The perfect time span.

On the present perfect in German, Swedish and English

Von der philosophisch-historischen Fakultät der Universität Stuttgart
zur Erlangung der Würde eines Doktors der
Philosophie (Dr. phil.) genehmigte Abhandlung

vorgelegt von

Björn Michael Rothstein

aus Tübingen

Hauptberichter:	Prof. Dr. h.c. Hans Kamp, PhD
Mitberichter:	Prof. Dr. Artemis Alexiadou

Tag der mündlichen Prüfung: 27.7.2006

Institut für maschinelle Sprachverarbeitung / Universität Stuttgart

2006

Ich erkläre hiermit, dass ich, abgesehen, von den im Literaturverzeichnis aufgeführten Quellen und den Ratschlägen von den jeweils namentlich aufgeführten Personen, die Dissertation selbständig verfasst habe.

Tübingen, den 16. Januar 2007

(Björn Rothstein)

A Vévé

Acknowledgements

My first teacher in linguistics, Veronika Ehrich, suggested a couple of years ago a short term paper on the Swedish present perfect. Now, it has become a thesis (being short was never my strong side). I am very much indebted to her.
These pages were written in 2003 to 2006 when I was part of the graduate school *Sprachliche Repräsentationen und ihre Interpretation* at the University of Stuttgart. I wish to thank Artemis Alexiadou and Hans Kamp who supervised the thesis. I thank Sabine Iatridou, Roumyana Pancheva and Elena Anagnostopoulou for permitting me to use their scientific term as the title.
Many thanks go to my perfect colleagues and friends of "my" graduate school as well as to the members of the linguistic faculties in Stuttgart. Thanks as well to the perfect audiences at the conferences and work shops in Basel, Stuttgart, Helsinki, Québec, Washington, Växjö, Göteborg, Geneva, Paris, Nijmegen, Cologne, Montréal, Tübingen, Bergen, Rom, Trondheim and in the Kleinwalsertal.
I had the opportunity to discuss parts of my work with Veronika Ehrich, Elisabet Engdahl, Susann Fischer, Ljudmila Geist, Catherine Fabricius-Hansen, Sabine Iatridou, Brenda Laca, Arne Martinus Lindstad, Elisabeth Löbel, Claudia Maienborn, Anita Mittwoch, Tom McFadden, Albert Ortmann, Jürgen Pafel, Christer Platzack, Irene Rapp, Arnim von Stechow, Tim Stowell, Achim Stein, Carola Trips and some other people I probably forget to mention. *Thank you.*
Tom McFadden, Brenda Laca, Susann Fischer and Carola Trips read earlier versions or parts of the thesis and gave me detailed and very helpful comments. Thank you for your help. Nele Hartung helped me with the glosses of the German examples and the summary.
Many thanks go to Carola for the help with all my inner- and outerlinguistic problems. Thank you Martin, Karoline, Nele, Ljudmila, Elisabeth, Achim, Brenda and Johannes for everything. Merci à mes parents, my family, Ann-Lise, Karine, Nathalie, Olivier, Regine, Jakob and Erwaa, Martina, Christine and *Balu, les giraffes & co*. My daughter Coralie helped me a lot during the last stage of the thesis: her smile made me forget that not everything is as perfect as I would like it to be.
When I started the thesis, I met Véronique. We got rather quickly married. I would not have finished the thesis without her. Being a linguist, it is hard to admit that I miss the words to express my gratitude and love.

Table of contents

Abbreviations

CR	Current relevance approach
D	Discourse time point
E	event time
e	eventuality
IdP	Indefinite Past Theory
LB	Left boundary
LPPP	Lost present perfect puzzle
ρ	Temporal relation between E and contextually given D
PPP	Present perfect puzzle
PTS	Perfect time span
R	reference time
RB	Right boundary
S	moment of speech
TT	topic time
XN	ExtendedNow (-approach)

Zusammenfassung

Die vorliegende Arbeit behandelt das Präsensperfekt im Deutschen, Schwedischen und Englischen. Das Präsensperfekt wird in allen drei Sprachen aus dem Präsens des Auxiliarverbs *haben/ha/have* und einem Partizip gebildet. Im Deutschen liegen sogar zwei Auxiliare, *haben* und *sein*, vor.
Die wichtigsten Ergebnisse dieser Untersuchung sind:

- Nur eine Schnittstellen-Analyse, die gleichermaßen Syntax und Semantik berücksichtigt, kann das Präsensperfekt erfolgreich analysieren. Dabei müssen verschiedene Theorien (im Fall dieser Arbeit *Diskursrepräsentationstheorie* (DRT) und *Distributed Morphology* (DM)) angewendet werden. Ihre Kombination wirft eine Reihe technischer Fragen auf, die hier nur gestellt, aber nicht (vollständig) beantwortet werden können.
- Das Präsensperfekt hat trotz teilweise sehr unterschiedlicher Verwendungen eine einzige uniforme Bedeutung, von der aus alle Verwendungen abgeleitet werden können.
- Das Präsensperfekt kann nur erfolgreich durch eine so genannte ExtendedNow-Analyse erfasst werden. Der ExtendedNow Ansatz besagt vereinfacht gesprochen, dass das Präsensperfekt ein Zeitintervall, d.h. eine Perfektzeit (*perfect time span*), liefert, innerhalb derer die Zeit liegt, zu der das im Partizip II stehende „Ereignis“ stattfindet. Es wird argumentiert, dass die Länge der Perfektzeit übereinzelsprachlich variiert.
- Das *present perfect puzzle* (PPP) kann entgegen der Standardauffassung nicht durch den Bedeutungsbeitrag des Präsens analysiert werden. Das PPP besagt, dass das Präsensperfekt im Englischen und Schwedischen nicht mit Adverbien wie *yesterday* bzw. *igår* kombiniert werden kann, obwohl es Vorzeitigkeit ausdrückt.
- Das inferentielle schwedische Präsensperfekt ist kein semantisches Präsensperfekt, sondern hat die Semantik eines infiniten Perfekts.
- Die verschiedenen Verwendungsweisen des Präsensperfekts müssen durch einen diskursbasierten Ansatz im Rahmen der DRT analysiert werden.

Die Abhandlung geht dabei wie folgt vor:
Im **Kapitel eins**, *preliminaries*, wird ein REICHENBACHscher Analyseansatz des Tempus verteidigt. REICHENBACH (1947/1966) unterscheidet zwischen einem Sprechzeitpunkt (S), einer Ereigniszeit (E) und einer Referenzzeit (R). (E) ist der Zeitpunkt oder die Zeitspanne, zu dem oder zu der das Ereignis stattfindet. (S) ist der Zeitpunkt, zu dem die Äußerung gemacht wird und (R) ist der Zeitpunkt oder die Zeitspanne, relativ zu der (E) lokalisiert ist. Ein Vergleich des REICHENBACHschen mit dem KLEINschen Analyseansatz von Tempus

ergibt, dass ersteres auf jeden Fall vorzuziehen ist. Insbesondere KLEINs Topikzeit wird daher abgelehnt.
Um die Interpretation von Tempora in Texten analysieren zu können, wird einem Vorschlag von KAMP & ROHRER (1985) gefolgt. Ein weiterer Zeitpunkt Rtp wird demnach benötigt, um die temporale Abfolge von Ereignissen in Texten erfassen zu können. Ein vorhergehender Diskursausschnitt liefert einen Referenzzeitpunkt Rtp, mit dem der folgende Diskursausschnitt eine anaphorische Relation etabliert. Um Verwechslung mit REICHENBACHs Referenzzeit zu vermeiden, wurde Rtp als (D) bezeichnet, als Diskurszeitpunkt.
Die notwendige Unterscheidung zwischen (R) und (D) ist beispielsweise am Plusquamperfekt nachzuvollziehen. Die Sequenz (1) – hier ins Deutsche übertragen – beginnt mit einem Präteritum. Die Ereignisse (e_2) bis (e_6) weisen eine bestimmte temporale Abfolge auf. Fritz steht zuerst auf, duscht sich dann und so weiter. Die korrekte temporale Anordnung der Ereignisse (e_2) bis (e_6) kann nicht durch die Verwendung von REICHENBACHs Referenzzeit erfasst werden, da für alle fünf Plusquamperfekte in (1) (R) gleich der durch das Präteritum eingeführten Ereigniszeit ist, zu der Fritz ankommt. (D) kann dies Problem lösen: (D_2) geht (D_3) voraus und so weiter.

(1) Fritz kam um zehn Uhr an. Er war um fünf Uhr aufgestanden (e_2), hatte geduscht (e_3), sich angezogen (e_4), gefrühstückt (e_5) und das Haus um 6 Uhr 30 verlassen (e_6). (frei übersetzt nach einem englischen Beispiel von KAMP & REYLE (1993:594))

Die Unterscheidung zwischen (D) und (R) ist insbesondere für die Ergebnisse von Kapitel fünf relevant, das für einen diskursbasierten Ansatz für das Präsensperfekt argumentiert. Dieser Ansatz erfolgt im Rahmen der *Diskursrepräsentationstheorie* in der Version von KAMP, van GENABITH & REYLE (2004).
In **Kapitel zwei**, *the meaning components of the perfect*, wird die Bedeutung des schwedischen, englischen und deutschen Präsensperfekts in Form der ExtendedNow-Theorie (XN) analysiert. Vereinfacht gesprochen liefert das Präsensperfekt in allen drei Sprachen ein Zeitintervall, das die Ereigniszeit enthält. Dieses Zeitintervall wird *perfect time span* (PTS) oder auf deutsch *Perfektzeit* genannt. Es wird gezeigt, dass die Länge der *perfect time span* übereinzelsprachlich variiert. Dabei wird von einer monosemen Analyse ausgegangen, die besagt, dass das Präsensperfekt nur eine einzige Bedeutung hat und dass seine verschiedenen Verwendungsweisen nur Varianten dieser einzigen Bedeutung sind.
Es wird gezeigt, dass das schwedische Präsensperfekt sich in vielerlei Hinsicht wie das englische Präsensperfekt verhält. Beide Sprachen weisen das von KLEIN (1992) als *present perfect puzzle* bezeichnete Phänomen auf: Sie können nicht mit Adverbien wie *igår* (gestern) oder *yesterday* (gestern) kombiniert werden.

Im Gegensatz zum englischen Präsensperfekt ist es jedoch im Schwedischen möglich, das Präsensperfekt auch als Futurperfekt zu verwenden:

(2) Imorgon har konferensen slutat.
Morgen hat Konferenz-die aufgehört
'Morgen hat die Konferenz (bereits) aufgehört.'

Es wird gegen *Current relevance* Ansätze (CR) argumentiert, nach denen das Präsensperfekt ein vergangenes Ereignis als relevant für die Sprechzeit darstellt, und auch gegen *Indefinite Past Time Theorien* (IPT), nach deren Auffassung die Ereigniszeit des Präsensperfekts zeitlich nicht genauer bestimmt werden kann.
CR kann nicht erklären, warum Beispiele wie (3) keine Relevanz für den Sprechzeitpunkt ausdrücken und IPT kann nicht erklären, warum die Ereigniszeit gelegentlich doch näher bestimmbar ist:

(3) Newtons teorier har haft stor betydelse i vetenskapens
Newtons Theorien haben gehabt große Bedeutung in Wissenschafts
historia även om de har upphävts.
Geschichte auch wenn sie haben aufgehoben
'In der Geschichte der Wissenschaft haben Newtons Theorien große Bedeutung gehabt, auch wenn sie aufgehoben worden sind'
(aus dem Englischen nach McCOARD (1978:41))

(4) Imorse har konferensen slutat.
Heute morgen hat Konferenz-die aufgehört
'Heute morgen hat die Konferenz (bereits) aufgehört.'

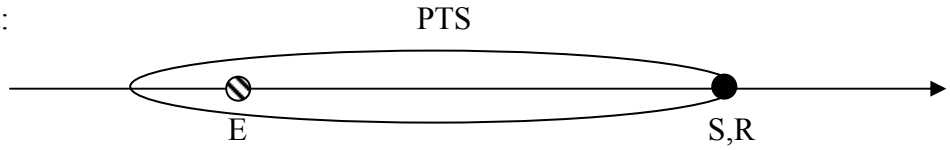
Die Ähnlichkeiten zwischen dem englischen und schwedischen Präsensperfekt legen eine ähnliche Analyse nahe, doch kann PTS nicht beim Sprechzeitpunkt enden, da sonst die futurale Verwendung des schwedischen Präsensperfekts wie in (2) nicht erfasst werden kann. Der ExtendedNow-Ansatz muss daher modifiziert werden.
Das Präsensperfekt liefert ein PTS, dessen rechte Begrenzung (RB) identisch ist mit der Referenzzeit des Tempus des Auxiliars und dessen linke Begrenzung (LB) nicht spezifiziert ist oder durch beispielsweise *seit*-Adverbien angegeben werden kann.
Es gibt jedoch einen weiteren übereinzelsprachlichen Unterschied, was das Präsensperfekt und Adverbien wie *immer* anbelangt. Während es im Schwedischen und Englischen unmöglich ist, dass ein durch *always* bzw. *alltid* modifiziertes Präsensperfekt nicht besagt, dass die Ereigniszeit noch zur Sprechzeit gilt, so sind im Deutschen Beispiele wie (5)c möglich:

(5) a. *Hon har alltid bott här till alldeles nyss (Schwedisch)
Sie hat immer gewohnt hier bis ganz neulich
b. *She has always lived here until recently … (Englisch)
c. Sie hat immer hier gewohnt, bis sie vor kurzem … (Deutsch)

Es wird argumentiert, dass durch *immer* modifizierte Ereigniszeiten während der gesamten Perfektzeit gelten. Konsequenterweise ist die Perfektzeit übereinzelsprachlich verschieden lang. Während im Englischen und Schwedischen die Referenzzeit stets finales Subintervall der Perfektzeit ist, kann die Perfektzeit im Deutschen vor der Referenzzeit enden. Damit ist die Position der rechten Begrenzung (RB) der Perfektzeit im Deutschen semantisch nicht festgelegt. In Kapitel fünf wird im Rahmen eines diskursbasierten Ansatzes dafür argumentiert, dass die Position von RB im Deutschen durch das Tempus des nächsten Satzes durch Diskursprinzipien festgelegt wird.
Die Bedeutungen des Präsensperfekts sind demnach wie folgt (auf eine Darstellung in DRT wird hier aus Platz- und Darstellungsgründen verzichtet). (S) steht für Sprechzeitpunkt, (R) für Referenzzeit und (E) für Ereigniszeit. PTS ist die Perfektzeit. Die kleinen Pfeile sollen jeweils andeuten, dass die Position von (R) bzw. RB in Pfeilrichtung verschiebbar ist. Das englische Präsensperfekt liefert damit ein PTS, das zu (R) endet und (R) identisch mit (S) ist. Im Deutschen und Schwedischen kann (R) nicht vor (S) liegen. Im Schwedischen ist RB mit (R) identisch, im Deutschen kann RB vor (R) liegen.

(6) Englisches Präsensperfekt:

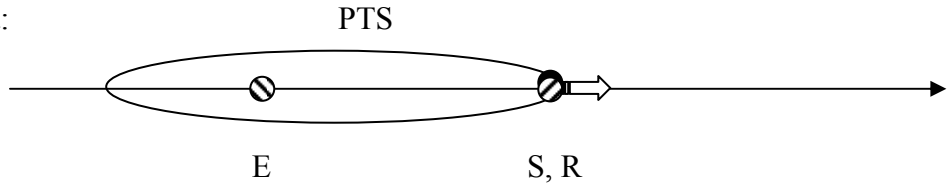
a:



b: $S = R \;\&\; PTS\ (LB, RB) \;\&\; RB = R \;\&\; E \subseteq PTS$

(7) Schwedisches Präsensperfekt:

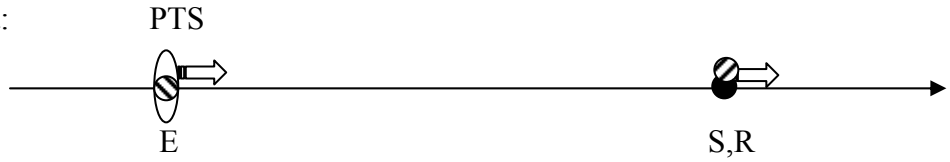
a:



b: $S \leq R \;\&\; PTS\ (LB, RB) \;\&\; RB = R \;\&\; E \subseteq PTS$

(8) Deutsches Präsensperfekt:

a:



b: $S \leq R \;\&\; PTS\ (LB, RB) \;\&\; RB \leq R \;\&\; E \subseteq PTS$

Es wird ebenfalls gezeigt, dass das deutsche Präsensperfekt gelegentlich eine stative Komponente enthält. Diese Komponente wird als *Perfektzustand* bezeichnet. Der Perfektzustand ist ein ereignisbedingter Zustand, der dann vorliegt, wenn ein im Perfekt ausgedrücktes Ereignis kulminiert hat. Die Dauer des Perfektzustands ist unendlich. Argumentiert wird für einen Zusammenhang zwischen Perfektzeit und Perfektzustand. Der Perfektzustand ist nur möglich, wenn die rechte Begrenzung RB der Perfektzeit distinkt von (E) ist. Daher liefert das Präsensperfekt im Englischen und Schwedischen stets einen Perfektzustand, im Deutschen jedoch nur, wenn RB distinkt von (E) ist.
Im **Kapitel drei**, *perfect puzzles: Adverbials and the perfect*, wird gegen die Standardauffassung argumentiert, man könne die übereinzelsprachlichen Verschiedenheiten des Präsensperfekts durch den jeweiligen Bedeutungsbeitrag des Präsens erklären. Ein Problem für solche Erklärungsversuche stellt das Schwedische dar. Das deutsche und schwedische Präsens verhalten sich identisch. Beide können Gegenwart und Zukunft ausdrücken und beide können mit *seit*-Adverbien kombiniert werden:

(9)	a.	Han sover. *Er schläft*	(Schwed.)	b.	Er schläft.
(10)	a.	I morgon reser jag *Morgen reise ich* till Washington. *Nach Washington*	(Schwed.)	b.	Morgen reise ich nach Washington.
(11)	a.	Jag är lärare sedan 1990. *Ich bin Lehrer seit 1990*	(Schwed.)	b.	Ich bin seit 1990 Lehrer.

Analysen, die die übereinzelsprachliche Variation des Präsensperfekts durch den Bedeutungsbeitrag des Präsens erklären, sagen nun voraus, dass Sprachen mit parallelen Präsensbedeutungen sich auch parallel in Bezug auf das Präsensperfekt verhalten. Doch ist dies nicht der Fall. Während es im Schwedischen ein *present perfect puzzle* gibt, liegt im Deutschen keines vor.

(12)	a.	Sigurd har kommit igår. *Sigurd hat gekommen gestern*	(Schwedisch)	b.	Sigurd ist gestern gekommen.

Insofern kann das PPP nicht auf Basis des Präsens erklärt werden. Stattdessen wird die Hypothese aufgestellt, dass PTS selbst die adverbiale Selektion des Präsensperfekts restringiert. PTS besagt, dass (E) an jedem beliebigen Zeitpunkt innerhalb von PTS stattfinden kann. *Igår* (gestern) hingegen verlangt, dass (E) innerhalb des Tages stattfindet, der vor dem Tag liegt, der (S) enthält. Wenn PTS nun im Schwedischen und Englischen bei der Referenzzeit endet und die Referenzzeit im Falle des Schwedischen nicht vor und im Falle des Englischen zu der Sprechzeit liegt, so widersprechen sich die semantischen Anforderungen von PTS und *igår*. Nach PTS kann (E) auch außerhalb von der von *igår* bezeichneten Zeitspanne liegen. Dieser Widerspruch führt zur Unakzeptabilität von (12).

In **Kapitel vier**, *The inferential present perfect in Swedish*, werden Unterschiede zwischen dem englischen und schwedischen Präsensperfekt in inferentiellen Kontexten analysiert. In nicht-inferentiellen Kontexten weisen beide Präsensperfekte das in Kapitel drei analysierte *present perfect puzzle* (PPP) auf. In inferentiellen Kontexten, in denen das Präsensperfekt verwendet wird, um die vom Sprecher dargestellte Quelle der Information anzugeben, verschwindet das *present perfect puzzle* nur im Schwedischen, nicht aber im Englischen (vgl. (14)). Dieses Phänomen wird in dieser Arbeit *lost present perfect puzzle* (LPPP) genannt.

(13) a. *Sigurd har kommit igår. (Schwed.) b. *Sigurd has come yesterday.
Sigurd hat gekommen gestern

(14) a. Sigurd har tydligen kommit igår. (Schwed.) b. *Sigurd has probably come
Sigurd hat wahrscheinlich gekommen gestern yesterday.

Infinite Perfekte, die unter entsprechende Modalverben eingebettet sind, zeigen in beiden Betrachtsprachen kein PPP:

(15) a. Sigurd lär ha kommit igår. (Schwed.) b. Sigurd might have come
Sigurd kann haben gekommen gestern yesterday.

Es wird gezeigt, dass sich das schwedische inferentielle Präsensperfekt wie ein solches infinites Perfekt verhält. Daher wird davon ausgegangen, dass das inferentielle Präsensperfekt semantisch ein infinites Perfekt ist, phonetisch-phonologisch aber ein Präsensperfekt.
Die Arbeit argumentiert für einen Zusammenhang zwischen dem *lost present perfect puzzle* und so genannter parasitärer Morphologie. Im Unterschied zum Englischen weist das Schwedische eine solche Morphologie auf. Ein parasitäres Komplement ist ein Komplement, in dem ein zu erwartender Infinitiv ersetzt wird durch die Kopie der Flexion des übergeordneten Verbs und in dem, trotz kopierter Flexion, die Semantik des Infinitivs erhalten bleibt. In (16) hat *kommit* ‘komm-Partizip’ die Bedeutung eines Infinitivs, flektiert aber wie das c-kommandierende Verb *kunnat* ‘könn-Partizip’.

(16) a. Sigurd hade kunnat kommit. (Schwed.) b. *Sigurd had could come.
Sigurd hat gekommt gekommen
‘Sigurd hatte kommen können.’

Um parasitäre Morphologie erklären zu können, wird ein Ansatz im Rahmen der *Distributed Morphology* (DM) nach HALLE & MARANTZ (1993) angenommen. In DM ist Wortbildung auf Syntax und morphologische Struktur verteilt. Phonologische Merkmale sind während der syntaktischen Komputation und im vorsyntaktischen Lexikon nicht vorhanden. Die terminalen Knoten enthalten semantische und syntaktische Merkmale, sie weisen keinerlei phonologische Merkmale auf. Die Syntax linearisiert die terminalen Knoten durch *Merge* und *Move*. Phonologische Merkmale werden auf einer

postsyntaktischen Ebene, in der morphologischen Struktur (MS), durch Einfügen von *Vocabulary Items* hinzugefügt. Insbesondere die lineare Anordnung der terminalen Knoten kann auf MS weiteren morphologischen Operationen unterliegen. Da der Zugriff auf semantische und syntaktische Merkmale zu einem anderen Zeitpunkt als der Zugriff auf phonologische features erfolgt, sind Diskrepanzen zwischen Form und Bedeutung, wie sie bei parasitärer Morphologie vorliegen, möglich.
Mit WIKLUND (2001) wird behauptet, dass parasitäre Komplemente unterspezifizierte morphosyntaktische Merkmale haben. Ihre Semantik ist die eines Infinitivs. Die morphosyntaktischen Merkmale müssen spezifiziert werden, um das Einfügen von *Vocabulary Items* zu ermöglichen. Das parasitäre Komplement kopiert daher die relevanten Merkmale durch lokale Operationen auf MS. Den kopierten Merkmalen entsprechend werden phonologische Merkmale eingeführt. Dadurch entstehen Diskrepanzen zwischen Form und Bedeutung, da die Semantik während der gesamten Derivation unverändert geblieben ist und da nur morphosyntaktische Merkmale manipuliert wurden.
Das sogenannte inferentielle Präsensperfekt hat nun die syntaktische und semantische Struktur eines infiniten Perfekts, das unter ein kovertes, d.h. phonetisch leeres Modalverb mit entsprechender Bedeutung gebettet ist, welches wieder von den overten T-Merkmalen c-kommandiert wird. Das Perfektauxiliar hat unterspezifizierte morphosyntaktische Merkmale. Die Tempusmerkmale des Modalverbs sind overt, d.h. sie haben phonologischen Gehalt. Da im Schwedischen overte Flexionsmerkmale nicht an nicht-overte Stämme treten können, muss die Derivation scheitern. Doch aufgrund von Operationen auf MS im Sinne von EMBICK & NOYER (2001) kann anstelle des Modalverbs das unterspezifizierte Perfektauxiliar mit den Tempusmerkmalen in T „gemerget“ werden. Dadurch ist das inferentielle Präsensperfekt ein infinites Perfekt auf LF, auf PF aber ein Präsensperfekt. Die gleiche Analyse ist nun für das Englische aus zwei Gründen nicht möglich. Erstens gibt es keine parasitäre Morphologie im Englischen. Zweitens werden englische Modalverben im Gegensatz zum Schwedischen in T basisgeneriert, die T Merkmale können daher nicht mit den Merkmalen des infiniten Auxiliars *ha* „gemerget“ werden.
In **Kapitel fünf**, *perfect readings*, wird für einen diskursbasierten Ansatz zur Disambiguierung der verschiedenen Verwendungen des Präsensperfekts plädiert. Ausgegangen wird von einer einzigen uniformen Perfektbedeutung (vgl. (6), (7) und (8)). Der diskursbasierte Ansatz erfolgt im Rahmen der DRT. Temporale und rhetorische Relationen zwischen Tempora eines kohärenten Texts werden verwendet, um zwischen den Perfektlesarten zu disambiguieren.
Der Diskurszeitpunkt (D) wird verwendet, um die verschiedenen Perfektlesarten zu ermitteln. Dabei wird argumentiert, dass RB des Perfekts als (D) für die Ereigniszeit des Tempus aus dem nachfolgenden Satz dient. Je nachdem, wo diese Ereigniszeit auf der Zeitachse lokalisiert ist, ergeben sich verschiedene Lesarten. Wenn RB ein (D) für ein Präsens ist, hat das Präsensperfekt als (plausibelste) Lesart eine retrospektive Interpretation. Es drückt dann,

vereinfacht gesprochen, eine Art „Gegenwartsrelevanz“ aus, siehe (18). Wenn RB ein (D) für ein Präteritum ist, hat das Präsensperfekt eine präteritale Lesart, d.h. eine Lesart, in der das Präsensperfekt das Präteritum ersetzt (vgl. (17)).

(17) Albin hat um Sandrines Hand angehalten. Die Hochzeit fand im Juni statt.
(18) Albin hat um Sandrines Hand angehalten. Die Hochzeit findet im Juni statt.

Die vorliegende Untersuchung ist damit eine Schnittstellenanalyse mit den interagierenden Komponenten Syntax und Semantik. Syntax (und Morphologie) werden im Rahmen von DM analysiert, das semantische oder besser diskurssemantische Modell ist DRT.
Die vorliegende Arbeit kann jedoch mindestens zwei wichtige Fragen nicht beantworten: zum einen ist nicht klar, worauf die übereinzelsprachliche Variation des Präsensperfekts beruht. Einer der Bestandteile des Präsensperfekts sollte der Grund für die Variation sein. In den Kapiteln zwei und drei wird jedoch gezeigt, dass eine kompositionale, semantisch ausgerichtete Analyse nicht erklären kann, warum das Präsensperfekt übereinzelsprachlich variiert. In Kapitel zwei wird lediglich darüber spekuliert, ob die Variation Resultat unterschiedlicher (syntaktischer) Strukturen des Perfekts ist und aufgrund der Interaktion von Semantik und Syntax unterschiedliche Perfektbedeutungen entstehen. Demnach ist das deutsche Präsensperfekt ein Verbcluster, wohingegen im Englischen und Schwedischen das Auxiliar in einer eigenen Phrase basisgeneriert wird. Doch die Syntax von Verbclustern ist im Allgemeinen ein wenig verstandenes Phänomen und daher wird dieser Spekulation nicht weiter nachgegangen.
Eine zweite, nicht beantwortete Frage betrifft einen technischen Teil der Analyse. Beim gegenwärtigen Stand der Forschung ist es nicht möglich, die Kompatibilität von DM und DRT in all ihren Details zu überprüfen. Was die hier verwendeten Mechanismen betrifft, so ist zumindest bei den hier analysierten Phänomen prinzipiell die Kombination der beiden Theorien möglich. Das soll jedoch nicht heißen, dass DM und DRT ohne weiteres kompatibel sind, es sind vielmehr detaillierte Untersuchungen nötig, die sich mit dieser Frage beschäftigen. Es kann nun eingewendet werden, dass dieser laxe Umgang mit Theorien problematisch oder unter Umständen falsch ist. Beim gegenwärtigen Forschungsstand ist er in meinen Augen jedoch unvermeidlich.

Summary

The present study aims at analysing the meaning of the present perfect in German, Swedish and English. The main findings are as follows:

- **Monosemy:** The present perfect has a single uniform meaning.
- ***ExtendedNow*:** Only an *ExtendedNow*-analysis correctly captures the present perfect.
- The *present perfect puzzle* (PPP) cannot be explained by looking at the meaning contribution of the present tense. The explanation of the PPP can not only be a semantic or a pragmatic one. I show that only a **combined syntactic and semantic approach** correctly accounts for the *perfect puzzles*.
- The inferential present perfect behaves like **an infinitival perfect** that is embedded under a modal verb in the present tense. It is therefore assumed that the inferential present perfect is an infinitival perfect that is embedded under **a phonological null modal verb**.
- It is only possible to account for the readings within an approach that considers **situation type aspect, adverbial modification and context**.
- The readings of the present perfect are **context sensitive**. I therefore assumed the discourse based approach to tense as first developed by KAMP & ROHRER (1985).

In **CHAPTER ONE**, *preliminaries*, I argue for a REICHENBACHian approach to tense. REICHENBACH (1947/1966) distinguishes between an event time (E), a speech time (S) and a reference time (R). (E) is the point in time at which the event takes place, an utterance is made at (S) and (R) is the point in time relative to which (E) is located.
To account for the use of tenses in discourse, I followed KAMP & ROHRER (1985) / KAMP & REYLE (1993) by introducing a further point in time. The reference time point Rtp is used to account for the temporal ordering of events in texts: the preceding discourse yields an Rtp with which the following tense form establishes an antecedent-anaphora relationship. To avoid confusion with REICHENBACH's (R) I don't use the term Rtp. I therefore introduced the term (D)*iscourse time point*.
I argue that the distinction between (R) and (D) becomes especially urgent with sequences in the pluperfect (see (1)). The sequence starts with a past tense. The events (e_2) to (e_6) are temporally ordered. Fred first gets up, then takes a shower and so on. The right temporal order of the events (e_2) to (e_6) cannot be given by referring to REICHENBACH's reference time (R), since for the five pluperfects in (1) (R) is always the same: it is e_1, the event of Fred's arrival. (D) resolves that problem: (D_2) precedes (D_3), which in turn precedes (D_4) and so on.

(1) Fred arrived at 10. He had got up at 5 (e_2), he had taken a long shower (e_3), had got dressed (e_4) and had eaten a leisurely breakfast (e_5). He had left the house at 6:30 (e_6). (KAMP & REYLE (1993:594))

The semantic framework I used in this dissertation is *Discourse Representation* In chapter five, it will be argued that only a discourse based approach to the perfect can fully account for the various interpretations the perfect has. Temporal and rhetorical relations between tenses in a given text will be used to account for the different readings of the present perfect.

In **CHAPTER TWO**, *the meaning components of the perfect*, I analyse the meaning of the Swedish, English and German present perfect in terms of an ExtendedNow-analysis (XN). Roughly speaking, the perfect in each language introduces a time interval which contains the event time expressed by the perfect. The possible positions of the boundaries of this interval (more specifically its right boundary RB) are said to differ cross linguistically.

It is shown that the Swedish perfect behaves in several respects like the English perfect: it always links the present to the Past and it cannot be combined with adverbials like *yesterday* (dubbed the "present perfect Puzzle" by KLEIN (1992)).

But contrary to the English present perfect, the Swedish perfect can be used as a future perfect, see (2):

(2) Imorgon har konferensen slutat. (Swedish)
Tomorrow has conference-the ended
'The conference has ended tomorrow.'

The similarities between English and Swedish suggest a similar analysis, but an ordinary *XN* will fail due to the futurate use of the Swedish perfect in (2), since the XN is not located with respect to the point of speech, but relative to the reference point. I therefore propose to modify the XN-Theory.

The present perfect introduces an ExtendedNow-interval (XN). "Traditionally", XN is an interval whose right boundary (RB) ends at the reference time set by the tense of the auxiliary. As the time span the perfect introduces does not always end at the moment of speech, the term *ExtendedNow* is considered to be somewhat misleading. Following a proposal by IATRIDOU et al (2001), I therefore use the term *perfect time span* as a more neutral term for *ExtendedNow.* The *perfect time span* (PTS) is a time interval introduced by the perfect whose right boundary is the reference time set by the tense of the auxiliary. The position of its left boundary (LB) is not specified or can be given by adverbials like *since.* PTS includes the event time expressed by the perfect.

The use of the present perfect in (3) is called u(-niversal) perfect. This is a use of the present perfect where (E) holds throughout the entire PTS. A present perfect normally has a universal interpretation, if it is modified by adverbials such as *always*. An example is the following where the speaker still loves his addressee at the moment of speech.

(3) I have always loved you.

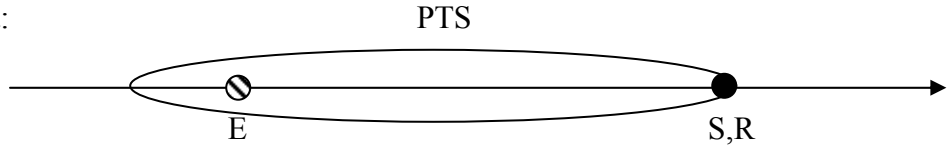
This shows that PTS ends at (R) and by substitution at (S), because (E) holds through the entire PTS. Consider now the German universal perfect in (4). Here, the eventuality *in Berlin wohnen* 'to live in Berlin' does not hold at (S), or more generally at (R). PTS has therefore to be modified.

(4) Ich habe immer in Berlin gewohnt, (German)
I have always in Berlin lived
aber vor kurzem bin ich nach Tübingen gezogen.
but before recently am I to Tübingen moved
'I always lived in Berlin but recently, I moved to Tübingen.'

Uses such as in (4) are not possible in English and Swedish. To account for German, I propose a dynamic PTS with flexible boundaries. The position of RB varies due to the different uses of the present perfect.
English, Swedish and German differ in how the *perfect time span* and the reference time set by the auxiliary are computed. In English, the right boundary (RB) of PTS is always identical with the moment of speech (S). In Swedish, RB is (R) of the auxiliary. The German PTS is dynamic. In the default, it is simultaneous with (E). RB is only distinct from (E) if context requires it. The meanings I assume are as follows:

(5) English present perfect:

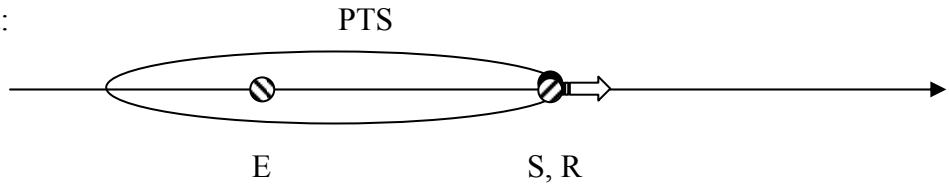
a:



b: S = R & PTS (LB, RB) & RB = R & E $\subseteq$ PTS

(6) Swedish present perfect:

a:



b: S $\leq$ R & PTS (LB, RB) & RB $\leq$ R & E $\subseteq$ PTS

(7) German present perfect:

a:

b: S ≤ R & PTS (LB, RB) & RB ≤ R & E ⊆ PTS

In **CHAPTER THREE**, *perfect puzzles: Adverbials and the perfect*, I argue against the by now standard explanation that cross linguistic meaning differences of the present perfect arise due to language specific meaning composition of the perfect. The traditional account claims that the present tenses in the languages differ it is for this reason that the present perfect tenses differ as well. A problem for those accounts is Swedish. When we look closer at the present tense in German and Swedish, it can be shown that they pattern in exactly the same way: They can be used to denote pastness with *since*-adverbials, present and future:

(8)	a.	Han sover. *He sleeps*	(Swedish)	b. Er schläft. *He sleeps*	(German)
(9)	a.	I morgon reser jag *Tomorrow travel I* till Ishington. *to Ishington*	(Swedish)	b. Morgen reise ich *Tomorrow travel I* nach Ishington. *to Ishington*	(German)
(10)	a.	Jag är lärare sedan 1990. *I am teacher since 1990*	(Swedish)	b. Ich bin seit 1990 *I am since 1990* Lehrer. *teacher*	(German)

Analyses motivating the cross linguistic differences of the present perfect by the present tense predict that languages with "similar" present tense meanings should have a "similar" present perfect. Swedish shows that this is not borne out. The present tense(s) in both languages have an identical meaning, but Swedish displays the *present perfect puzzle* (PPP), while German does not:

(11)	a.	Sigurd har kommit igår. *Sigurd has come yesterday*	(Swedish)	b. Sigurd ist gestern *Sigurd has come* gekommen *yesterday*	(German)

The PPP can therefore not be explained on the basis of the present tense. Instead, I propose to account for the PPP in the following way: PTS comes with the semantic requirement that (E) can potentially hold at any point in time within PTS. *Igår* 'yesterday', on the other hand, requires (E) to be located somewhere within the day before the day that contains the moment of speech. This means that (E) can hold neither before *yesterday* nor after *yesterday*. This is

a clear contradiction: while PTS requires that (E) can obtain at other points in time as denoted by *igår* 'yesterday', *yesterday* excludes this.
The goal of **CHAPTER FOUR**, *The inferential present perfect in Swedish*, is to analyse differences in inferential uses of the Swedish and English present perfect. When used in non-inferential contexts, both display the *present perfect puzzle* (cf. (12)). They cannot be combined with certain past adverbials (KLEIN (1992)). In inferential contexts, however, when used to indicate the author's degree of confidence in a present inference about past events, the *present perfect puzzle* only disappears in Swedish (cf. (13)). I call this the *lost present perfect puzzle*.

(12) a. *Sigurd har kommit igår. (Swedish) b. *Sigurd has come yesterday.
Sigurd has come yesterday
(13) a. Sigurd har tydligen kommit igår. (Swedish) b. *Sigurd has probably come yesterday.
Sigurd has probably come yesterday

Infinitival perfects that are embedded under modals in the present tense do not display the *present perfect puzzle* in both English and Swedish (cf. (14)).

(14) a. Sigurd lär ha kommit igår. (Swedish) b. Sigurd might have come yesterday.
Sigurd might have come yesterday

I assume that the inferential present perfect is an infinitival perfect being embedded under a phonologically null modal verb. To account for (13), a link between the *lost present perfect puzzle* and *parasitic morphology* is assumed. A parasitic complement is a complement where an expected infinitival inflection is replaced by the copy of the inflection of a superordinate verb and where the semantics remains the one of an infinitive despite the copied inflection. In (15), for instance, *kommit* 'come-past-participle' has the meaning of an infinitive, but inflects like the c-commanding verb *kunnat* 'can-past-participle'.

(15) Sigurd hade kunnat kommit. (Swedish)
Sigurd had could-past participle come-past participle
'Sigurd had been able to come:'

To account for parasitism, I assume an approach based on distributed morphology (DM) (cf. HALLE & MARANTZ (1993)). Using DM allows me to derive the inferential present perfect from the infinitival perfect. My major claim is that what looks like a present perfect at PF is an infinitival perfect at LF. As there is no parasitic morphology in English, the cross linguistic variation between Swedish and English concerning the *lost present perfect puzzle* could be explained.
In **CHAPTER FIVE**, *perfect readings*, I give a monosemous analysis of the meaning of the present perfect in terms of an Extended Now theory (McCOARD (1978). I propose an account for the different present perfect readings in terms of KAMP & REYLE's (1993) discourse-based approach to tense. Temporal and

rhetorical relations between tenses in a given text are used to account for the different readings of the present perfect.
To account for the context dependence of the perfect readings, I assume the discourse based approach to tense sketched in chapter 1.
The discourse time point (D) is used to account for the temporal ordering of eventualities in texts: the preceding discourse yields a (D) with which the tense of the following sentence establishes an antecedent-anaphora relationship.

(16) Albin hat um Sandrines Hand angehalten. (German)
Albin has for Sandrine's hand asked.
Die Hochzeit fand im Juni statt.
The wedding took in June place

(17) Albin hat um Sandrines Hand angehalten. (German)
Albin has for Sandrine's hand asked.
Die Hochzeit findet im Juni statt.
The wedding takes in july place.

(D) provides a useful tool for explaining the readings of the present perfect. The present perfect has a preterite reading when (D) is simultaneous to the final subinterval of the event time denoted by the present perfect, and a perfect reading when (D) is located after the event time. The preterite reading arises when (D) serves as an evaluation time for another event time located before the time of utterance. This is illustrated in (16). In other cases, the present perfect has a perfect reading (see (17)). Furthermore, (D) serves to identify the right boundary RB of the PTS-interval: (D) is RB. The same approach is also used for the other interpretations of the perfect.

Chapter 1: *preliminaries*

1. Outline

There are many ways to express temporal meaning in natural language. One of them is the use of the perfect tenses. Swedish and English have three perfect tenses while German has an additional fourth, the so called *double perfect* shown in (4) and (5).[1] The perfect tenses of these languages are given below:

(1) a. Sigurd har kommit. (Swedish)
Sigurd has arrived
b. Sigurd has arrived.
c. Sigurd ist gekommen. (German)
Sigurd is arrived
'Sigurd has arrived.'

(2) a. Sigurd hade kommit. (Swedish)
Sigurd had arrived
b. Sigurd had arrived.
c. Sigurd war gekommen. (German)
Sigurd was arrived
'Sigurd had arrived.'

(3) a. Sigurd verkar ha kommit. (Swedish)
Sigurd seems have arrived
b. Sigurd seems to have arrived.
c. Sigurd scheint, gekommen zu sein. (German)
Sigurd seems arrived to be
'Sigurd seems to have arrived.'

(4) Sigurd hat eingekauft gehabt. (German)
Sigurd has shopped had-past-participle
(5) Sigurd hatte eingekauft gehabt. (German)
Sigurd had shopped had-past-participle

The perfects in (1) consist of an auxiliary in the present tense and a past participle, the perfects in (2) include a past tense auxiliary and the perfects in (3) have an infinitive as auxiliary. In (4) and (5), there is an additional auxiliary in the past participle and the finite auxiliary is in the present tense and past tense respectively. According to the tense of the auxiliary, (1) is a present perfect, (2) a past perfect or pluperfect and (3) an infinitival perfect. (4) and (5) are so called double perfects. (1) to (3) will be called perfects.
The goal of this study is to provide an analysis of the perfect in English, Swedish and German. Especially in German and English linguistics, there has

[1] The existence of double perfects has been challenged by some researchers, see THIEROFF (1992) for discussion.

been a longstanding discussion on the correct analysis of the perfect. In Swedish, however, there have only been few investigations to the perfect.
The present study is mainly about the present perfect although it sometimes also considers the other perfects. As a general matter, the analysis proposed for the present perfect is also valid for the other perfects, if one abstracts away from the temporal meaning contribution of the auxiliaries.
The three languages were chosen because their perfect tenses share many characteristics, but differ at relevant points. It will be shown that especially the correct analysis of the Swedish present perfect has to break with a lot of by now standard assumptions about the perfect.
There are several points which have not been analysed satisfyingly so far:

- if it is possible to assign to the present perfect a single uniform meaning;
- how to account for the different readings the perfect has;
- how to account for the cross linguistic variation;

The goal of this study is to find answers to the questions listed above. Chapter 1 introduces the basic assumptions about tense and the framework that will be used. In chapter 2, *the components of the perfect meaning*, the meaning of the present perfect in German, Swedish and English will be developed. First, it will be argued that the German present perfect has a single uniform meaning that covers all its possible uses. Second, I will argue against the standard assumption that *Post state* and *ExtendedNow* approaches to the perfect are not compatible. According to the former, the present perfect introduces a post state emerging immediately from the eventuality in the perfect (cf. KAMP & REYLE (1993)). Eventuality is used as cover term for states, events and processes. According to the *ExtendedNow*-approach, the present perfect introduces a *perfect time span* (=PTS) that starts somewhere in the past and ends – roughly speaking – at the moment of speech (S). The event time (E) is part of PTS (cf. McCOARD (1978) and IATRIDOU et al (2001)). It will be shown that a combination of both approaches is necessary to account for the perfect. Third, I will show that the cross linguistic differences between English, Swedish and German arise due to the length of the PTS that the perfect denotes. In English and in Swedish, the end of the PTS is fixed by default, whereas it is vague in German.
In chapter 3, the *perfect puzzles: adverbials and the perfect*, the interplay of the present perfect with positional temporal adverbials is analysed. The Swedish Perfect behaves in several respects like the English Perfect: it always links the Present to the Past and it cannot be combined with adverbials like *yesterday* (cf. (6)). This has been dubbed the *present perfect puzzle* by KLEIN (1992).

(6) a. *Sigurd har kommit igår. (Swed.) b. *Sigurd has come yesterday. (Engl.)
Sigurd has come yesterday

It will be argued that Swedish provides empirical evidence against the standard assumption that some languages display the *present perfect puzzle* due to the meaning the present tense has in those languages.
Chapter 4, the *inferential perfect in Swedish*, analyses differences in inferential or evidential uses of the Swedish and English present perfect. When used in non-inferential contexts, both languages display the *present perfect puzzle* (cf. (6)). In inferential contexts however, when used to indicate the author's degree of confidence in a present inference about past events, the present perfect puzzle disappears in Swedish, but not in English (cf. (7)). I call this the *lost present perfect puzzle*. I claim that semantic and/or pragmatic analyses of the lost present perfect puzzle cannot account for the data. Instead, I will pursue a morphosyntactic account. I will show that the Swedish inferential present perfect originates as an infinitival perfect that does not impose restrictions on adverbial selection in both English and Swedish. I will further show that the same analysis is not possible for English.

(7) a. Sigurd har tydligen kommit igår. (Swed.) b. *Sigurd has probably come yesterday.
Sigurd has probably come yesterday

Chapter 5, *the perfect readings*, presents an analysis of how the different uses of the present perfect arise. It will be shown that pragmatic principles are too weak to make predictions for the different perfect readings. To account for the behaviour of the present perfect, I propose an account for the different present perfect readings in terms of KAMP & REYLE (1993)'s discourse-based approach to tense. Temporal and rhetorical relations between tenses in a given text will be used to account for the different readings of the present perfect.
Chapter 6 concludes the study.
In the reminder of this chapter, I discuss the basic framework I will work with. Section 2 explains the difference between *time* and *tense*. In sections 3 to 5, I present the basic temporal framework I use in this study and in section 6 I return to the question how to define tense. Section 7 presents the framework I assume. Section 8 concludes.

2. Time and tense

Time is one of the fundamental categories of human cognition. Without a conventionalised and well-structured system for measuring time, our modern industrial societies would simply break down. In our modern civilizations, the perception of time is measured by the clock and the calendar. From this point of view, time is some sort of constant and linear progression.
Time can be perceived in many different ways. There are national, cultural, social, individual, physical and subjective differences in the observation of time.
Each language has its own language-specific ways to express time. While some languages like Chinese do not mark time on the verb, others such as German and Swedish have a verbal system to refer to time. Time can, among others, be

expressed linguistically by tense, by temporal adverbs and by temporal prepositions. Hence, a sentence like *Yesterday, I met Véronique before dinner* contains three temporal expressions: the past tense of *meet*, the adverbial *yesterday* and the prepositional phrase *before dinner*.
Tense is a grammaticalized verbal category, locating the time at which the eventuality denoted by the verb obtained relative to some other time. This other time is often the moment of speech. There are three basic options for temporal relations: anteriority, simultaneity and posteriority. Evaluating these three relative to the moment of speech, gives us tenses as a past tense, a present tense and a future tense.

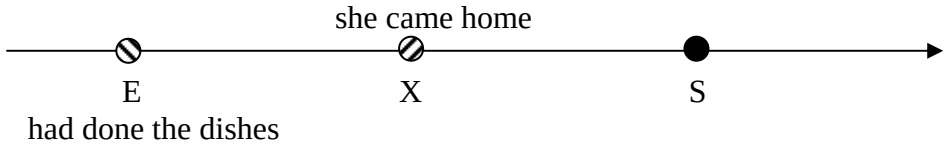
3. On REICHENBACH's approach to tense

The underlined tense form in (8)a is a pluperfect. It denotes a time span prior to the event of coming home. When uttered *out of the blue* like in (8)b, the pluperfect sentence becomes impossible. The meaning of the pluperfect must be analysed relative to a point in time that is before the point of speech. A temporal scheme for (8)a is given in (8)c. "X" stands for the point in time relative to which the time expressed by the pluperfect is evaluated.

(8) a. By the time she came home, he had already done the dishes.

b. *He had already done the dishes. (*out of the blue*)

c.



"X" has been defined very differently. We find its notion among many other grammars in PAUL (1886):

> „Die kategorie des tempus beruht auf dem zeitlichen verhältnis, in dem ein vorgang zu einem bestimmten zeitpunkt steht. Als solcher kann zunächst der augenblick genommen werden, in dem sich der sprechende befindet und so entsteht der unterschied zwischen vergangenheit, gegenwart und zukunft, welchem die grammatischen kategorien perfectum, praesens, futurum entsprechen … Statt der gegenwart kann nun aber ein in der vergangenheit oder in der zukunft gelegener punkt genommen werden, und zu diesem ist dann wieder in entsprechender weise ein dreifaches verhältnis möglich. Es kann gleichzeitig, vorangegangen oder bevorstehend sein. Die gleichzeitigkeit mit einem punkte der vergangenheit hat ihren ausdruck im imperfectum gefunden, das ihm vorausgegangene wird durch das plusquamperf. bezeichnet." PAUL (1886:228 – 229)
> 'The category of tenses is based on the chronological relationship of an event to a certain point in time. The first such moment to be considered is the moment at which an utterance is made; thus, the difference between the past, the present and

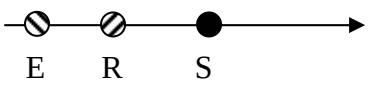
> the future can be delimited, corresponding to the grammatical categories of past, present and future tenses. However, instead of the present one can take a point of time in the past or in the future, and a threefold relationship to this point is similarly possible. It can be concurrent, preceding or coming. Concurrence with a point in the past has found its expression in the preterit, that which precedes is expressed by the pluperfect.'

Yet it is not clear which tenses include a category "X" and which tenses only consist of two points in time, the time of the eventuality and the moment of speech. REICHENBACH (1947/1966) was the first to develop a consistent temporal system that analyses all (English) tenses as relations of three points in time.[2] REICHENBACH distinguishes between an event time (E), a speech time (S) and a reference time (R). (R) corresponds to what we called "X" so far. (E) is the point in time at which the event takes place, an utterance is made at (S) and (R) is the point in time relative to which (E) is located.[3]

> "From a sentence like "Peter had gone", we see that the time order expressed in the tense does not concern one event, but two events, whose positions are determined with respect to the point of speech. We shall call these time points the *point of the event* and the *point of reference*. In the example the point of the event is the time when Peter went; the point of reference is a time between this point and the point of speech. In an individual sentence like the one given it is not clear which time point is used as the point of reference. This determination is rather given by the context of speech"
> REICHENBACH (1966:288)

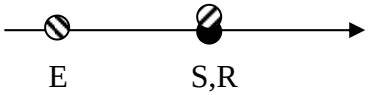
REICHENBACH (1947/1966) explicitly assumed the existence of the reference time in all English tenses. REICHENBACH's tense system of English is as follows:

(9) a. Past perfect



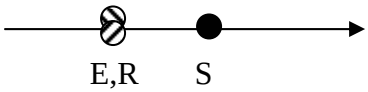
I had seen John.

b. Present perfect



I have seen John.

c. Past tense



I saw John.

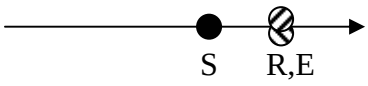
d. Present tense

I see John.

---

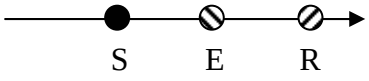
2 I will quote from the edition from 1966.
3 In the following I treat points in time and time spans equally.

e. Simple future



I will see John.

f. Future perfect



I will have seen John.

As we can see, each tense consists of a certain individual configuration of (S), (R) and (E). While it seems intuitively clear that a notion like reference time is needed for tenses where "X" is distinct from both (E) and (S), the assumptions about its presence in the tenses where "X" falls together with (E) and/or (S) differ widely (cf. HAMANN (1987) for a careful and detailed discussion on that question). In the following, I will limit myself to a discussion on the definition of reference time.

4. Different notions of the *reference time*

The notion of reference time is hard to explain. Unfortunately, we do not find a clear cut definition in REICHENBACH (1947/1966). It is a paradox that the most influential notion within temporal semantics turns out to be rather vague and not well understood. The REICHENBACHian notion of reference time has often been modified to various extents (e.g. BÄUERLE (1979), COMRIE (1981/1985), EHRICH (1992), FABRICIUS-HANSEN (1986), HORNSTEIN (1990), THIEROFF (1992) and many more). For a discussion of some interpretations, I refer the reader once more to HAMANN (1987) and also to THIEROFF (1992:80 – 87). To avoid repetition, I limit myself to some short remarks.

Scholars like HINRICHS (1986), KLEIN (1992/1994) and MUSAN (2002) make it a sort of psychological point of view of the actual speaker, others such as PARTEE (1984) claim that it does not belong to the meaning of the given tense. KAMP & ROHRER (1985:59) see the reference time as an obligatory point in time of all tenses relative to which the event time is located.

KLEIN (1992/1994) proposes a modified REICHENBACHian approach to tense that has become very popular and that has been adopted by many scholars. KLEIN (1992/1994) distinguishes between a topic time, a *situation time* (=Tsit) and *time of utterance* (=TU). The latter corresponds to REICHENBACH's event time (E) and speech time (S). The topic time (=TT) is "the time for which the particular utterance makes an assertion" (KLEIN (1994:37)). The topic time is introduced by the finite verb. But KLEIN's topic time is problematic, because it is not possible to have multiple occurrences of the topic time, because the topic time is introduced by the finite verb. Consider the double perfect in (10).

(10) In dem Augenblick fühlte er sich am linken Arm ergriffen und zugleich einen
At that moment felt he himself at-the left arm grabbed and at-the-same-time a

sehr heftigen Schmerz. Mignon hatte sich versteckt gehabt und ihn in den
very splitting pain. Mignon had herself hidden had-past-participle and him in the
Arm gebissen. (German)
arm bitten
(J.W. Goethe, *Wilhelm Meisters Lehrjahre*, cited after EROMS (1984:346))[4]
'At that moment he felt someone grab his arm and, at the same time, a splitting pain. Mignon had been hiding and had bitten him in the arm.'

(10) displays the following temporal order: Mignon hides herself, then she bites him and he feels pain. The order is derived by the meaning contribution of the involved tenses. The double pluperfect expresses that the hiding took place before she bites him. The latter is expressed by a pluperfect sentence.
Hence, the event time of a pluperfect sentence serves as "X" for a double pluperfect. And this pluperfect is also evaluated relative to the past tense sentence *fühlte sich ergriffen und zugleich einen heftigen Schmerz* 'he felt someone grab his arm and, at the same time, a splitting pain'. In (10), this is the point in time at which he feels the pain. The past tense sentences serves as "X" for the pluperfect. Hence, there are two "X"s involved in the temporal interpretation of a double pluperfect:

(11) E < X < X < S

If we define "X" as KLEIN (1994:37) as "the time for which the particular utterance makes an assertion" or as "the time span to which the claim made on a given occasion is constrained". (KLEIN (1992:535)), we have to treat the two "Xs" in (10) differently, because this definition excludes multiple occurrences of the *topic time*.
Another problem is the often made statement that the *reference time* or *topic time* is a subjective speaker oriented point of view. Whatever the definition of the "reference time point" or "X" is, it must allow "X" to contribute to truth conditions. Consider the following pair of examples from HAMANN (1987:32f):

(12) a When Thelma hurried past the bakery, she breathed a sigh of relief.
b When Thelma had hurried past the bakery, she breathed a sigh of relief.

If (R) was irrelevant for truth-conditions, one would not be able to account for the temporal differences between (12)a and b. Both the past perfect and the past tense would only express that an event time is located before the moment of speech. Then, it could not be stated that in (12)a, Thelma breathed a sigh of relief while she was hurrying past the bakery and that in (12)b, she breathed a sigh after having hurried past the bakery. The relevance for truth conditions rules out all approaches stating that (R) is not part of semantics.

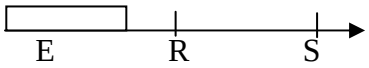
[4] The example is attributed to BEHAGHEL (1924:271).

It seems more accurate to me to define the reference time not as a subjective category in terms of speaker's point of view, but as an objective notion giving it the same theoretical status as the event time and the speech time. I therefore do not adopt the approaches to tense as proposed by KLEIN and MUSAN. We arrive at the following definition:

(13) The reference time (R) is a point in time relative to which the event time is located.

It has also often been discussed whether point of speech, reference time and event time have the status of *points in time* or of *time spans*. It is a trivial fact that some events take more time than others. *An arrival* is a punctual event, while *building a house* is not. REICHENBACH (1947/1966:290) himself speaks of "the time extension of the event" when he treats the English progressive. This can also be seen in his graphical representation of the pluperfect progressive:

(14) I had been seeing John REICHENBACH (1947/1966:290)



Hence, I consider REICHENBACH's three points in time as time spans.[5]
The definition in (13) corresponds to the way REICHENBACH treats (R) in his notation of the English tenses. (R) is treated equally as (E) and (S) (cf. the English temporal system according to REICHENBACH in (9)). But REICHENBACH's text suggests something else. When REICHENBACH (1947/1966:289) comments on *Much have I travelled in the realms of gold* ..., he states "we notice that here obviously, 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." This suggests rather a definition of the reference point as a kind of vantage point where events and states are seen from (cf. HAMANN (1987:32)).
The systematic treatment of the reference time point REICHENBACH (1947/1966) makes in his notation of the English tenses argues for the definition of the reference time point as a point in time relative to which the event time is evaluated. When REICHENBACH speaks about seeing events from the point of reference, this is rather to be understood as a metaphor. This is precisely the point KAMP & ROHRER (1985) make. They state that the indispensable presence of the reference time point in all tenses

[5] The main problem for the assumption that (E) and (R) and maybe also (S) are time spans is that time intervals allow for many more relations between (E), (R) and (S) than (strict) precedence and coincidence (Brenda Laca (pc)).
As will become clear in chapter 2, this is (at least) no problem for the analysis of the perfect tenses.
For the moment, I will leave the question whether (S) is a time span or atomic open. It is intuitively clear that while we are speaking, time moves on. So, it is plausible that (S) is an interval. On the other hand, an interval based approach to (S) makes it probably hard to restrict the boundaries of (S).

> "reflects the intuition that each tensed sentence presents the state or event it describes from a certain vantage point. This vantage point may, but need not be the speech time, and it may, but need not coincide with the time of the described state or event; but whether or not it coincides with either of these times, it must, in each and every case a tense is interpreted, be located somewhere."
> KAMP & ROHRER (1985:59)

A related important question is to know what can serve as a "temporal referent" for the reference time. There are several candidates. The reference time can either refer to the time of another contextually given eventuality or to a contextually salient time span. This time span can either be the moment of speech as in (15) or a time span referred to by another temporal expression such as the adverbial in (16).

(15) Peter has arrived.
(16) At four o'clock, Carla had already left the office.

As a rule, (R) must be resolved to a co(n)textually salient time span. In this respect, (R) differs from (S) and (E). (S) is an indexical discourse referent that always refers to the time span at which an utterance is made. All participants of a conversational event share the moment of speech. (S) is conversational common ground and as such automatically known by the speaker and the hearer. (E) always denotes the time of an event, state or process. Its exact location in time might be known or not, all that matters is that all events are somewhere located on the time axis.
There is a further problem concerning the definition of (R). REICHENBACH (1947/1966) speaks of the permanence of the reference point:

> "When several sentences are combined to form a compound sentence, the tenses of the various clauses are adjusted to one another by certain rules which the grammarians call the rules for the *sequence of tenses*. We can interpret these rules as the principle that, although the events referred to in the clauses may occupy different time points, the reference point should be the same for all clauses – a principle which, we shall say, demands *the permanence of the reference point*. Thus, the tenses of the sentence, "I had mailed the letter when John came and told me the news" may be diagrammed as follows:
>
> | | | | | | |
> |---|---|---|---|---|---|
> | 1st clause: | E_1 | - | R_1 | - | S |
> | 2nd clause: | | | R_2, E_2 | - | S |
> | 3rd clause: | | | R_3, E_3 | - | S |
>
> It would be incorrect to say: "I had mailed the letter when John has come"; in such a combination, the reference point would have changed."
> REICHENBACH (1966:293)

But this cannot be the full story. HINRICHS (1986) and PARTEE (1984) suggest that the reference point cannot be permanent. In the following series of past tenses, there is clearly a progression in time and the reference time point

must therefore move. If it did not move, the event time and the reference time of the eventualities below could not be simultaneous which would contradict the meaning of the past tense as in (9)c.

(17) Martha öffnete das Fenster (e_1), um Luft ins Zimmer zu lassen, sah mich
Martha opened the window to air into room to let saw me
durch den Regen hasten (e_2) und stand mit ausgebreiteten Armen da (e_3), als
through the rain rush and stood with open arms there when
ich in den Hausflur trat (e_4). In diesem Augenblick war mein Besuch im
I in the hallway entered. At that moment was my visit in-the
Waldgefängnis vorbei (e_5). Wir küssten uns auf jeder zweiten Stufe bis zu
prison-in-the-forest over. We kissed each-other on every other step up to
ihrem Treppenabsatz (e_6); ich war eine Stunde vor der verabredeten Zeit
her landing; I was one hour before the agreed time
gekommen (e_7), aber keine Sekunde zu früh. Ihre Mutter fragte
come-past participle but not a second too soon. Her mother asked
durch eine Tür hindurch (e_8), wer gekommen sei, da schob Martha
from-behind a door, who come is, and pushed Martha
mich in die Küche (e_9), nahm meine rechte Hand (e_{10})
me in the kitchen took my right hand
und hielt sie ihrer Mutter zur Begrüßung hin (e_{11}). (German)
and held it her mother to-the greeting out
Jurek Becker: *Bronsteins Kinder*. Frankfurt: Suhrkamp (1986[1]), 107.

'Martha opened the window to get some air into the room, saw me rushing through the rain and stood there with open arms when I entered the hallway. At that moment my visit to the prison in the forest came to an end. We kissed on every other step up to her landing; I had come one hour before the agreed time, but not a second too soon. From behind the door, her mother asked who had come, and then Martha pushed me into the kitchen, took my right hand and held it out to her mother in greeting.'

Therefore, HINRICHS (1986) and PARTEE (1984) argue for a conception of progression in which an event sentence introduces not only an event time into the discourse, but also a reference time which serves as the default location for the next introduced eventuality. States do not introduce a reference time; they inherit their reference time from their actual context. This explains the often observed fact that in narration states retard the story while events put the story forward. The simplicity of these approaches is very attractive, but there are some problems (cf. KAMP et al (2004) for further discussion):

(18) Max fell. John pushed him.
(19) John turned off the light. The room was pitch dark.

In (18), the pushing must have occurred before Max fell. In (19), the darkness is the result of turning off the light and cannot already have obtained before the turning off the light. On PARTEE's and HINRICH's account, the falling would have preceded the pushing, since the reference time of the falling serves as anchoring point for the event in the next sentence and the predicted reading of

(19) would be that the dark room could not be the result of the turning the light off. Therefore, these analyses fail.
To account for temporal progression, Hans KAMP (KAMP & ROHRER (1985)) proposed that REICHENBACH's reference time must be split up into a reference time that operates on the discourse level and an intrinsic reference time being part of the meaning of the tense in question. These are called *reference time point* (Rtp) and *temporal perspective point* (Tpt). Tpt corresponds to what REICHENBACH called reference time, it is the intrinsic unchangeable reference time that serves to locate an (E) in time. This can be demonstrated by the following example:

(20) Fred arrived at 10. He had got up at 5; he had taken a long shower, had got dressed and had eaten a leisurely breakfast. He had left the house at 6:30. (KAMP & REYLE (1993:594))

In (20), the past tense sentence *Fred arrived at 10* serves as Tpt relative to which all pluperfect sentences are evaluated. To avoid terminological confusion, I keep REICHENBACH's term (R) for what KAMP and co-authors call Tpt. The temporal order of the pluperfects is derived at the discourse level by the anaphoric relations the tenses establish to one another. KAMP et al state that "the antecedent discourse gives an Rtp in relation with which the following tense form establishes an anaphoric relation" To avoid terminological confusion with (R), I call KAMP's (Rtp) (D)*iscourse time point*. If one takes the notion of (D) to be given, the analysis of (20) becomes easy. $(D)_2$ precedes $(D)_3$ which precedes $(D)_4$ and so on.
KAMP, van GENABITH & REYLE (2004) define (D) as always referring to an event time, but it can also refer to other points in time.
Consider (21), for instance. It means that at some point in the past, the glasses were lost, but luckily found again:

(21) Ich habe meine Brille verloren (German)
I have my glasses lost
und heute Morgen erst wieder gefunden.
and today morning particle again found
'I lost my glasses and didn't find them until this morning.'

(22) means something different: at some point in the past, the glasses were lost. At the moment of speech, they are still lost, because I am looking for them. This is the target state reading.

(22) Ich habe meine Brille verloren. (German)
I have my glasses lost
Ich finde sie einfach nicht.
I find them simply not
'I have lost my glasses and simply cannot find them.'

A possible way to account for these two interpretations is to state that in (21), the second tense *habe gefunden* 'have found' takes the event time of the first tense *habe verloren* 'have lost' as a (D). In (22), it is more plausible to assume that the time at which the target state of loosing the glasses obtains serves as a (D) for the localisation of (E) of the second tense. This time is the reference time (R) introduced by the present perfect.
The emerging generalisation is as follows:[6]

(23) Restriction for (D):
(D) can either be resolved to (E) or (R).

It follows from (23) that the choice whether to resolve (D) to (E) or (R) only makes sense if (E) or (R) are not simultaneous. This is the case in the perfect tenses. As a preliminary conclusion, we define (D) and (R) as follows:

(24) Reference time (R): (KAMP et al (2004): Tpt)
(R) is a point in time relative to which (E) is located.

(25) Discourse time point ((D)): (KAMP et al (2004): Rpt)
(D) is a point in time set by an antecedent discourse in relation with which the event time of the following sentence establishes an anaphoric relation.

(D) will be used as a tool to make predictions for temporal structures within texts without specifying these relations in terms of anteriority, simultaneity or posteriority. From what we said above during the discussion of the series of pluperfects in (20) it remains unclear how the temporal order of the different pluperfect sentences comes about. Why does the event of having breakfast follow the event of taking a shower? (D) on itself does not provide any answer to this question.
The temporal order between eventualities in a coherent text depends on other functions such as tense, temporal adverbials (SANDSTRÖM (1993) and many others), situation type aspect (HINRICHS (1986), PARTEE (1984), DRY (1983), DOWTY (1986) and many more) and rhetorical relations between the eventualities involved (cf. LASCARIDES & ASHER (1993)). This makes (D) some kind of "vacuous" notion. (D) is a reflex of the factors just quoted, but, and this is the important part, (D) can be used as a tool to make very simple general predictions about temporal progression without having to refer to the very complex interaction of tense, situation and viewpoint aspect, other temporal relations and the rhetorical relations the involved eventualities enter. This is a very important advantage (D) provides.
As will become clear in chapter 5, we need a tool such as (D) to make predictions for the present perfect readings. Those predictions would be

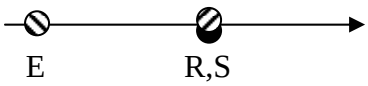
[6] As will become clear in the chapters 2 and 5, we have to modify the generalisation in (23) when we have developed the meaning of the present perfect in more detail.

impossible without (D). The interpretation of tenses in texts will become more explicit in chapter 5.

5. Why there is a reference time in the present perfect

In the previous sections, I argued following REICHENBACH (1947/1966) and many others for the presence of a reference time point in the pluperfect. The question whether all tenses are to be analysed as having a reference time was kept apart. As already stated, I cannot discuss this question here, but, as this is essentially a study about the present perfect, I have to say something about the presence of the reference point in the present perfect. The meaning REICHENBACH assigned to the English present perfect is repeated from (9)b as (26).

(26) English Present perfect



Contrary to the pluperfect, the reference time is not distinct from the point of speech in the English present perfect. As (R) is "invisible", its presence can be questioned.

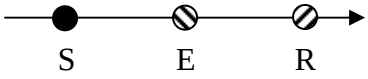
There are two arguments that favour the existence of (R) in the present perfect. The first is a methodological one; the second is an empirical argument from German and Swedish. First, given the morphological parallels between the present perfect and the pluperfect, it is wishful to analyse them by the same mechanisms. Both tenses are built from an auxiliary verb and a past participle, only the tense of the auxiliary differs. Hence, it makes sense to assume the presence of a reference time in the present perfect as there is a reference time in the pluperfect. Second, as we will see shortly in more detail, there is a future use of the present perfect in Swedish and German. It can be used as a future perfect expressing that the time of the main verb is before a point in time in the future. In (27), for instance, the conference will have finished by tomorrow 3 p.m.

(27) a. Morgen um drei hat die Konferenz (bereits) aufgehört. (German)
Tomorrow at three has the conference (already) ended

b. Imorgon klockan tre har konferensen (redan) slutat. (Swedish)
Tomorrow clock three has conference-the (already) ended
'The conference will have ended by tomorrow three o'clock.'

Using a REICHENBACHian notation, this can be represented as follows:

(28)



Because of uses such as (27) scholars like THIEROFF (1992) assume that the German present perfect denotes an event time that is prior to a reference time. The reference time is said not to precede (S). Hence, the reference time can be distinct from the point of speech. It is intuitively clear that if we want to account for uses as (27), we have to make use of the reference time. For comparative reasons we will also assume the presence of a reference time in the English present perfect.
To sum up, in this section we saw that we need a notion reference time to analyse the perfect tenses. Further, I showed that the reference time must be defined in the REICHENBACHian way as a point in time relative to which (E) is located.

6. On tense again

As stated in section 2, tense is a grammaticalized verbal category that indicates the temporal position of an event or a state relative to some other time. In sections 3 to 5, the REICHENBACHian approach to tense was introduced and defended. But somehow, it is not clear what kind of temporal relation tense denotes exactly. Is it the relation between (E) and (R) or (E) and (S) or (R) and (S)? The question is less trivial as it appears to be at first glance and for a long time, opinions differed widely how tense should be defined in REICHENBACH's terms. It has now become some kind of standard to define tense as the relation between (R) and (S) (cf. KLEIN (1994)) which is – to a certain amount – quite surprising as it against our basic intuitions. We perceive the core meaning of tense as (E) relative to (S). But the following example suggests that this view is problematic:

(29) They found Barschel in the bath tube. He was dead. (MUSAN (2002:7))

If we defined tense as the relation between (E) and (S), the above sentence would not be possible. The past tense locates the event time of Barschel being dead before the moment of speech. As we know from irreversible states like being dead, Barschel must also be dead at the moment of speech. This makes the choice of the past tense in (29) instead of a present tense problematic.
If we consider tense as the relation between (R) and (S), this problem can easily be resolved. The relation between (E) and (S) is then indirect. (E) is evaluated relative to (S) via (R). In cases like (29), the past tense suggests that (E) holds at (R). As the relation of (E) and (R) is indirect, nothing is said about whether (E) still obtains at (S). This rather depends on the event or state denoted by the main verb. We thus arrive at the following definition of tense:

(30) Tense is the relation between (R) and (S).

Further, (30) provides indirect evidence for the assumption that all tenses contain a reference time (R). Without (R), the verbal form in question does not count as a tense.

7. On the formal implementation of tense

The framework I use in this thesis is *Discourse Representation Theory* (DRT) in the version by KAMP, van GENABITH & REYLE (2004). The reasons why I choose DRT (and especially this version of DRT) to represent natural language semantics will become clear in chapter 5.

DRT is an extension of truth-conditional and model theoretic approaches to natural language semantics. The main concern of DRT is to analyze the contribution of isolated sentences to the *discourse* in which they appear. According to DRT, truth-conditions therefore apply to the discourse and not to the (isolated) sentence.

One of the main interests of DRT are intersentential connectors such as *discourse anaphors*. These give rise to *discourse coherence*. *Discourse anaphors* take their interpretation from another item of the surrounding discourse. Famous examples are the pronouns *he* and *it* in the following sentence:

(31) A farmer owns a donkey. He beats it.

The references of *he* and *it* can only be identified by considering the context of the sentence in which they occur. *He* refers to *a farmer* and *it* to *a donkey*. In DRT, this is treated in the following way.

The representations used in DRT are called *Discourse Representation Structures* (DRS). Simple DRSs consist of a set of *discourse referents* and a set of conditions on those *discourse referents*. The set of *discourse referents* is often referred to as the *discourse universe*. Referential expressions such as *a farmer* and *a donkey* introduce *discourse referents* into the DRS. The *discourse referent* introduced by *a farmer* has precisely the properties our knowledge of the meaning of *a farmer* leads us to assume. These are being a farmer, being human etc. Pronouns like *he* or *it* are introduced to the DRS with the requirement to find a suitable discourse referent from which they get their interpretation (suitable means to find a discourse referent with identical grammatical features like number, gender, person etc). DRSs are often represented by the „box notation“. The discourse universe is written in the upper cell of the structure. The set of conditions is in the lower one. A simplified DRS for (31) is (32):[7]

[7] Abstracting away from tense, aspect etc.

(32)

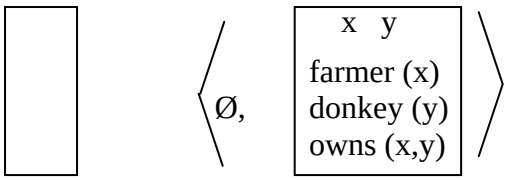
x y u v
farmer (x)
donkey (y)
owns (x,y)
u = x
v = y
beats (u,v)

Following much recent work in DRT (cf. KAMP, van GENEABITH and REYLE (2004) for instance), I treat anaphoric expressions as carrying a presupposition that there is a suitable anaphoric antecedent in the discourse. DRSs are constructed in the following way:

> „In the new version of DRT DRS construction proceeds in two stages: a preliminary sentence representation is constructed during the first stage and during the second stage the presuppositions of the sentence, which are explicitly represented in the preliminary DRS, are verified in their respective contexts, with or without context accommodation; when presupposition verification is successful, the non-presuppositional remainder of the preliminary representation is merged with the context representation (or with the representation of the accommodated context). The simplest preliminary representations for sentences with presuppositions are of the form <P, D> e, where D (a DRS) is the non-presuppositional part of the representation and P is a set of representations of the presuppositions of the sentence, where these representations also take the form of DRSs. In more complicated cases the set P may itself consist of preliminary DRSs (as a presupposition may rest in its turn on other presuppositions) and D too may have a more complicated structure which involves additional presuppositions.“ KAMP, van GENEBITH & REYLE (2004:15)

The „box notation“ is thus as follows. (33) is the preliminary DRS for the first sentence in (31).

(33)



context preliminary DRS

I assume that indefinite NPs do not carry a presupposition. This distinguishes them from definite NPs. As there is no discourse referent which yields a presupposition (both *a farmer* and *a donkey* are indefinites), the left side of the preliminary DRS remains empty. This is represented by „Ø“. Hence, there is no presupposition to be resolved. The brackets around Ø and the DRS for *A farmer owns a donkey* indicate that the presupposition belongs to this sentence. For the sake of simplicity, I assume that *a farmer owns a donkey* is uttered *out of the blue*, that is without any appropriate preceding context. I ignore here default

rules for *out of the blue* sentences. The left side in (33) represents the context, which is in case of (31) empty.
The context in (33) can be merged with the preliminary DRS. This gives rise to the following DRS:

(34)

x y
farmer (x)
donkey (y)
owns (x,y)

(34) is now the new DRS relative to which the second sentence in (31) is interpreted. *He beats it* contains two anaphoric pronouns. Hence, there are two presuppositions to be resolved to. *He* requires a suitable antecedent with the property male or neutral between female and male. *It* requires an antecedent with a neutral interpretation between female and male. In (35), two such suitable antecedents are provided by the context. *Farmer* is male; *donkey* is neutral with respect to male and female. Thus, the presuppositions can be satisfied by accommodating male (u) and fe/male (v) to context.

(35)

x y
farmer (x)
donkey (y)
owns (x,y)

context

⟨ { | u v
male (u)
fe/male (v) | } | u v
beats (u,v) | ⟩

preliminary DRS

The presupposition resolution gives the following. „u“ is resolved to „x“ and „v“ is to „y“.

(36)

x y
farmer (x)
donkey (y)
owns (x,y)

+

u v
beats (u,v)
u = x
v = y

=

x y u v
farmer (x)
donkey (y)
owns (x,y)
beats (u,v)
u = x
v = y

The final DRS for (31) is hence as follows:

(37)

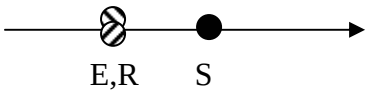
x y
farmer (x)
donkey (y)
owns (x,y)
beats (u,v)
u = x
v = y

We will now turn to the discourse representation of temporal reference. The mechanisms of the representation of temporal anaphoric relations are basically the same as those of the representation of nominal reference. This is not very surprising as there are many parallels between nominal and temporal reference. Like pronouns, tenses can have deictic and anaphoric uses (cf. PARTEE (1973)). The following is an illustration.

(38) Peter betrat die Bar. Er bestellte einen Whisky. (German)
Peter entered the bar he ordered a whisky
'Peter entered the bar. He ordered a whisky.'

(38) contains a sequence of past tenses. The described eventualities do not occur at unrelated times in the past: Peter first enters the bar and then orders a whisky. The anaphoric properties of the two tenses are therefore intersentential. The event time of ordering a whisky is interpreted relative to the event time of entering the bar. In this respect, temporal discourse relations cannot simply be dealt with in terms of co reference (as this is the case with pronouns). A detailed proposal how to determine such discourse relations was given above and won't be repeated here. We now turn to their representation within DRT. The DRS algorithm is the same as for nominal anaphoric relations.
In section 3, the past tense was assigned the following meaning (cf. (9)c):

(39) Past tense



The DRS for the past tense is thus as follows, where " , " indicates that (E) obtains at (R):

(40)

S^8 R E
R < S
E, R

We now turn to the DRSs for (38). The first sentence *Peter betrat die Bar* is represented as follows. e stands for eventuality. $e_1 \subseteq E_1$ indicates that e_1 obtains at (E_1).

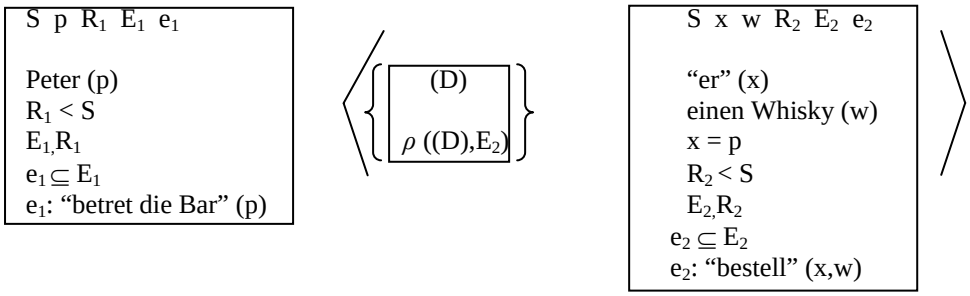
(41)

S p R_1 E_1 e_1
Peter (p)
R_1 < S
E_1, R_1
$e_1 \subseteq E_1$
e_1: "betret die Bar" (p)

[8] (S) is an indexical discourse referent, see KAMP, van GENEABITH and REYLE (2004:75) for further discussion on (S).

The past tense denotes an event time (E_1) which holds at the reference time (R_1). (R_1) is before (S). *Betret die Bar (p)* is an eventuality (e_1) which obtains at (E_1). Eventuality is used as a cover term for states, processes and events. Again, I ignore default rules for *out of the blue sentences*. (41) serves now as a *context* relative to which the second sentence *er bestellte einen Whisky* is interpreted. The DRS is as follows (nominal expressions are neglected for the sake of simplicity):

(42)



presuppositional part | non-presuppositional part

context | preliminary DRS

The first past tense sentence has the meaning $E_1,R_1 < S$ and the second $E_2,R_2 < S$. We then find the eventualities (e_1) and (e_2). (e_1) is the event of Peter entering the bar, (e_2) of him ordering a whisky. This is represented by e_1:"betret die Bar" (p) and e_2:"bestell" (x,w). (e_1) obtains at the event time (E_1) which is represented as $e_1 \subseteq E_1$. P stands for Peter, w for whisky and x represents the pronoun "he".
The meaning of the two sentences is given in the two "big" boxes. The temporal relation between the two event times (E_1) and (E_2) consists of a presupposition yielded by the second sentence. The presuppositional part is in the "little" box. This presupposition must be resolved in order to fix the temporal relation between the eventualities (e_1) and (e_2). This is where the *discourse time point* (D) comes into play. In section 4, (D) was defined as follows:

(43) Discourse time point ((D)):
(D) is a point in time set by an antecedent discourse in relation with which the event time of the following sentence establishes an anaphoric relation.

It follows that (D) belongs to the presuppositional part. The resolution of the presupposition consists of finding specifications for (D) and ρ. ρ is the temporal relation between the event time (E_2) and (D). (D) has to be linked by an anaphoric presupposition resolution to the event time or reference time of an element from the context. For the first sentence, there is no discourse context. The relation between (E_1) and (E_2) is the relation of succession, so (E_1) must

precede (E_2).[9] (D) must therefore be resolved to (E_1) and ρ is a "prior-to" relation. As (D) is resolved to (E_1) and ρ is specified as "<", we can now incorporate the presupposition into the representation of the second sentence. The final representation for (38) is therefore as follows:

(44)

S p x w R_1 E_1 R_2 E_2 e_1 e_2
Peter (p)
$R_1 < S$
E_1, R_1
$e_1 \subseteq E_1$
e_1: "betret die Bar" (p)
$E_1 < E_2$
er (x)
einen Whisky (w)
x = p
$R_2 < S$
E_2, R_2
$e_2 \subseteq E_2$
e_2: "bestell" (x,w)

8. Conclusion

In this chapter, I defended a REICHENBACHian approach to tense. Tense was analysed as the relation that holds between (R) and (S). (R) is a point in time/time span relative to which (E) is located. I argued against KLEIN's topic time as it turned out to be problematic in several respects.

I accounted for temporal progression by assuming the discourse based approach to tense first developed in KAMP & ROHRER (1985). Hence, a distinction was made between the reference time point (R) relative to which (E) is located and the discourse time point (D). (D) is set by an antecedent discourse in relation with which the following event time establishes an anaphoric relation.

[9] I bypass the question why the relation between (E_1) and (E_2) is a succession relation. In chapter 5, we will discuss some of the principles that are responsible for the temporal relations between event times.

Chapter 2: *the components of the perfect meaning*

> "Perfektum är ett tempus vars innebörd är svår att bestämma."
> (The perfect is a tense whose meaning is difficult to determine.)
> Rolf Pipping (1936:143)

1. The present perfect

In the following I speak of the *present perfect* as a perfect containing an auxiliary in the present tense. In German, there are two perfect auxiliaries *sei-* (to be) and *hab-* (to have). English and Swedish only have *to have* and *ha-* (to have). The *pluperfect* is a perfect built from a past tense and the past participle, the *infinitival perfect* contains *hab-* or *sei-* in the infinitive plus the past participle. The term *perfect* is used to cover these three perfects. I call the perfect participle *past participle.* This is a cover term for all infinitival verbal and adjectival forms being built with the past participle morphemes.
The purpose of this chapter is to analyse the meaning of the present perfect. The contributions I want to make to the ongoing discussion are:

- **Monosemy:** The German present perfect has a single uniform meaning as there are contexts in which it can not substitute the past tense. In other words: although it can replace the past tense very often, it has not a past tense like meaning. This will be shown in section 2.2. I will also assume a single uniform meaning for the English and Swedish present perfect.
- ***ExtendedNow* meaning:** As the behaviour of the present perfect with *since-adverbial*s shows, the present perfect introduces a time interval that contains the event time. This interval is called *ExtendedNow-interval* or *Perfect Time span* and will be explored in section 8.
- **Aspectuality:** It will be shown that the perfect does not denote an aspect and that it isn't a tense-aspect combination neither (see section 5.1).
- **Stativity:** Section 9 argues that the present perfect sometimes denotes a (lexical) post state and sometimes not. It will be shown that there is a correlation between the *perfect time span* and the stativity of the perfect.

2. The German data

2.1 The data

The German present perfect is a periphrastic tense that is built from an auxiliary in the present tense and a past participle. There are two perfect auxiliaries in

German, *hab-* (have) and *sei-* (be). As already mentioned, auxiliary selection will not be analysed in this study.
In German, the present perfect can be used to express a kind of current relevance or result of a past event for the moment of speech:

(1) Ich habe den Führerschein der Klasse zwei gemacht, (German)
I have the driver's-license of class two gotten;
also darf ich LKWs fahren.
therefore, am-allowed I trucks drive
'I have a class two driver's license; therefore, I am allowed to drive trucks.'

It can be combined with adverbials denoting pastness. As we will see shortly, this is not possible in English and Swedish.

(2) Sigurd ist gestern angekommen. (German)
Sigurd is yesterday come
'Sigurd came yesterday.'

In Southern German, the past tense is – with the exception of auxiliaries and some modals – not used any longer. Speakers of Southern German clearly prefer to express (3) by (2). The present perfect has replaced the past tense in those regions. I call this use the preterite use. As HENNIG (2000:29) states, native speakers of German are often not able to tell the difference between the present perfect and the past tense.[1]

(3) Sigurd kam gestern an. (German)
Sigurd came yesterday particle

The present perfect can be used to express that an eventuality obtained in the recent past:

(4) Véronique hat gerade angerufen. (German)
Véronique has (just) called

In German, the present perfect can be used as a futurate perfect. The most plausible reading (5) has is that the conference will have ended by tomorrow. Hence, its end is after the moment of speech.

---

[1] HENNIG (2000:29-31) presents a questionnaire where 182 native speakers of German were asked about their intuitions concerning the famous last sentences of Goethe's novel: „*Die Leiden des jungen Werther*". The original sentence is in (1), (2) is the modification by HENNIG.

(1) Handwerker trugen ihn. Kein Geistlicher hat ihn begleitet.
Workman carried him. No clergyman has him accompanied
'Workman carried him. No clergyman attended.'

(2) Handwerker haben ihn getragen. Kein Geistlicher hat ihn begleitet.
Workmen have him carried. No clergyman has him accompanied

HENNIG's results are very interesting. Unfortunately, she does not mention whether her informants come from areas in Germany where the past tense has almost become extinct in oral communication (cf. ABRAHAM & CONRADI (2001) for a recent overview on the German regions where the past tense is still used).

(5) Morgen hat die Konferenz bereits geendet. (German)
Tomorrow has the conference already ended
'The conference will have ended by tomorrow.'

It is highly debated how many meanings the German present perfect has. Does it have two independent meanings, one for the "current relevance" use as in (1) and one for the preterite use as in (2)? Or can it be analysed in terms of one single uniform meaning covering (1) and (2)? This will be the topic in the next section.

2.2 Why the German present perfect does not have a past tense like meaning

Most analyses propose a uniform semantics of the German present perfect. Very often the empirical reasons for assuming one, two or even more meanings of the present perfect are not given. Other analyses propose that the present perfect has two distinct and independent meanings: one for the "current relevance" use as in (1) and one for the preterite use as in (2). The analyses claiming that the present perfect only has one meaning seem to follow the more general assumption about language that total synonyms cannot exist. If the present perfect had exactly the same meaning as the past tense, these two tenses would be synonyms.
KLEIN (2000:362) and RATHERT (2004:43) are, for instance, quite recent examples. Both argue against a multisemous approach that assigns two (or maybe even more) independent meanings to the German present perfect. This set of independent meanings would at least comprise one meaning for the resultative present perfect as in (1) and one for the preterite interpretation like the one in (2). RATHERT, for instance, exclusively motivates her monosemous approach by arguments such as elegance and simplicity. No attempt is made to motivate her analysis from an empirical point of view:

> "Many researchers believe that the German perfect [=present perfect, B.R.] is ambiguous between a Preterite-meaning and a genuine Perfect-meaning. It is always OK to make many distinctions, but for the sake of simplicity I would prefer a theory of the Perfect that can capture all meanings." RATHERT (2004:43)

But arguments such as simplicity, laziness and elegance are not "enough" evidence for a monosemous analysis. Polysemy is something quite familiar in lexical semantics. There is no reason why polysemy should be allowed on the lexical level, but not on any higher level. So why not simply assume that the German present perfect is ambiguous between a past tense like meaning and a perfect meaning? An adequate answer to the question whether the present perfect in German is ambiguous or not, can only be given from an empirical point of view.
Fortunately, there is linguistic evidence that indirectly favours a monosemous approach. If one of the meanings of the present perfect was identical to the

meaning of the past tense, we would expect the present perfect to be able to substitute the past tense in any context. Substitution is, however, not always possible:

(6) Fritz dachte, dass es 8 Uhr war. (German) (STECHOW (1999:98))[2]
Fritz thought that it 8 o'-clock was
'Fritz thought that it was eight o'clock.'

(7) Fritz dachte, dass es 8 Uhr gewesen ist. (German) (STECHOW (1999:98))
Fritz thought that it 8 o'-clock been is
'Fritz thought that it had (already) been eight o'clock.'

(8) Aber am Vormittag hatte sie den Baum zu putzen.
But in the morning had she the tree to decorate
Morgen war Weihnachten. (German) (HAMBURGER (1957:65))
Tomorrow was Christmas.
'But in the morning she had to decorate the tree. Tomorrow was Christmas.'

(9) Aber am Vormittag hatte sie den Baum zu putzen.
But in the morning had she the tree to decorate
*Morgen ist Weihnachten gewesen. (German)
Tomorrow is Christmas been.

(10) Wir kamen über die Autostrada nach Florenz,
We reached via the Autostrada to Florence
das in einem breiten Tal lag. (German) (WUNDERLICH (1970:139))
which in a wide valley laid
'We reached Florence, which was situated in a wide valley, via the Autostrada.'

(11) *Wir kamen über die Autostrada nach Florenz,
We reached via the Autostrada to Florence
das in einem breiten Tal gelegen hat. (German)
which in a wide valley laid has

In (6) the past tense can have the reading, that it already has been 8 o'clock or that it is 8 o'clock when thinking so. The present perfect in (7) only allows for the first reading. (8) and (9) are examples of what has been called "represented speech and thought". These are cases that only occur in written contexts (normally in literary texts but also in newspapers) and the author uses them to quote the thoughts and feelings of his figures. So in (8) the author quotes the figure who thinks that Christmas is on the next day. Note that normally a past tense cannot be used with *tomorrow*. (10) and (11) show a further interesting contrast. An unchangeable property of Florence is that it is in a huge valley. As such the copula sentence contains an individual state. Those are predicates that are true throughout the entire existence of the individual they specify. It has often been observed, e.g. KLEIN (1994) that the past tense only locates temporal information at some time before the time of utterance, but it does not say anything about later points in time. Since it is true that Florence was in that valley before the time of utterance and since nothing is said by the past tense about Florence at the time of utterance, (10) is possible. The present perfect on

[2] The difference is already found in LATZEL (1977a:191).

the other hand in (11) is ungrammatical. Again, this is unexpected from an approach that assigns a past tense meaning to the present perfect.
Empirical evidence suggests that the present perfect and the past tense are not synonyms. I therefore follow accounts that assign a single uniform meaning to the present perfect, because a polysemous approach suffers in this respect from the shortcoming that one of the meanings of the present perfect is a past tense meaning and substitution between the past tense and the present perfect is therefore always possible. The only answer a polysemous approach might give is that in embedded constructions the present perfect is not equal to the past tense and that there is a difference with individual state level predicates that is hard to explain. This is not an attractive solution as it looks stipulated.
The present perfect has therefore a uniform meaning covering the preterite reading[3] whenever it can replace a past tense and a perfect reading, whenever substitution by a past tense is not possible. A systematic account how to distinguish the two readings is proposed in chapter 5.
Let us now turn to Swedish.

3. The Swedish data

The Swedish present perfect can be used to denote some kind of currently relevant or recently happened eventualities.

(12) Jag har tagit fil.kand.examen, (Swedish) (ANDERSSON (1991))
I have taken philosophy candidature exam,
så jag är behörig för tjänsten.
so I am suitable for position-this
'I've taken an exam in philosophy and that's why I'm suitable for this position.'

(13) Véronique har (precis) ringt. (Swedish)
Véronique has (just) called

Like in German, the Swedish present perfect can also be used as a future perfect:

(14) Imorgon har konferensen (redan) slutat. (Swedish)
Tomorrow has conference-the already ended
'The conference will have ended by tomorrow.'

Swedish differs from German in that it does not have the preterite use of the present perfect. It is impossible to combine the present perfect in purely temporal uses with adverbials such as *igår* (yesterday). This is only possible with the past tense.

(15) *Sigurd har kommit igår. (Swedish)
Sigurd has come yesterday

[3] I shall speak of the past tense as a morphological tense and of the preterite reading as a specific reading the German present perfect can have in certain contexts.

(16) Sigurd kom igår. (Swedish)
Sigurd came yesterday

Not all speakers of Swedish seem to agree with the judgement in (15). It is sometimes even claimed that Swedish actually allows the present perfect to be combined with *yesterday* (cf. DAHL (1985), LINDSTRÖM & WIDE (2001)). The uncertainty concerning examples like (15) are eventually due to another use of the Swedish present perfect. In inferential contexts, when used to indicate the author's degree of confidence in a present inference about past events, the present perfect can be combined with adverbials denoting a definite position on the time axis. In (17), the speaker is saying to himself that he might have been sick during the week 27 (in Swedish, we like to count in weeks). With HAUGEN (1972), I call this use the inferential present perfect.

(17) Jag har tydligen varit sjuk veckan 27. (Swedish)
I have probably been sick week-the 27
'I seem to have been sick during the week 27.'

Further, Swedish displays so called *life time effects* with the grammatical subject of present perfect sentences. The Swedish example (18) strongly suggests that Einstein is still alive which is incorrect. Therefore, (18) is odd. Princeton however still exists. Hence, (19) is fine.

(18) *Einstein har besökt Princeton. (Swedish)
Einstein has visited Princeton
'Einstein visited Princeton.'
(19) Princeton har besökts av Einstein. (Swedish)
Princeton has visited-been by Einstein
'Princeton has been visited by Einstein.'

4. The English data

Like in Swedish and German, the English present perfect is used to denote current relevance of past events and to describe eventualities that happened in a recent past. The futurate use is, however, not possible.

(20) I've taken an exam in philosophy and that's why I'm suitable for this position.
(21) Véronique has (just) called.
(22) *Tomorrow, the conference has already ended.

Contrary to German and like Swedish, there is no preterite use of the English present perfect. Instead, speakers must use the past tense.

(23) *Sigurd has come yesterday.
(24) Sigurd came yesterday.

English displays the same *life time effects* with present perfect sentences as in Swedish.

(25) *Einstein has visited Princeton.
(26) Princeton has been visited by Einstein.

There is no inferential present perfect in English:

(27) *I have probably been sick in March.

5. Former approaches to the German present perfect

5.1 Introduction: Tense and aspect approaches to the perfect

The list of analyses of the German present perfect is endless. A summary of these would require a book of its own. Fortunately, there are excellent and quite recent overviews of the literature: EHRICH (1992), THIEROFF (1992) and RATHERT (2004). McCOARD (1978) offers a helpful discussion about the English perfect. A short discussion on Swedish is found in ROTHSTEIN (2005c). To avoid repetition, I limit myself to a very short and selective criticism of the already existing approaches.

Many approaches analyse the present perfect to be ambiguous between a past tense and a "true" perfect meaning (among others: BÄUERLE (1979), FABRICIUS-HANSEN (1986), STECHOW (2002), LÖBNER (2002)).

As shown in section 2.2, these analyses fail, as they claim the present perfect always to be able to substitute the past tense. (6) and (7), repeated as (28) and (29), show that this is not the case.

(28) Fritz dachte, dass es 8 Uhr war. (German) (STECHOW (1999:98))
Fritz thought that it 8 o'-clock was
'Fritz thought that it was eight o'clock.'
(29) Fritz dachte, dass es 8 Uhr gewesen ist. (German) (STECHOW (1999:98))
Fritz thought that it 8 o'-clock been is
'Fritz thought that it had (already) been eight o'clock.'

EHRICH (1992) mainly distinguishes between theories of the present perfect that analyse it as an aspect, as a combined tense-aspect construction or as a tense. I call the first kind of analysis the *perfect-as-aspect-theory,* the second the *perfect-as-combined-tense-and-aspect-theories* and the third the *perfect-as-tense-theory*.

Perfect–as–aspect-theories assume that the perfect denotes a present state resulting from a culminated eventuality or that it denotes perfectivity. Various versions of this approach have been defended (cf. WATERMAN (1956), GLINZ (1970) and HEIDOLPH et al (1981)). These accounts run into problem in cases where the present perfect substitutes the past tense. As the eventuality denoted

by such a present perfect is viewed as ongoing, there can be no perfect or resultant state meaning (see (30)). These accounts are forced to claim ambiguity for the present perfect, but as has been shown in section 2.2 this is not a solution.

(30) Peter hat gerade gespült, als ich heimkam. (German)
Peter has in-the-moment done-the-dishes when I home-came
'Peter was doing the dishes when I got home.'

Perfect-as-combined-tense-and-aspect-theories like the one by EHRICH & VATER (1989), EHRICH (1992) and MUSAN (2002) analyse the present perfect to carry both tense and aspect information. Leaving many details aside, this approach suffers from the same shortcomings as the perfect-as-*aspect-approach*. It can not explain non-aspectual uses of the present perfect or it has to stipulate why aspect is not always denoted by the present perfect.
It is therefore plausible to assume that the German present perfect is a tense and not an aspect. This leaves the third approach. There are – roughly speaking – two different tense based approaches to the present perfect. *Anteriority approaches* claim that the present perfect denotes an event time that is before the reference time. According to *ExtendedNow-theories* the present perfect introduces a time interval containing the event that the present perfect describes. This interval ends – again roughly speaking – at the speech time.

5.2 Anteriority approaches

Most of the approaches claiming an anteriority component in the present perfect analyse it within the tense system developed by REICHENBACH (1947/1966). As shown in chapter 1, REICHENBACH distinguishes between an event time (E), a speech time (S) and a reference time (R). (E) is the point in time at which the event takes place, an utterance is made at (S) and (R) is the point in time relative to which (E) is located. REICHENBACH assigns the following meaning to the English present perfect:

(31) English present perfect: E < R,S

However, there is a major problem for analyses in the spirit of REICHENBACH concerning *since-adverbials*. *Since-adverbials* are only possible with durative verbs. *To fall asleep* is an achievement and as such not durative.

(32) *Véronique schlief seit zehn Minuten ein. (German)
Véronique fell asleep since ten minutes particle

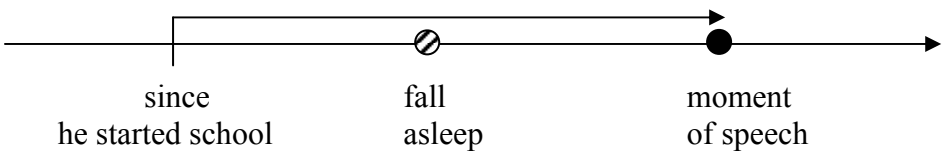
Strangely enough, the above sentence becomes fine when put in the present perfect. A possible solution would be to say that *seit* 'since' selects a kind of result state denoted from the perfect, whatever this result state might look like (cf. section 9.2 for a detailed discussion).

(33) Véronique ist seit zehn Minuten eingeschlafen. (German)
Véronique is since ten minutes fallen-asleep
'Véronique has been asleep since ten minutes ago.'

Saying that *seit* 'since' selects the result state makes however a wrong prediction for the following sentence whose most plausible reading is – informally speaking – the one in (35).

(34) Seit seiner Einschulung ist Mark nur einmal im Unterricht eingeschlafen. (German)
Since his start-of-school is Mark only once in-the class fallen-asleep
'Since he started school Mark only fell asleep once during class.'

(35)



If *seit* 'since' only selects the result state, the event of falling asleep must happen at the moment, when Mark started school. This is not a very plausible reading of (35). We should say that the present perfect delivers a time interval which is selected by *seit* 'since'. This interval is called *ExtendedNow* and will be further developed in the next sections.
To sum up, the discussion around *since-adverbial*s has shown that the present perfect cannot be analysed by an anteriority account. Theories that claim to explain this are called *ExtendedNow-theories*.

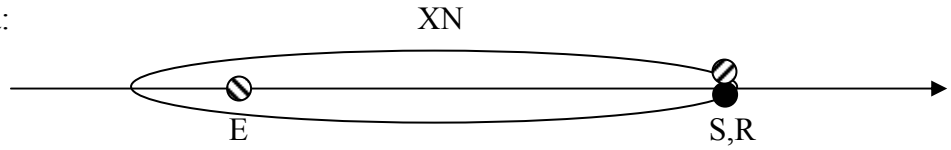
5.3 ExtendedNow-theories

The *ExtendedNow-analysis* goes back to McCOARD (1978), but has also earlier predecessors (notably PICKBOURN (1789)). The *ExtendedNow-interval* (XN) is a time span whose right boundary (RB) ends in case of the present perfect at the moment of speech. The position of its left boundary (LB) is not specified or can be given by adverbials like *since.* Within XN is the event time expressed by the present perfect:

> "The reader who has gone through the preceding chapters will have noted that at several points we argued the merits of an analysis of the perfect as the marker of prior events which are nevertheless included within the overall period of the present, the "*ExtendedNow*", while the preterite marks events assigned to a past which is concluded and separate from the extended present."
> McCOARD (1978:123)

(36) McCOARD (1978): XN[4]

a:



b:

S R E XN LB RB
S = R
XN (LB, RB)
E ⊆ XN
RB = R

6. Former approaches to the Swedish present perfect

The criticism of earlier approaches to the German present perfect is also valid to similar approaches to the Swedish present perfect and won't therefore be repeated here (cf. ROTHSTEIN (2005c) for further discussion).

Contrary to the German perfect, there have been only surprisingly few investigations for Swedish. There are three different approaches to the perfect in Swedish. The *current relevance* analysis claims that the present perfect expresses that a past event is relevant at the moment of speech. This is the most popular analysis and has been pursued by LANDTMANSON (1908), PIPPING (1936), THULSTRUP (1948), NYLUND-BRODDA & HOLM (1972), KINNANDER (1974), ANDERSSON (1991) and LINDSTRÖM & WIDE (2001) among others.

A second approach which is similar to the *anteriority approaches* discussed in the previous section claims that the present perfect introduces a past event time (E) which is unidentified as to time. Certain adverbials cannot be combined with adverbials such as *yesterday*. This has been proposed by ANDERSSON (1989).

A third approach combines the *current relevance* analysis with the *anteriority* approach. It has been proposed among others by SAG (1999), HAUGEN (1972) and EKEROT (1995).

But the current relevance approach cannot explain why the present perfect sometimes does not express an ongoing relevance of a prior event. In (37), the relevance of Newton's theories is explicitly negated.

(37) Newtons teorier har haft stor betydelse i vetenskapens historia, (Swedish)
Newton's theories have had great importance in science-the's history
även om de har upphävts. (translated from McCOARD (1978:41))
although particle they have superseded-been

[4] For expository reasons, I represent McCOARD (1978), IATRIDOU et al (2001), RATHERT (2004) and PANCHEVA & STECHOW (2004) in the notation of my own formalism.

> 'In the history of Science, Newton's theories have been of premier importance, though they have been superseded.'

The anteriority approach fails to explain why certain adverbials denoting a definite position on the time axis can be combined with the perfect. Such an adverbial is *idag* 'today' as shown in (38).

(38) Véronique har ringt idag. (Swedish)
Véronique has called today

A problem for the third approach is that it is not clear when the *current relevance* criteria is used or when the *anteriority feature* holds.
SAG (1999) writes the following:

> „Om man för en förfluten aktion lätt kan föreställa sig en yttre tidsram, en tidrymd inom vilken aktionen kunde ha inträffat eller inom vilken man ser efter om aktionen har inträffat, väljs denna tidsram som tematisk tid. Om tidsramen också innefattar talögonblicket, blir yttrandets tematiska tid nutida och perfekt används." SAG (1999:IV:235)
> If one, for a past action, can easily imagine an outer time frame, a space in time within which the action could have taken place or within which one checks to see if the action has happened, then this space in time is chosen as thematic time. If the space in time also includes the moment of speech, the thematic time of the utterance is the present and the perfect is used.

But this predicts examples such as (39) to be grammatical. *Den här veckan* 'this week' is a frame which contains the moment of speech.

(39) *Den här veckan har jag varit på bio igår. (Swedish)
This here week-the have I been to movies yesterday

To conclude, none of the already existing analyses can account for all uses of the Swedish present perfect.

7. Former approaches to the English present perfect

As for the English present perfect, the same argumentations apply to as for German and Swedish. Again, we find different approaches to the perfect meaning. Most popular are by now anteriority approaches (cf. REICHENBACH (1947/1966) and KLEIN (1992/1994)) and *ExtendedNow-approach*es (see McCOARD (1978), IATRIDOU et al (2001), PANCHEVA & STECHOW (2004) ... (cf. RATHERT (2004) for a recent discussion of approaches to the English perfect). The anteriority approaches are problematic for the same reason they are problematic in German and Swedish.
Only the *ExtendedNow-approach* fully accounts for the present perfect. The relevant argument concerns the behaviour of the perfect with since-adverbials. Achievements do not combine with past tense sentences:

(40) *Véronique fell asleep since ten minutes.

The sentence is fine when used in the present perfect:

(41) Véronique has fallen asleep since ten minutes.

As we have seen around the discussion of (34), it is not possible to assume that *since* only selects some sort of "result state". Rather, *since* selects a time interval containing both the event time and the "result state". This is the *ExtendedNow-interval*.
In the following, we will develop a new approach to the present perfect based on McCOARD (1978).

8. A (new) *ExtendedNow-analysis* for the present perfect

Within the last years, *ExtendedNow-analyses* of the present perfect have become more and more popular (FABRICIUS-HANSEN (1986), STECHOW (1999/2002), RATHERT (2004) and PANCHEVA & STECHOW (2004)).
The XN-analyses as developed by McCOARD (1978) (see (36)) can, however, not be entirely transferred to German and Swedish. It basically says that the present perfect denotes a time interval, the *ExtendedNow-interval* (XN), that is a time span whose right boundary (RB) ends at the moment of speech. The position of its left boundary (LB) is either not specified or given by certain adverbials like *since*. The XN includes the event time. This XN-approach does not capture futurate uses of the German and Swedish present perfect, as it always requires (E) to be located before (S):

(42) a. Morgen bin ich nach London gefahren. (German)
Tomorrow am I to London travelled
'I will have travelled to London by tomorrow.'
b. Imorgon har jag rest till London. (Swedish)
Tomorrow have I travelled to London.
'I will have travelled to London by tomorrow.'

(43) a. Als sie nach Hause kam, hatte er bereits gespült. (German)
When she to home came had he already done-the-dishes
'When she got home, he had already done the dishes.'
b. När hon kom hem, hade han redan diskat. (Swedish)
When she came home had he already done-the-dishes
'When she got home, he had already done the dishes.'

This is not a plausible reading of (42). It rather suggests that something will have already been done in the future by the reference time of the tense of the auxiliary. Another point is that, as (43) shows, the pluperfect cannot be captured by (36). Here the event of *doing the dishes* already happened before she came home.

(E) can therefore not be located after (R) of the tense of the auxiliary. The interval the perfect introduces does not end at (S), but at (R). This makes the term *ExtendedNow* somewhat misleading. I therefore follow IATRIDOU et al (2001) who introduce the term *perfect time span*:

> "There is an interval that we will call the *perfect time span* [...]. The *right boundary* (RB) is set by tense. This means that in the present perfect, RB is at (i.e. includes) the utterance time. In the past perfect, RB precedes the utterance time; in the future perfect, RB follows the utterance time" IATRIDOU et al (2001:195)

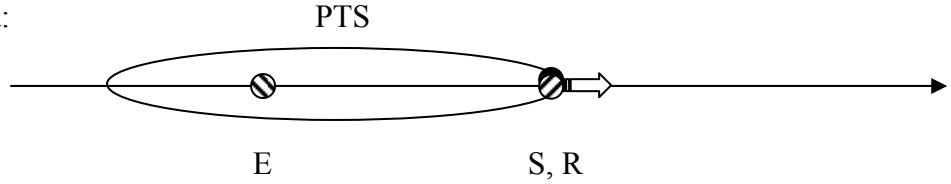
In a footnote on page 228, they further state:

> "In Reichenbachian terms, this means that RB is representable by R."

In the following, the term *perfect time span* will be abbreviated by PTS.
The modified XN-semantics for German and for Swedish is given in (44). The arrow indicates that (R) cannot be before (S):

(44) Modified XN:

a:



b: Present perfect:

S R E PTS LB RB
$S \leq R$
PTS (LB, RB)
$E \subseteq PTS$
RB = R

The English present perfect cannot be used as a future perfect, see (42).[5] The meaning I assume for the English present perfect is therefore the one proposed by McCOARD (1978). The meaning of the English present perfect is as follows:

(45) English present perfect:

a:

[5] With the exception of the already mentioned scheduled contexts (cf. Section 5.2).

b: Present perfect:

S R E PTS LB RB
R = S PTS (LB, RB) E ⊆ PTS RB = R

The use of the present perfect in (46) is called u(-niversal) perfect. As will become clear in chapter 5, this is a use of the present perfect where (E) holds throughout the entire PTS. A present perfect normally has a universal interpretation, if it is modified by adverbials such as *always*. An example is the following where the speaker still loves his addressee at the moment of speech.

(46) I have always loved you.

This shows that PTS ends at (R) and by substitution at (S), because (E) holds through the entire PTS. Consider now the German universal perfect in (47). Here, the eventuality *in Berlin wohnen* 'to live in Berlin' does not hold at (S), or more generally at (R).

(47) a. Ich habe immer in Berlin gewohnt, (German)
I have always in Berlin lived
aber vor kurzem bin ich nach Tübingen gezogen.
but recently am I to Tübingen moved
'I always lived in Berlin, but recently, I moved to Tübingen.'

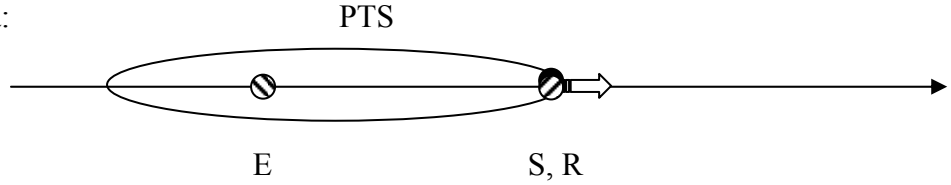
b. *Jag har alltid bott i Berlin, (Swedish)
I have always lived in Berlin,
men alldeles nyss har jag flyttat till Tübingen.
but recently have I moved to Tübingen
'I always lived in Berlin, but recently, I moved to Tübingen.'

c. I have always lived in Berlin.

(47) suggests that the length of PTS differs cross linguistically. In Swedish and Englisch, it cannot end before (R). The meaning I assume for the Swedish present perfect is therefore the one developed in (44) and repeated as (48). The meaning of the English present perfect is the one in (45).

(48) The Swedish present perfect:

a:

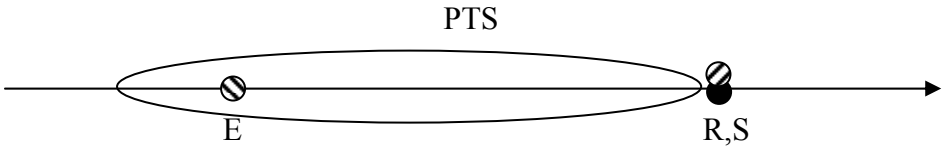


b:

S R E PTS LB RB
$S \leq R$
PTS (LB, RB)
$E \subseteq PTS$
$RB = R$

To explain the German (47)a, PTS must abut (R) (cf. RATHERT (2004)). The semantic RATHERT (2004) proposes is given in (49):

(49) RATHERT (2004): XN



b: Present perfect:

S R E PTS LB RB
$R = S$
PTS (LB, RB)
$E \subseteq PTS$
$RB \supset\subset R$

But RATHERT's proposal also runs into problems. It can, for instance, not explain (50). The adverbial *immer* 'always' suggests that the eventuality the present perfect describes holds throughout the entire PTS (IATRIDOU (2001) for English, RATHERT (2004), PANCHEVA & STECHOW (2004) for German). The PTS of the first present perfect can therefore clearly not abut (R). (R) is located in 2004 (I am writing this chapter in 2004), but the eventuality the present perfect describes ends in 1999, five years before stating (50). The semantics proposed by RATHERT (2004) yields therefore the wrong reading for (50). It suggests that the *living in France* abuts 2004. Under the view that *schon immer* 'always' requires the eventuality expressed by the present perfect to hold throughout the entire PTS[6], the PTS must end before (R).

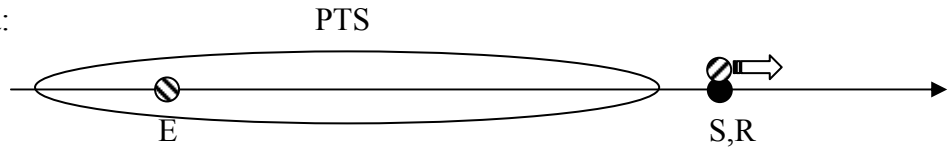
(50) Véronique hat immer in Frankreich gewohnt. (German)
Véronique has always in France lived
1999 ist sie nach Deutschland gezogen.
1999 is she to Germany moved
'Véronique always lived in France. In 1999, she moved to Germany.'

I therefore follow PANCHEVA & STECHOW (2004) who allow the PTS to be completely separated from (R). It can precede, follow or be simultaneous to it. I give a somewhat simplified semantics in (51).

[6] See also chapter 5, section 3.

(51) PANCHEVA & STECHOW (2004): XN

a:



b: Present perfect:

S R E PTS LB RB
S ≤ R
PTS (LB, RB)
LB < RB
E ⊆ PTS
RB ≤ R

If one wants to maintain an XN approach, there is indeed no other way to analyse the German present perfect and to allow the PTS to be separated from (R).

A problem concerns narration. Consider the following example:

(52) Sigurd ist in Tübingen angekommen (E_1), (German)
Sigurd is to Tübingen arrived
hat sein Gepäck am Bahnhof eingeschlossen (E_2)
has his luggage at the railway-station in-locked
und ist stadteinwärts gelaufen.
and is downtown walked
'Sigurd arrived in Tübingen, locked in his luggage and walked downtown.'

The sequence of events in (52) displays a temporal order. Sigurd first comes to Tübingen, locks in his luggage and then goes to the centre. To account for this temporal order, something must be said on the position of each event time relative to the other event times. If one now assumes a vague PTS_1 containing an (E_1) whose temporal position is not fixed and a vague PTS_2 where (E_2) is unfixed as well and a vague PTS_3 and so on, it is not possible to prevent PTS_1 to overlap with PTS_2 and so on. But this overlap makes it very hard to account fort he correct temporal order of (E_1), (E_2) and (E_3). For instance, if PTS_1 and PTS_2 overlap and if they are defined as each containing (E_1) and (E_2) whose temporal relations are not fixed, (E_2) can actually precede (E_1). It is therefore desirable to restrict the PTS.[7]

A simple solution is to assume a dynamic PTS which is identical to (E) and only distinct from (E), if context requires it. The solution has the advantage that it easily allows for analyses of temporal succession. Moreover, as we have seen, RB in Swedish is always at (R) of the auxiliary. This explains why uses such as (52) are not possible in Swedish.

[7] Note that the argument is weakened if we account for temporal progression by purely looking at rhetorical relations between eventualities as mainly proposed by LASCARIDES & ASHER (1993). As I argued, however, in chapter 1, such an approach cannot appropriately account for narration.

Dynamic means that the German present perfect does not fix RB at a certain point in time (i.e. (R) as in English and Swedish). The position of RB is not determined by the meaning of the German present perfect. It can be identical to the final subinterval of (E) or to (R) or can be in between. Chapter 5 argues that the position of RB depends on context.[8]

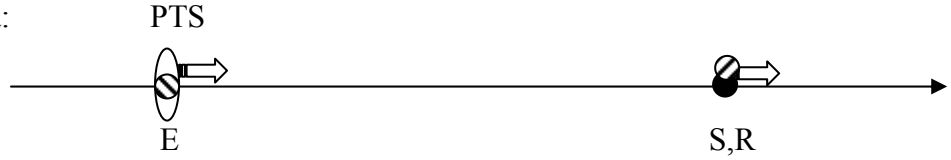
There is a further argument favoring a dynamic PTS for the German present perfect. This argument concerns coordinated universal perfects. In (53), the studying and the working do not end simultaneously, although this seems to be required by the adverbial *gleichzeitig* 'at the same time'. Therefore, the right boundary of PTS must be dynamic. Presumably, the studying and the working did not begin at the same time as well. Thus, LB must also be dynamic.

(53) Er hat immer gleichzeitig studiert und gejobbt. (German)
He has particle always at-the-same-time studied and worked
Aber dann hat er erst mit dem Studieren und dann mit
but than has he first with the study and then with
dem Jobben aufgehört.
the work stopped
'He always studied and worked at the same time. But then, he first stopped studying and then stopped working.'

The meaning I assign to the German present perfect is the following. The arrows indicate that PTS is dynamic and that (R) may not be before (S).

(54) The German present perfect:[9]

a:



b:

S R E PTS LB RB
$S \leq R$
PTS (LB, RB)
$E \subseteq PTS$
$RB \leq R$

To conclude, in this section we discussed several *ExtendedNow-approach*es to the analysis of the present perfect. As the present perfect does not denote aspect, approaches based on aspectuality become impossible. Tense based approaches in terms of anteriority also fail. The behaviour of the present perfect with *since*-

---

8 In a certain sense, we may think of RB of the German present perfect as being semantically underspecified. The specification of RB is achieved via context (cf. chapter 5).

9 To prevent the event time of the present perfect to be located at (S), but not before (S), it is necessary to assume that both LB and RB cannot be at (R). As will become clear in chapter 5, there is a restriction for (E) of a present perfect. It can only be at (S), if the present perfect is modified by certain adverbials such as *schon immer* (always). LB can never be at (R). In the following I neglect this.

adverbials suggests an *ExtendedNow*-theory. Under this view, the perfect introduces a time interval in which the event time is located. This interval is called *perfect time span* (PTS).
The English present perfect introduces a *perfect time span* that always ends at the moment of speech. The *perfect time span* of the Swedish present perfect always ends at the reference time of the auxiliary.
From the existing *ExtendedNow*-theories, none is able to capture all uses of the German present perfect. *Since-adverbial*s and adverbials such as *immer* suggest that PTS does not end at the reference time of the auxiliary, it can end long before it. I therefore proposed to dislocate the PTS interval completely from the reference time.
According to this view, the German present perfect introduces a dynamic time interval (PTS) whose right boundary can reach up to the reference time set by the auxiliary. The position of its left boundary (LB) is not specified. LB and RB can be identical. Within PTS is (E). If there is no indication to the other, PTS is identical with the event time of the present perfect. In chapter 5, it will be argued that the position of RB depends on the actual context in which the perfect is used. A discourse based approach will therefore be proposed.

9. Identifying the stative component

9.1 Introduction

In this section, I show that the present perfect is a stative construction under circumstances that will be become clear in section 9.2. The point has been made for English, French and German by PARSONS (1990), KAMP & ROHRER (1985), KAMP & REYLE (1993), MUSAN (2002) and DESCLÉS & GUENTCHEVA (2003) and many others. With the exception of MUSAN (2002), they do not make clear whether the stative component is a situation type aspect. KATZ (2003) argues that the present perfect denotes a state in the sense of situation type aspect, but, as will be argued, the standard tests he uses do not necessarily show that the present perfect is a stative construction. MUSAN (2002:32) claims that the present perfect is always stative, but, as will be shown by the behaviour of the present perfect in discourse, this is not the case.
The section is organised as follows. First, I show that the German present perfect has both a stative and a non-stative use. In English and Swedish, there is only a stative use. Then I give a proposal how to derive the stative and non-stative uses from a single uniform semantic meaning.

9.2 The present perfect as a stative construction

The present perfect includes a stative component.[10] This will be shown by the application of standard tests for stativity with the present perfect. The point I want to make is that there are similarities between the *state* in (55) and the present perfect construction in (56). While both are states, the second is a state that results from a prior culminated eventuality.

(55) a. Er weiß die Antwort. (German)
He knows the answer
b. Han vet svaret. (Swedish)
He knows answer-the
c. He knows the answer.

(56) a. Sie sind nach Barcelona gefahren. (German)
They are to Barcelona gone
b. De har rest till Barcelona. (Swedish)
They have gone to Barcelona
c. They have gone to Barcelona.

KATZ (2003) claims that the English present perfect is a stative construction because it does not allow for progressives, wh-cleft constructions and the imperative. His tests are transferred to German and Swedish:

(57) a. *Véronique ist dabei die Antwort zu wissen. (German)
Véronique is particle the answer to know
b. *Véronique håller på att veta svaret. (Swedish)
Véronique holds particle to know answer-the
c. *Véronique is knowing the answer.

(58) a. *Véronique ist dabei die Antwort gewußt zu haben. (German)
Véronique is particle the answer known to have
b. *Véronique håller på att ha vetat svaret. (Swedish)
Véronique holds particle to have known answer-the
c. *Véronique is having known the answer.

(59) a. *Was Hans tat, war, die Antwort zu wissen. (German)
What Hans did was the answer to know
b. *Vad Hans gjorde var att veta svaret. (Swedish)
What Hans did was to know answe-the
c. *What Hans did was to know the answer.

(60) a. *Was Hans tat, war Marie geküßt zu haben. (German)
What Hans did was Marie kissed to have
b. *Vad Hans gjorde var att ha kysst Marie. (Swedish)
What Hans did was to have kissed Marie
c. *What Hans did was to have kissed Mary.

(61) a. *Wisse die Antwort! (German)
Know the answer
b. *Vet svaret! (Swedish)
Know answer-the
c. *Know the answer!

[10] It will be shown in section 9.2 that there is also a non-stative use of the German present perfect.

(62) a. *Habe Maria geküßt! (German)
Have Marie kissed
b. *Ha Maria kysst! (Swedish)
Have Marie kissed
c. *Have Maria kissed!

It is true that the tests in (57) to (62) show striking similarities between states and the present perfect, but one cannot exclude that the versions in the present perfect are ruled out due to something else than stativity. One cannot for instance command nor do something that has already been done. The present perfect sentences are not possible due to the anteriority meaning of the present perfect. We are therefore not able to tell whether the present perfect is ruled out, because it is a stative construction or because it denotes anteriority (cf. ROTHSTEIN (2005b:198).
There is however a test that shows us that the present perfect is a stative construction. This test is not used by KATZ (2003), but by MUSAN (2002: 33). As PARSONS (1990:36)) states it is possible to ask "how long" with states and activities, but not with achievements and accomplishments. The achievement sentence is not possible in the past tense, but with the present perfect:

(63) a. ?*Wie lange entdeckte Hans die Formel (schon)? (German) (MUSAN (2002:33))
How long discovered Hans the formula (already)
b. ?*Hur länge upptäckte Hans redan formeln? (Swedish)
How long discovered Hans already formula-the
c. ?*How long discovered Hans already the formula?
(64) a. Wie lange hat Hans die Formel (schon) entdeckt? (German) (MUSAN (2002:33))
How long has Hans the formula (already) discovered
b. ?Hur länge har Hans redan upptäckt formeln? (Swedish)
How long has Hans already discovered formula-the
c. ?How long has Hans already the formula discovered?

As the eventuality has already culminated, the present perfect cannot be analysed as an activity-construction. MUSAN (2002:33) concludes therefore that the present perfect is always stative. It will be argued in section 9.3 that this is not always the case.
Yet there are two differences between the situation type *state* and the present perfect construction. States cannot be combined with adverbs such as *intentionally* that requires an agent in the grammatical subject position. The subject of *wiss-* can not be an agent. Therefore, it can not be modified by *intentionally*. The present perfect on the other hand can.

(65) a. *Hans weiß die Formel absichtlich. (German)
Hans knows the formula intentionally
b. *Hans vet formeln avsiktligt. (Swedish)
Hans knows formula-the intentionally
c. *Hans knows the formula intentionally.

(66) a. Hans hat die Vase absichtlich umgeworfen. (German)
He has intentionally the vase over-knocked
b. Hans har stött omkull vasen avsiktligt. (Swedish)
Hans has knocked over vase-the intentionally
c. He has intentionally knocked the vase over.

As KATZ (2003) states it is plausible that *absichtlich* only modifies the eventive part of the present perfect, the past participle. *Umwerf-* allows its subject to be an agent. The topicalization of the participle together with the adverb in (67) suggests that *absichtlich* modifies only the past participle. As *absichtlich* does not modify the whole perfect construction, (65) is not a counterexample to the hypothesis that the present perfect is a stative construction.

(67) Absichtlich umgeworfen hat Hans die Vase bestimmt nicht. (German)
Intentionally knocked-over has Hans the vase certainly not

The second difference between states and the present perfect is a more serious challenge to the analysis defended here. *States* can be modified by *viele Jahre lang* 'for many years', but in a perfect use the present perfect cannot.

(68) Hans liebte Maria viele Jahre lang. (German)
Hans loved Maria many years long
'Hans loved Maria for many years.'
(69) ??Hans hat Maria viele Jahre lang geliebt. Jetzt ist es Zeit zum Heiraten. (German)
Hans has Maria many years long loved. Now is it time to-the marry

Once more, this turns out not to be an argument against the stativity of the present perfect. As will be shown in chapter 5, there are several readings of the present perfect. One of them is the universal use. In this case, the eventuality the present perfect denotes holds throughout the entire PTS up to the moment of speech. This reading is only available under certain adverbial modification. (69) is an example where the eventuality of the present perfect sentence must hold at (S) in order to make sense for the second sentence. But the necessary adverbial modification is lacking. When modifying the perfect sentence by *schon viele Jahre*, the sentence becomes fine:

(70) Hans hat Maria schon viele Jahre lang geliebt. (German)
Hans has Maria particicle many years long loved.
Jetzt ist es Zeit zum Heiraten.
Now is it time to-the marry
'Hans has been in love with Maria for many years. Now it is time to get married.'

KATZ (2003) argues that the state the present perfect denotes is an individual state. There are basically two different kinds of states. Individual states hold throughout the entire existence of their referent, stage level states do not. While the latter can be modified by *viele Jahre lang* 'for many years' (see (71)), the former cannot (cf. (72)).

(71) Ich war viele Jahre lang überzeugter WG-Befürworter. (German)
I was many years long strong communal-living-supporter
'For many years I was a strong supporter of communal living.'
(72) *Ich war viele Jahre lang großwüchsig. (German)
I was many years long tall

Examples like (69) led KATZ (2003) to analyse the state of the present perfect as an individual state. There are, however, three important differences between the present perfect and individual states.
First, individual states can not be modified by *jetzt* 'now', but the perfect can.

(73) *Maria ist jetzt intelligent. (German)
Maria is now intelligent
(74) Maria ist jetzt schon abgeflogen. (German)
Maria has now already taken-off
'Maria's flight has left already.'

More generally speaking, the state the present perfect introduces allows for singling out temporal subintervals. This is not possible with individual states.
Second, it is impossible to ask *wie lange* 'how long' with individual states. The present perfect sentences are however fine. I repeat (64) as (76):

(75) *Wie lange ist Maria (schon) intelligent? (German)
How long is Maria (already) intelligent
(76) Wie lange hat Hans die Formel (schon) entdeckt? (German) (MUSAN (2002:33))
How long has Hans the formula (already) discovered

Third, individual states do not presuppose an event, the present perfect does.

(77) Maria ist intelligent. (-> ?) (Ger.)
Maria is intelligent
(78) Hans hat die Formel entdeckt. (-> Hans die Formel entdecken) (Ger.)
Hans has the formula discovered *Hans the formula discover*

Stage level states don't presuppose an eventuality either.

(79) Martina liebt italienisches Essen. (German)
Martina loves Italian food

It is therefore plausible to assume that the state the perfect denotes is different from the two other states. Given that it results from a prior eventuality, it is plausible to think of it as a kind of result state. PARSONS (1990:234/235) distinguishes between two result states, the resultant state and the target state:

> "For every event e that culminates, there is a corresponding state that holds forever after. This is "the state of e's having culminated," which I call the "Resultant state of e," or "e's R-state." If Mary eats lunch, then there is a state that holds forever after: The state of Mary's having eaten lunch."

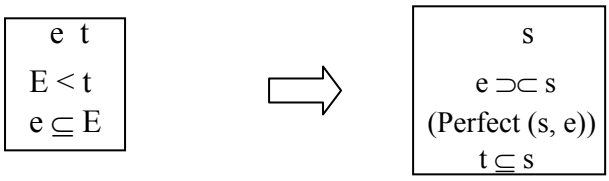
> "It is important not to identify the Resultant-state of an event with its "target" state. If I throw a ball onto the roof, the target state of this event is the ball's being on the roof, a state that may or may not last for a long time. What I am calling the Resultant-state is different; it is the state of my having thrown the ball onto the roof, and it is a state that cannot cease holding at some later time".

I do not adopt PARSONS (1990:235) term "resultant state" as I think it is somehow misleading. It is not really about results we speak of when referring to "resultant states". Nor do I take over MUSAN's (2002:34) term "post-state" as MUSAN claims that a minimal subinterval of an event time can already yield a "post state". In (80), for instance, taking the first step already implies that the speaker is in the post-state of running, while he is still running. But "to run" is at the same time an activity. This is not very plausible. A verb or a verbal construction cannot have two situation type aspects at the same time.

(80) Ich bin gerannt. (German)
I am run
'I have run.'

As I make a distinction between stage level states, individual level states and the state of the perfect, I introduce the term *perfect-state*. Importantly, the *perfect-state* is only available if there is at least one point in time at which it can obtain (cf. (74)). We can think of the licensing of the perfect-state in the form of an entailment: only if there is a time point available that is located after (E), can there be a perfect-state:

(81) Perfect-state



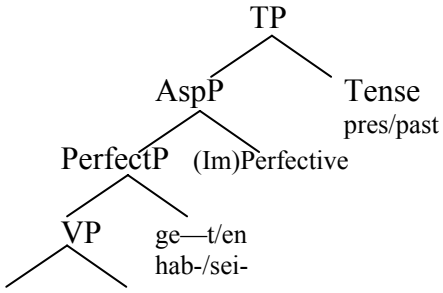
The analysis proposed here differs from other accounts of the perfect state in one important respect. It follows from (81) that it is possible to single out subintervals of the perfect-state. As we have seen, this is not possible with individual states.

To sum up, the present perfect always has a stative meaning in Swedish, English and German. The majority of standard tests for stativity can however not be applied to the perfect due to its pastness meaning. The only available test is therefore the *wie lange schon* 'how long' test. Achievements and accomplishments do not combine with *wie lange schon* 'how long'. If they are used in the present perfect, modification by *wie lange schon* 'how long' becomes possible. The present perfect is therefore a stative construction. In the next section we will see whether the present perfect is always stative.

9.3 The present perfect as a non-stative construction

MUSAN (2002:45) assumes a structure like (82) for the German perfect. TP contains the tense information *present* or *past*, AspP the feature *post state* and PerfectP introduces both the participial form and the auxiliary of the perfect construction. On this view, the German perfect always denotes a post state, since it always contains an AspP. From this view the perfect is always stative. As will be shown in this section, this position cannot be maintained.[11]

(82)



There are two problems for (82). First, it is a well known and established fact that *states* normally don't "move" narration in discourse. Sentences with event predicates however do (cf. DRY (1983), KAMP & ROHRER (1985), GLASBEY (1998)). If one analyses the present perfect as a stative construction, one would expect it to (almost) never move time. But it turns out that the German present perfect may move time as easily as the past tense can do. It is therefore not plausible to assume that it always has a stative component. The following example, for instance, clearly contains a sequence of temporally ordered events. Sigurd first comes to Tübingen, then goes to the university library and then meets some friends.

(83) Sigurd ist heute morgen in Tübingen angekommen, in die Unibibliothek (German)
Sigurd has today morning in Tübingen arrived, in the university-library
gegangen und hat sich dann am Nachmittag mit Freunden getroffen.
walked and has reflexive-pronoun then in the afternoon with friend met
'Sigurd arrived in Tübingen this morning, went to the university library immediately and, then, met with friends in the afternoon.'

As a second problem for the claim that the present perfect always denotes a perfect state is that it then follows that every event described by the present perfect must have culminated. Its occurrence in when-clauses makes this implausible. In (84), my wife has – unfortunately – not already finished the dishes (don't worry, we now have a dish-washer).

(84) Meine Frau hat gerade gespült, als ich heimkam. (German)
My wife has in-the-moment done-the-dishes when I home-came
'My wife was doing the dishes, when I got home.'

[11] Note that MUSAN's proposal works if one allows the perfect state to begin before the eventuality has culminated. I argued against such a solution with the example (80).

(84) is not possible in Swedish and English:

(85) *When I came home, she has been doing the dishes.
(86) *När jag kom hem, har hon precis hållit på att diska. (Swedish)
When I came home, has she in-the-moment hold particle to do-the-dishes

I conclude that the present perfects in these languages are always stative.

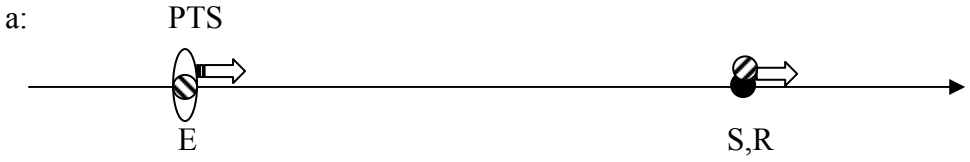
9.4 Conclusion so far

To sum up, the English and Swedish present perfect are always stative. The German present perfect has both a stative and a non-stative use. The stativity was confirmed by looking at the *how long* test. The behaviour of the present perfect in narration and *when*-clauses shows however that there is also a non-stative use of the present perfect.
This turns out to be a challenge for any analyses that assumes a single uniform semantics for the present perfect as the perfect state must be available under some circumstances and disappear under others. A structure like (82) which assumes that the perfect state is localised in AspP is not able to capture the stative and non-stative use of the present perfect as it would have to stipulate why sometimes there is an AspP and sometimes not.

9.5 Accounting for stative and non-stative uses

In the preceding sections we have seen that there is one use of the German present perfect which is stative and another one which is non-stative. It has been argued that in the stative use the present perfect denotes a lexical perfect state. This, however, turns out to be problematic for the monosemous analysis presented above as it seems that there is one perfect with – if you like – a feature [+stative] and one perfect with [-stative]. It seems to be impossible to cover the two uses of the perfect under a single uniform meaning.
Let us reconsider the German present perfect meaning as developed in (54) and repeated as (87):

(87) The German present perfect:



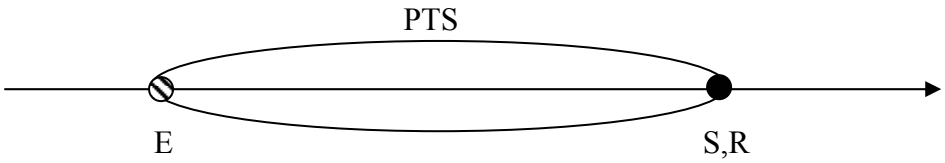
b:

S R E PTS LB RB
$S \leq R$
PTS (LB, RB)
$RB \leq R$
$E \subseteq PTS$

We have defined PTS as a dynamic time interval in German. Its right boundary RB is "identical" with the final subinterval of (E), if there is no evidence to the contrary (see chapter 5 for a more detailed discussion of the relation between RB and (E)).
We have defined the perfect state relative to a point in time at which it can hold. This point in time is later than the event time of the eventuality from which the perfect state results.
There is an interesting correlation between the right boundary of the *perfect time span* and the stative use of the present perfect. Only if the right boundary is distinct from (E), the present perfect is stative. In (88), the present perfect has a kind of resultative reading. Because I have lost my glasses, I cannot find them any longer. As will be shown in detail in chapter 5, RB is therefore simultaneous to (R) of the auxiliary:

(88) Ich habe meine Brille verloren. Ich finde sie einfach nicht. (German)
I have my glasses lost. I find them simply not
'I have lost my glasses and simply cannot find them.'

(89) Stative perfect:



If RB is the final subinterval of (E), the present perfect is non-stative. This is illustrated in the following example:

(90) In dem Moment als ich zu Hause ankam, ist der Fernseher kaputtgegangen. (Ger.)
In the moment when I at home arrived, is the television particle-broken

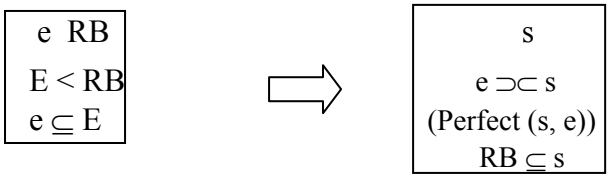
(91) Non-stative perfect

The relation between PTS and the lexical perfect state is as follows:

(92) Only if RB is distinct from (E), does the perfect denote a post state.

This follows immediately from the definition of the lexical perfect state given in (81). In (81), we stated that the perfect-state is only available if there is a point in time at which it can hold.
I claim that this point in time is RB of the perfect. We arrive at the following entailment.

(93) Perfect-state



This means that the *perfect-state* is caused by an eventuality described by a (present) perfect. It starts immediately after the eventuality in the perfect has culminated and holds forever. It is only available if RB is later than (E).
(93) resolves the problem how to account for the stative and non-stative uses of the German present perfect. It allows for a uniform meaning of the present perfect covering both its stative and non-stative uses.
In both Swedish and English, RB of a present perfect is (R) of the auxiliary. As RB is always distinct from (E) in both Swedish and English, it follows from (93) that the present perfect must be stative. This is borne out:

(94) a. *Precis när jag har kommit hem, satte hon på teven. (Swedish)
Exactly when I have come home, turned she on television-the
b. *When I have come home, she turned on the television.

(95) a. ?Hur länge har Hans redan upptäckt formeln? (Swedish)
How long has Hans already discovered formula-the
b. ?How long has Hans already discovered the formula?

There is, however, one systematic exception to this. This is the so called u(niversal)-perfect in which (E) of the perfect holds throughout the entire PTS. In (96), the speaker still loves his or her addressee at the moment of speech. As (E) holds throughout the entire PTS, there can be no *perfect-state*, as RB is not distinct from (E). Hence, our analysis makes the right predictions

(96) a. Ich habe Dich schon immer geliebt. (German)
I have you particle always loved
'I have always loved you.'
b. Jag har alltid älskat dig. (Swedish)
I have you always loved
'I have always loved you.'
c. I have always loved you.

We have to be careful not to confound the PTS-interval with the lexical perfect-state. IATRIDOU et al (2001) state the following:

> "Neither should the perfect time span be confused with the interval in which the state resulting from the underlying eventuality holds, for example, the "post state", or the "result state", both of which are also common descriptions of the perfect. In (97) (my numeration, B.R.), for example, the poststate holds from (after) the fall of 1993 and stretches indefinitely into the future. On the other hand, the *perfect time span* starts earlier (1991) and ends earlier (utterance time)." IATRIDOU et al (2001:206/2003:169)

(97) Since 1991, I have been to Cape Cod only once, namely, in the fall of 1993.

Under the analysis proposed here, there is a correlation between PTS and what I call the *perfect-state*. Only if RB is distinct from (E), is there a *perfect-state*. This does however not mean that the PTS and the *perfect-state* are identical. Once the perfect-state is licensed by RB, it holds forever. If RB is distinct from (E), the *perfect time span* ends however at the reference time of the auxiliary (see chapter 5 for a closer discussion on the relation of RB and the context).
Moreover, the relation of PTS and the lexical perfect state can account for so far unsolved cross linguistic problems concerning the pluperfect. This will be the topic of the next section.

9.6 A short note on the pluperfect

The present analysis can also account for the pluperfect. When pursuing seriously an approach that analyses the perfect as a state resulting from a prior eventuality, one has to assume two independent meanings for the pluperfect. KAMP & REYLE (1993), for instance, propose two such meanings of the English pluperfect.
As for the stative use, the same test applies as for the German present perfect. It is not possible to ask "how long" with achievements. In the pluperfect, however, "how long" becomes fine with achievement verbs. Therefore, the pluperfect must introduce a stative component:

(98) a. Wie lange hatte Hans die Formel (zu diesem Zeitpunkt) (German)
How long had Hans the formula (at that time)
bereits entdeckt?
already discovered
b. ?How long had Hans at this moment already discovered the formula?
c. ?Hur länge hade Hans då redan upptäckt formeln? (Swedish)
How long had Hans then already discovered formula-the

The event time expressed by a pluperfect sentence can, however, be modified by a when-clause. This suggests that there cannot be a *perfect state* in those uses, because the *perfect state* can only obtain if the eventuality it is obtained from has already culminated. As the when-clause specifies the event time, the eventuality has not culminated. This is the non-stative use:

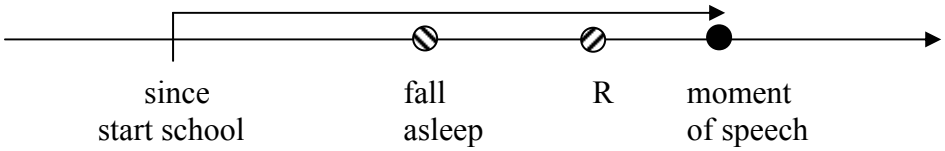
(99) a. In dem Moment, als ich nach Hause gekommen war, (German)
In the moment when I to home come was
hatte sie den Fernseher angemacht (E_2).
has she the television on-turned
b. When I had come home, she had been turning on the television.
c. Precis när jag hade kommit hem, hade hon satt på teven. (Swedish)
In-the-moment when I had come to home had she turned-on television-the

The pluperfect must also be analysed in terms of an *ExtendedNow-approach*. Once more, the core argument for such an approach comes from *since*-adverbials. *Since*-adverbials are not possible with achievements, when not used in the perfect. As stated in section 5.2, *since*-adverbials select a time interval, the *perfect time span*. Saying that since selects the *perfect state* makes a wrong prediction concerning the position of the event time. Conider, for instance, the pluperfect version of (34):

(100) a. Seit seiner Einschulung war Mark nur einmal (German)
Since his start-of-school was Mark only once
im Unterricht eingeschlafen.
in-the class fallen-asleep
'Since he had started school Mark only had fallen asleep once during class.'
b. Since he had started school Mark only had fallen asleep once during class.
c. Sedan han hade börjat skolan hade Mark bara somnat (Swedish)
Sine he had started school-the had Mark only fallen-asleep
en gång under undervisningen
once during class-the
'Since he had started school Mark only had fallen asleep once during class.'

Its most plausible interpretation is as follows:

(101)



If since *only* selects the *perfect state*, the falling asleep must obtain at the moment when he started school which is not the most plausible interpretation of the above sentence. The following conclusion has therefore to be drawn: like the present perfect, the pluperfect introduces a time interval, the *perfect time span* (PTS) which is selected by the *since*-adverbial.
The PTS of the pluperfect is also dynamic The main argument in favour of a dynamic PTS comes from the behaviour of the pluperfect with adverbials such as *always*. *Always* requires the eventuality the perfect describes to hold throughout the entire PTS. This can be shown by the following present perfect sentence where the speaker still loves his addressee at the moment of speech:

(102) I have always loved you.

An interpretation of (102) where part of (E) does not hold at (S) is not possible. It is, for instance, not possible to go on like in (103).

(103) *I have always loved you, but recently I fell in love with another woman.

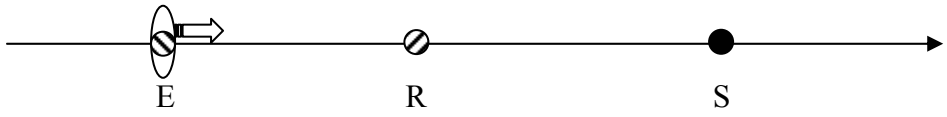
But this is possible with the pluperfect in English, Swedish and German. (E) does not hold at (R):

(104) a. I had always loved you, but recently I fell in love with another woman.
b. Ich hatte Dich immer geliebt, aber neulich habe ich mich in eine (German)
I had you always loved, but recently have I myself in a
andere Frau verliebt.
other woman fallen-in-love
'I had always loved you, but recently I fell in love with another woman.'
c. Jag hade alltid älskat dig, men alldeles nyss förälskade jag (Swedish)
I had you always loved, but recently fell-in-love I myself
mig i en annan fru.
in a other woman
'I had always loved you, but recently I fell in love with another woman.'

I conclude from this that PTS is also dynamic in case of the pluperfect. The meaning of the pluperfect is derived in the same way as for the present perfect. The meaning of the pluperfect in German, Swedish and English is as follows:

(105) German, Swedish, English pluperfect

a:



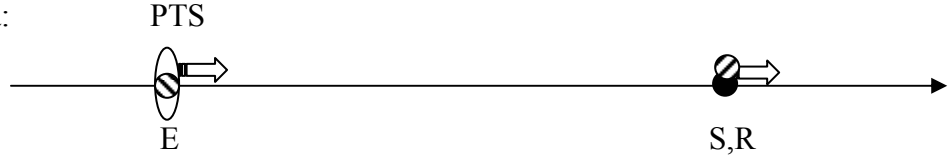
b:

S R E PTS LB RB
R < S PTS (LB, RB) RB ≤ R E ⊆ PTS

When comparing the pluperfect to the present perfect in this chapter, one discovers a striking parallel to the German present perfect. Its meaning is repeated as follows:

(106) The German present perfect:

a:



b:

S R E PTS LB RB
$S \leq R$
PTS (LB, RB)
$E \subseteq PTS$
$RB \leq R$

The stative and non-stative use of the pluperfect can now be analysed along the findings of section 9.5. Only if RB is distinct from (E), does the pluperfect denote the perfect state. The same analysis can be made for the infinitival perfect. I leave this as an exercise to the reader.

9.7 Conclusion

In short, the present perfect can have a stative and a non-stative use. The how long test provides evidence for its stativity, agentivity tests and the behaviour of the present perfect in narrative discourse provide evidence for its non-stativity. Thus, there can be no aspectual component in the present perfect that is always present. In its stative use the perfect denotes a perfect state.

The perfect state starts immediately after one minimal subinterval of the eventuality in the perfect has culminated. The perfect state is only available if RB is distinct from (E).

An interesting consequence from my account is that it breaks radically with the assumption that the present perfect has either to be analysed by a perfect state approach (KAMP & REYLE (1993), PARSONS (1990), MUSAN (2002) and others) or by an *ExtendedNow* account (among others McCOARD (1978) and STECHOW (1999)). As shown in this section, there is indeed evidence to assume that both approaches are necessary. Without a PTS that is different from (E), there can be no perfect state. We note in passing that this explains the so far unanswered question why the past tense and the present tense do not denote (lexical) states: they do not introduce PTS.

10. Why the present perfect differs cross linguistically

An interesting cross linguistic difference concerns the adverbial selection of the present perfect. Although the present perfects in English, Swedish and German denote anteriority, only the latter can be modified by positional temporal adverbials expressing a definite position on the time axis. Klein (1992) dubbed this phenomenon *the present perfect puzzle*:

(107) *I have been to the movies yesterday.

(108) *Jag har varit på bio igår.[12] (Swedish)
I have been to the-movies yesterday
(109) Ich bin gestern im Kino gewesen. (German)
I have been to the-movies yesterday

The pluperfect behaves differently. In all three languages, it allows for event time modification by positional temporal adverbials. This is the "*pluperfect puzzle*":

(110) I had been to the movies yesterday.
(111) Jag hade varit på bio igår. (Swedish)
I had been to the-movies yesterday
(112) Ich war gestern im Kino gewesen. (German)
I had yesterday to the-movies been

The *present perfect puzzle* and the *pluperfect puzzle* are summarized as *perfect variation*.[13] The *perfect variation* has been the topic of a long discussion in the, mostly semantic and pragmatic, literature (among many others Klein (1992), Portner (2003), Pancheva and Stechow (2004)), but all approaches I know of face problems. Hence, I consider the *perfect variation* to be still unexplained.
The aim of this paragraph is to give some new insights into the longstanding debate from a rather empirical point of view and to make some intuitively formulated suggestions. It will be claimed that the *perfect variation* is not the result of some semantic difference of the perfect or of some language specific parameter being independent from the perfect. Instead, it will be argued that different syntactic structures of the perfect yield the *perfect variation*. While the perfect is a verbal cluster in German, it has a biclausal structure in English and Swedish. The syntax of verbal clusters is a general problem which remains independently from the present study unsolved in many respects. Therefore, a detailled and fine grained syntactic analysis will not be given.
It is desirable to analyse all the perfect tenses (the present perfect, the future perfect and the pluperfect) in the same way, because all perfect tenses contain the same components: the tense of the auxiliary, the auxiliary and the past participle. This suggests the same kind of analysis. One of the arguments such an analysis is the correlation between the present tense and the present perfect in futurate contexts: If in a language L the present tense can be used to express future, then the present perfect of L can be used as a future perfect. This is confirmed by German, Swedish and English. While the German and Swedish

[12] This is different for modal uses of the Swedish present perfect. In inferential contexts, when used to indicate the author's degree of confidence in a present inference about past events, the *present perfect puzzle* only disappears in Swedish: *Han har tydligen jobbat igår*. In Rothstein (2005c), it has been argued that this is not a semantic present perfect, but an infinite perfect that is embedded under a phonologically null modal verb. In the following, inferential contexts are therefore neglected.

[13] I do not discuss the nonfinite perfect here. My analysis can, however, fully account for all perfect tenses in German, Swedish and English.

present tense can denote future time reference, this is only occasionally possible in English. A compositional account predicts that the German and Swedish present perfect can be used as future perfects, while this is not possible in English. This is borne out:

(113)	a.	*Tomorrow, I leave .	b.	*Tomorrow, I have already left.
(114)	a.	I morgon åker jag. *Tomorrow leave I* 'Tomorrow, I will leave.'	b.	I morgon har jag redan åkt (Swedish) *Tomorrow have I already left.* 'I will have left by tomorrow.'
(115)	a.	Morgen verreise ich. *Tomorrow leave I* 'Tomorrow, I will leave.'	b.	Morgen bin ich bereits verreist. (German) *Tomorrow am I already left* 'I will have left by tomorrow.'

The same compositional analysis of the present perfect and the pluperfect predicts that the meaning contribution of the auxiliary and the past participle remains the same independently from whether they occur in the present perfect or in the pluperfect. The *perfect variation* should therefore result from the third component of the perfect, from tense. We will discuss the contribution of each perfect component in the next section in more detail.

The by now standard approach to the *perfect variation* is an analysis which is based on the meaning contribution of the present tense (cf. Klein (1992), Portner (2003), Pancheva & Stechow (2004)). As the pluperfects pattern in the same way, it is natural to argue that the present tense explains the *perfect variation*, because only the present perfect contains the present tense.

However, the present tense cannot explain the *present perfect puzzle*. If it could, we would expect that languages with a "similar" present tense have a "similar" present perfect. The German and Swedish present tense pattern in the same way. They can be used to express future and present time reference and they can be combined with *since*-adverbials. Hence, analyses based on the present tense predict that there is no *present perfect puzzle* in Swedish. But Swedish displays the *present perfect puzzle*, while German does not:

(116)	a:	I morgon reser jag till London. (Sw.) *Tomorrow I go to London*	b:	Morgen reise ich nach London. (G) *Tomorrow I go to London*
(117)	a:	Jag är lärare sedan 1990. (Swedish) *I am teacher since 1990* 'I have been a teacher since 1990.'	b:	Ich bin Lehrer seit 1990. (German) *I am teacher since 1990* 'I have been a teacher since 1990.'
(118)	a:	Han sover. (Swedish) *He sleeps*	b:	Er schläft. (German) *He sleeps*
(119)	a:	*Sigurd har kommit igår. (Swedish) *Sigurd has come yesterday*	b:	Sigurd ist gestern gekommen. (German) *Sigurd is come yesterday*

Next, we will investigate if maybe the meaning contribution of the past participle explains the puzzle. There are basically two possibilities: either the meaning of the past participle differs cross linguistically or the meaning of the

past participle in the present perfect is different from the one in the pluperfect. If this position is correct, there should be an independent reason why the meaning of the past participle differs.
The German present perfect can be used in exactly the same ways as the German pluperfect: five major uses of the perfect can be distinguished (cf. McCawley (1971), Iatridou et al (2001), Musan (2002)). The universal present perfect denotes an event time stretching from a certain point in the past up to the present, compare (120). The existential perfect asserts that the subject had a certain experience (see (121)). It does not say anything about whether the eventuality of the main verb still holds at the moment of speech. The hot-news perfect reports an eventuality that happened in the recent past (cf. (122)) and the Perfect of result or resultative present perfect expresses a result that holds at the reference time set by the tense of the auxiliary (see (123)). In the preterite use, the perfect does not have a perfect state reading (see (124)).

(120) a. Ich habe Dich schon immer geliebt. (German)
I have you particle always loved
b. Ich hatte Dich schon immer geliebt. (German)
I had you particle always loved
(121) a. Ich habe *Faust* dreimal gelesen. (German)
I have Faust threetimes read
b. Ich hatte *Faust* dreimal gelesen. (German)
I had Faust threetimes read
(122) a. Ich habe gerade meine Prüfung bestanden. (German)
I have just my exam got
b. Ich hatte gerade meine Prüfung bestanden. (German)
I had just my exam got
(123) a. Ich habe meine Brille verloren. (German)
I have my glasses lost
b. Ich hatte meine Brille verloren. (German)
I had my glasses lost
(124) a. Sigurd ist gestern angekommen und gleich wieder abgefahren. (German)
Sigurd is yesterday arrived and at-once again left
b. Sigurd war gestern angekommen und gleich wieder abgefahren. (German)
Sigurd was yesterday arrived and at-once again left

(120) to (124) show that the German present perfect and the pluperfect pattern in exactly the same ways. They only differ concerning the meaning contribution of the tense of the auxiliary. I therefore conclude that the meaning of the German past participle is the same in the present perfect and in the pluperfect.
The English and Swedish pluperfect pattern in exactly the same way as the German present perfect does.

(125) a. Jag har alltid älskat dig. (Swedish)
I have always loved you
b. Jag hade alltid älskat dig. (Swedish)
I had always loved you

(126) a. Jag har läst Faust tre gånger. (Swedish)
I have read Faust threetimes
b. Jag hade läst Faust tre gånger. (Swedish)
I had read Faust threetimes
(127) a. Jag har precis klarat mitt prov.
(Swedish)
I have just got my exam
b. Jag hade precis klarat mitt prov. (Swedish)
I had just got my exam
(128) a. Jag har tappat mina glasögon. (Swedish)
I have lost my glasses
b. Jag hade tappat mina glasögon. (Swedish)
I had lost my glasses
(129) a. *Sigurd har kommit igår och åkt tillbaka igen. (Swedish)
Sigurd has yesterday arrived and left back again
b. Sigurd hade kommit igår och åkt tillbaka igen. (Swedish)
Sigurd had yesterday arrived and left back again
(130) a. I have always loved you.
b. I had always loved you.
(131) a. I have read *Faust* three times.
b. I had read *Faust* three times.
(132) a. I have just passed my exam.
b. I had just passed my exam.
(133) a. I have lost my glasses.
b. I had lost my glasses.
(134) a. Sigurd has arrived yesterday and left again.
b. Sigurd had arrived yesterday and left again.

It follows that the past participle cannot be the source of the *perfect variation*. Another possibility is to consider the meaning contribution of the auxiliary when used in the present perfect and in the pluperfect. But in German, the pluperfect and the present perfect pattern in exactly the same way. It follows that the English and Swedish perfect auxiliaries should have distinct meanings in the present perfect and the pluperfect. But there is no evidence for such a claim.
There is, however, a difference between the English, Swedish and German present perfect. Swedish and English only have one perfect auxiliary (*have*), while German has two (*have/be*). This suggests a causal relation between auxiliary selection in the perfect and the *perfect variation*. But Danish has two perfect auxiliaries (*have/be*) and displays the *present perfect puzzle*. Therefore, there can be no causal relation between auxiliary selection and the *perfect variation*.

(135) *Han er kommet igår. (Danish)
He is come yesterday
(136) *Han har arbejdet igår.[14] (Danish)
He has worked yesterday

[14] Sten Vikner (p.c.)

Maybe scope differences explain the *perfect variation*. In German, the adverbial seems to scope over the past participle while in English it is the other way around:

(137) Er hat gestern gearbeitet. (German)
He has yesterday worked
(138) ?Er hat gearbeitet gestern. (German)
He has worked yesterday
(139) He has worked yesterday.
(140) *He has yesterday worked.

But Swedish suggests that this is no solution. Temporal adverbials may immediately precede the past participle in Swedish. The scope based account predicts that Swedish should pattern like German, but this is not bourne out:

(141) President Mubarak hade igår talat i telefon med ledarna (Swedish)
President Mubarak had yesterday talked in phone with leaders
i elva arabländer.
in eleven arab-countries.
'President Mubarak had spoken yesterday on the phone with the leaders of eleven Arab countries.'
(142) Andro hade sjungit inne i stan igår. (Swedish)
Andro had sung in in town yesterday

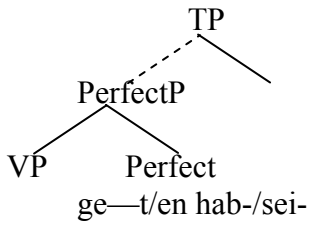
There might be another kind of analysis where the *perfect variation* results from language specific factors being independent from the present perfect. But if this position is correct, these factors will also give rise to a *pluperfect puzzle*. But there is no such puzzle. This suggests that "broader" language specific parameters do not play a role.
So far, we have seen that none of the components of the perfect (the auxiliary, the past participle or the tense of the past participle) yields the *perfect variation* unless one stipulates such an explanation.
Concerning the German perfect auxiliaries there is an interesting remark by Musan (2002:53f):

> "there is syntactic data that suggests that the past participle morpheme and the auxiliary in perfect constructions form a constituent on some level, too. Consider the data in (4.17). The sentences (b-f) involve topicalization of various constituents in a German present perfect construction that is embedded under a finite modal verb. The underlying verb-end form of the sentences is shown in (4-17a).
>
> (4.17) a. (weil) er ein Ufo gesehen haben muss
> *(since) he a ufo seen have must*
> b. [Ein Ufo gesehen haben] muss er.
> *a ufo seen have must he*
> c. [Ein Ufo gesehen] muss er haben.
> *a ufo seen must he have*

d. [Gesehen haben] muss er ein Ufo.
seen have must he a ufo
e. [Gesehen] muss er ein Ufo haben.
seen must he a ufo have
f. *[Haben] muss er ein Ufo gesehen.
have must he a ufo seen

Musan (2002:54) concludes that the German perfect has the following structure. For the sake of simplicity, I leave out her AspP:

(143) Musan (2002:54)



Musan's observation that perfects can be topicalised in German is interesting from a cross linguistic perspective. In Swedish, perfect auxiliaries cannot be topicalised together with the past participle:

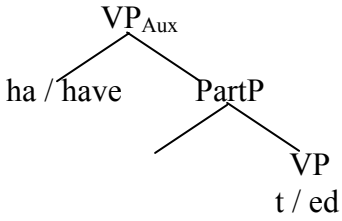
(144) *Ha gömt sedlar i madrassen och juveler i sykorgen kan hon. (Swedish)
Have hidden money in mattress-the and jewels in sewing basket-the may she

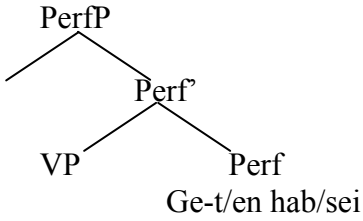
Neither are the corresponding tests (VP-preposing and pseudo-clefts) possible with the English perfect auxiliary:

(145) *Have hidden money in the mattress and jewels in the sewing basket, she may.
(146) *What she may have done is have hidden money in the mattress and jewels in the sewing basket.

To account for the German data, it is necessary to assume a structure where the past participle morpheme and the auxiliary form a constituent. I therefore follow Musan's analysis (cf. Musan (2002:54)). The relevant structure probably looks something like in (147)b:

(147) a. Swedish / English b. German





The English and Swedish data suggest a different analysis. There, the auxiliaries cannot be VP-preposed/ topicalised:

(148) *Ha gömt sedlar i madrassen och juveler i sykorgen kan hon. (Swedish)
Have hidden money in mattress-the and jewels in sewing basket-the may she
(149) *Have money in the mattress hidden, she may.

A structure like (147)a can probably account for the facts. The perfect is analysed as a biclausal structure consisting of an VP_{Aux} and a PartP. As VP_{Aux} cannot be topicalised, it is also impossible to topicalise both the auxiliary and the past participle.
The structural proposal in (147)b is, admittedly, a problematic one as it leaves several syntactic questions unanswered. It is, for instance, not clear how the internal organisation of *Perf* works exactly. Unfortunately, the structure of verbal clusters is a general problem for most accounts, however (cf. Kiss Riemsdijk (2004)), and therefore I will not present a more detailed structure here.
The different structures in (147) probably explain the *perfect variation*. The by now standard view concerning the syntax/semantics interface is that syntax serves as input structure for semantic interpretation (cf. among many others the *transparent logical form* by von Stechow (1999), *discourse representation theory* (Kamp & Reyle (1993)). In (147)b, there is a symmetric c-command relationship between the auxiliary and the past participle. The auxiliary a-symmetrically c-commands the past participle in (147)a. According to the standard picture, c-command is semantically spelled out as scope. Hence, the auxiliary scopes over the past participle in English and Swedish, while in German the past participle can also scope over the auxiliary.
The relation to the *perfect variation* is obvious: under the assumption that the past participle contains the anteriority meaning of the perfect (cf. Musan (2002) for a detailed argumentation for this view), it selects past time adverbials such as *yesterday* that modify the event time[15]. While the auxiliary – and therefore also the tense of the auxiliary – can restrict the adverbial selection of the past participle in English and Swedish due to its c-commanding position, no such restriction exists in German. This explains why there is no *present perfect puzzle* in German. But it does not explain why the present tense restricts the adverbial selection of the present perfect in Swedish and English.
Several proposals have been made in the literature and they differ widely. Difficulties already start when assigning a meaning to the perfect. While many scholars still follow the Reichenbachian tradition (e.g. Klein (1992), Musan (2002)), others propose an *ExtendedNow* approach (Portner (2003), Pancheva & Stechow (2004)) or a result state analysis (Kamp & Reyle (1993)). The Reichenbachian tradition analyses the present perfect as an event time being before the reference time[16] and the reference time being at the speech time. According to the *ExtendedNow* approach the present perfect introduces a time

[15] The event time is the time at which the event, state or process obtains.
[16] The reference time is the time relative to which the event time is located.

interval, an extended now starting somewhere in the past and ending – roughly speaking – at the moment of speech. The result state analysis maintains that the present perfect introduces a result state emerging immediately from the eventuality in the present perfect.

The explanation of the *perfect variation* therefore depends on the meaning of the perfect. All approaches, however, I am aware of, adhere to the fact that there is a *present perfect puzzle* and no *pluperfect puzzle*. The only difference between the present perfect and the pluperfect is the meaning contribution of the finite tense. Therefore, the present tense must be the source of the *present perfect puzzle*. This insight is used very differently in the literature. Klein (1992) and Portner (2003) propose a pragmatic constraint, Pancheva & Stechow (2004) and Kamp & Reyle (1993) argue for a semantic solution. Leaving many details aside, their point is intuitively clear: The *present perfect puzzle* consists of event time modification by past time adverbials assigning a definite position on the time axis such as *yesterday* (cf. Klein (1992)). The meaning of the present tense as it is standardly described today is that in English, the event time must be located around the speech time.[17] In German and Swedish, the event time can not be entirely located before the speech time, only at or after it. In all three languages, the present tense therefore involves no anteriority meaning. The past tense on the other hand locates an event time before the speech time. It has an anteriority meaning. The present tense now excludes past time adverbials assigning a definite position on the time axis from the present perfect. In other words: it is incompatible – be it for semantic or pragmatic reasons – with those adverbials. The past tense on the other side has an anteriority meaning and therefore allows the adverbials in question.

Combining the just sketched syntactic analysis of the perfect with this standard approach gives the right results. In English and Swedish, the present tense can restrict the adverbial selection of the past participle, because the auxiliary is in a c-commanding position to the past participle. In German, there is a symmetric c-command between the auxiliary and the past participle. Under the assumption that the adverbial selection depends on the auxiliary and the finite tense, the *perfect variation* can be explained: the present tense excludes definite past time adverbials, the pluperfect does not. In English and Swedish, the present tense can restrict the adverbial selection of the past participle due to its syntactic position. In German, however, the auxiliary cannot exclude the relevant class of adverbials, because it is c-commanded by the past participle.

In this section, it has been argued that the cross linguistic differences concerning the meaning of the present perfect are not due to different meaning contributions of either the auxiliary, the past participle or the present tense. It was shown that the syntax of the perfect differs cross linguistically. The German perfect is a verbal cluster, in English and Swedish the perfect has a biclausal structure where the past participle and the auxiliary head their own phrases. In the latter

[17] In scheduled contexts, the present tense may however also refer to the future.

languages, the auxiliary c-command the past particle and therefore scopes over it. Hence, the auxiliary determines which adverbials are possible with the English and Swedish present perfect. In German, the auxiliary cannot restrict the adverbial selection of the past participle. If it turns out that the perfect auxiliaries in German and Swedish/English are base generated at different positions, this provides an explanation of the *perfect variation*.
But many questions remain unanswered. The analysis sketched here can only successfully be provided if the syntax of the perfect has been worked out in detail. Especially the assumption that the German perfect is a verbal cluster with no separate phrases for the auxiliary and the past participle awaits to be confirmed. The syntax of verbal clusters is a general problem. I therefore believe that it is legitimate to have limited myself to some syntactic suggestions. The idea that only a syntax/semantics interface can account for the *perfect variation* is however new and surely right.

11. The perfect conclusion

The present perfect introduces a *perfect time span* (PTS). PTS is a time interval that contains the event time (E) at which the eventuality described by the main verb obtains. English, Swedish and German differ in how the *perfect time span* and the reference time set by the auxiliary are computed. In English, the right boundary (RB) of PTS is always identical with the moment of speech (S). In Swedish, RB is (R) of the auxiliary. The German present perfect has a uniform meaning integrating both its preterite and perfect readings. To cover both readings, the German PTS is dynamic. In the default, it is simultaneous with the final subinterval of (E). It is only distinct from (E) under circumstances that will be the topic of chapter 5.
It has been argued that only an *ExtendedNow-approach* to the perfect can give satisfying results. The main motivation for the *ExtendedNow* is the behaviour of the perfect with *since*-adverbials. The anteriority the past participle denotes is therefore a PTS-interval.
The lexical perfect state is licensed only if RB is distinct from (E). As in English and Swedish RB is always distinct from (E),[18] the present perfect is always stative in those languages. In German, non-stative uses are cases where RB is the final subinterval of (E). In the stative uses, RB is later than (E).
The traditional account for cross linguistic differences in the perfect has been to say that the present tenses in the languages differ (cf. KLEIN (1992), PORTNER (2003) among many others). As has become clear in section 10, the cross linguistic variation of the present perfect cannot be explained by the meaning of the present tense. I speculated that the reason why the present perfect differs cross linguistically depends on the syntax of the perfect.

[18] With the exception of the u(niversal)-perfect where (E) of the perfect holds throughout the entire PTS including (R).

Chapter 3: *perfect puzzles*: Adverbials and the perfect

1. Introduction

Although the present perfect(s) in English, Swedish and German denote anteriority, only the latter can be modified by certain positional temporal adverbials expressing pastness (cf. (1)a and b vs. c). KLEIN (1992) dubbed this phenomenon *the present perfect puzzle* (PPP).

(1) a. *Sigurd has come yesterday.
b. *Sigurd har kommit igår. (Swedish)
Sigurd has come yesterday
c. Sigurd ist gestern gekommen. (German)
Sigurd is come yesterday

The PPP is restricted to the present perfect. The sentences in (1) become fine when used in the pluperfect or in other perfects:

(2) a. Sigurd had come yesterday.
b. Sigurd hade kommit igår. (Swedish)
Sigurd had come yesterday
c. Sigurd war gestern gekommen. (German)
Sigurd was come yesterday

The PPP has been the topic of a long discussion in the, mostly semantic and pragmatic, literature (among others KLEIN (1992), PORTNER (2003), PANCHEVA & STECHOW (2004)), but all approaches I know of are problematic. Hence, I consider the PPP to be still unresolved.
There are further puzzles about the perfect. It is actually impossible to combine *since*-adverbials with adverbials such as *yesterday* in sentences containing a pluperfect. As far as I am aware of, this phenomenon has never been related to the PPP.

(3) a. *Since last week, Sigurd had come yesterday.
b. *Sedan förra veckan hade Sigurd kommit igår. (Swedish)
Since last week-the had Sigurd come yesterday
c. *Seit letzter Woche war Sigurd gestern gekommen. (German)
Since last week was Sigurd yesterday come

There is no approach I am aware of that can account for all these *perfect puzzles*. The contributions I want make to the ongoing discussion are therefore the following:

- There is **no (immediate) correlation between the present tense and the PPP**. A standard assumption has now become that the PPP can be explained

by the present tense. Languages whose present tense has a rather "flexible" meaning, for instance languages in which it can denote past, present and future, do not show the PPP. An example is German. Languages like English whose present tense semantics is rather restricted, e.g. where it only denotes the present, display the PPP.

- I challenge this view by observing that Swedish is a mixed type with a "flexible" present tense and a PPP and I conclude that the explanation why some languages have the PPP and others do not can not be derived from the given present tense meanings.

The chapter is organised as follows: In section 2, I show that none of the prior analyses of the PPP can account for the Swedish data. Section 3 repeats the meaning of the present perfect in English, Swedish and German. Section 4 is about temporal adverbials. In the following sections, I show that only a combined syntactic and semantic account can resolve the PPP.

2. Prior analyses

The present perfect is the only perfect of the perfect tenses that shows the PPP. It is also the only perfect that contains the present tense (cf. (4)). It is therefore tempting to explain the PPP in terms of properties of the present tense (cf. KLEIN (1992)).

(4)	a.	*Sigurd har kommit igår. *Sigurd has come yesterday*	present perfect	(Swedish)
	b.	Sigurd hade kommit igår. *Sigurd had come yesterday*	pluperfect	(Swedish)
	c.	Sigurd verkar ha kommit igår. *Sigurd seems have come yesterday*	infinitival perfect	(Swedish)

I begin by discussing a number of such explanations.
KLEIN (1992) observes that the *reference time* and the *event time* can not both be what he calls *p-definite*. It is, for instance, impossible to say something like (5) where both the *event time* and the *reference time* are specified by p-definite adverbials. A temporal expression is said to be *p(ositional)-definite* if its lexical content explicitly specifies a definite position of a time span in relation to the speech time KLEIN (1992:544). On this view, adverbials like *yesterday* are p-definite.

(5) *At seven, Chris had left at six.

(5) leads KLEIN (1992) to postulate the *p-definiteness-constraint* as formulated in (6).[1]

[1] I transfer KLEIN's (1992) system to REICHENBACH (1947/1966).

(6) P-definiteness constraint (KLEIN (1992)):
In an utterance, the reference time and the event time cannot both be independently p-definite.

KLEIN (1992) analyses the *p-definite constraint* as a pragmatic constraint. If Chris left at six, it is also true that he had already left at seven. He also points out that there is no syntactic reason to assume (6). In languages where there is no *present perfect puzzle*, the present tense is said to be a *p-indefinite expression*. This is the case for German where the present tense can apparently be used to express pastness, present and future (see KLEIN & VATER (1998)).
KLEIN's approach has been criticised very often (cf. PORTNER (2003), so I limit myself to some relevant remarks. First, there seems to be no independent pragmatic reason for the p-definiteness constraint. Another difficulty for KLEIN's approach is to determine whether a temporal expression is p-definite or not. Where is actually the exact borderline between p-definite and p-indefinite expressions? Adverbials like *just now* should refer to more definite position on the time axis as *in the 1990s*. Therefore, it is surprising that the latter is odd in present perfect sentences, while the former are fine. I therefore do not adopt the *p-definiteness-constraint* as given in (6).
PORTNER (2003) claims that in languages where the present tense can be used to refer to pastness, present and future, the present tense is atemporal. In languages where the present tense only refers to the present, it is said to be temporal. A temporal present tense yields a presupposition that excludes past time adverbials from any context in which a present tense is used. As the present perfect contains the present tense, it can not be combined with past time adverbials. This is not the case for the present perfect of those languages where the present tense does not yield a presupposition against past time adverbials. Here, the present perfect combines with them.
Several problems arise for PORTNER (2003). First, there is no general restriction of the present perfect against past time adverbials. It combines easily with *before*, *recently*, *lately* and so on. It rather seems to be the case that certain past time adverbials are excluded. Second, if the present tense was atemporal, it should be able to replace the past or the future in any context. (7) shows that this is not the case. Third, the assumption of an atemporal present tense can not explain its uses in historical or narrative contexts. (9) is an example of the so called historic present tense. The historical present tense is a rhetorical device to present the narrated story as immediate. By replacing the past tense by the present tense, the narration becomes more present. But if there was no such thing as the meaning of the present tense, one would not expect the present tense to show such rhetorical effects. Fourth, by saying that the present tense restricts the adverbial selection for the present perfect, it logically follows that the present tense and the present perfect always can combine with the same adverbials. This is not the case. The present tense can not be modified by adverbials like *recently*, but the present perfect can.

(7) *Igår reser han till Washington. (Swedish)
Yesterday travels he to Washington
(8) *Gestern reist er nach Washington. (German)
Yesterday travels he to Washington
(9) Im Jahr 1066 erobert Wilhelm England. (German)
In-the year 1066 conquers Wilhelm England
'In 1066, Wilhelm conquers England.'

I therefore reject PORTNER's (2003) account. I note in passing that KLEIN's assumption of a p-indefinite present tense suffers from similar short-comings.
PANCHEVA & STECHOW (2004) analyse the present perfect as an *ExtendedNow* whose right boundary need not be the moment of speech (cf. chapter 2). The assumption that the right boundary of the *perfect time span* can be completely separated from the PTS-interval in some languages is motivated by a competition process between the past tense, the present perfect and the present tense. The competition process does not need to occupy us here.
PANCHEVA & STECHOW (2004) explain the cross linguistic variation of the present perfect as depending on whether (R) is included in the PTS-interval or not. A present perfect whose right boundary (RB) is identical with (R) and more precisely, whose RB is (S), does not allow adverbials that exclude (S) from the PTS-interval. (10) is therefore a „clear contradiction". In languages where (S) is not the final subinterval of PTS, this adverbial restriction does not hold. The German example is therefore fine.

(10) *Sigurd har kommit igår. (Swedish)
Sigurd has come yesterday
(11) Sigurd ist gestern gekommen. (German)
Sigurd is yesterday come

As far as I can see, the approach by PANCHEVA & STECHOW (2004) is the most promising account made so far. The great innovation is the relation between RB and (S). I just mention two problems concerning this analysis. First, I do not see why in cases like (12) (S) should not be excluded from the PTS-interval. *Recently* localises the event time clearly before (S). Second, what happens if PTS does not end at the moment of speech? Consider the ungrammatical (13). On the account under discussion that sentence should be good, since (R) does not coincide with (S). Clearly, one could argue that *gestern* 'yesterday' excludes *morgen* 'tomorrow' from the PTS-interval, but no attempt is made to explain why sometimes (R) is part of the PTS and sometimes not.

(12) Sigurd har kommit nyss till Tübingen. (Swedish)
Sigurd has come recently to Tübingen
(13) *Morgen ist Sigurd bereits gestern gekommen. (German)
Tomorrow is Sigurd already yesterday come

It therefore occurs to me that the approach by PANCHEVA & STECHOW (2004) awaits further elaboration.

The Swedish Academy Grammar (SAG) proposes the following:

> If one, for a past action, can easily imagine an outer time frame, a space in time within which the action could have taken place or within which one checks to see if the action has happened, then this space in time is chosen as thematic time. If the space in time also includes the moment of speech, the thematic time of the utterance is the present and the perfect is used.[2]

This approach is said to explain (14), but it does not explain why cases like (15) are not possible. Again, the time span during which the eventuality obtained includes the *now*. There seems to be no difference between (14) and (15) and SAG's approach therefore fails.

(14) ??Idag har jag stigit upp klockan 12. (Swedish)
Today have I gone up clock-the 12

(15) *Den här veckan har jag varit på bio igår. (Swedish)
This here week have I been to movies yesterday

To sum up, none of the discussed approaches to the PPP can give a satisfactory answer to all the problems concerning the present perfect. I claim that there is a further, major problem for any account that analyses the PPP in terms of properties of the present tense (cf. also ROTHSTEIN (2005c) and section 10 in chapter 2). Most analyses try to account for the PPP by looking at its composition. The standard view is that languages differ with respect to the PPP as their present tenses differ (cf. KLEIN (1992), PORTNER (2003), PANCHEVA & STECHOW (2004)). Languages whose present tense can be used to express pastness, present and future do not have a PPP. The present tense is analysed as tenseless and therefore does not impose restrictions on the adverbial selection of the present perfect. Languages whose temporal meaning of the present tense is more restricted display the PPP.
A problem for those accounts is Swedish. When we look closer at the present tense in German and Swedish, it can be shown that they pattern in exactly the same way: They can be used to denote pastness with *since*-adverbials, present and future. Their meaning is identical.

(16)	a.	Han sover. *He sleeps*	(Swedish)	b. Er schläft. *He sleeps*	(German)
(17)	a.	I morgon reser jag *Tomorrow travel I* till Washington. *to Washington*	(Swedish)	b. Morgen reise ich *Tomorrow travel I* nach Washington. *to Washington*	(German)
(18)	a.	Jag är lärare sedan 1990. *I am teacher since 1990*	(Swedish)	b. Ich bin seit 1990 *I am since 1990*	(German)

[2] „Om man för en förfluten aktion lätt kan föreställa sig en yttre tidsram, en tidrymd inom vilken aktionen kunde ha inträffat eller inom vilken man ser efter om aktionen har inträffat, väljs denna tidsram som tematisk tid. Om tidsramen också innefattar talögonblicket, blir yttrandets tematiska tid nutida och perfekt används." SAG (1999:IV:235)

Lehrer.
teacher

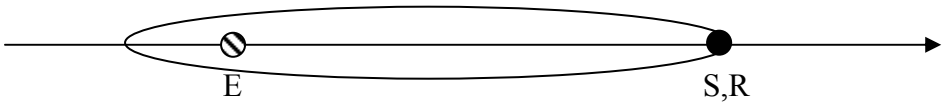
Analyses motivating the PPP by the present tense predict that languages with similar present tense meanings should pattern identically in the present perfect. Swedish shows that this is not borne out. The present tense(s) in both languages have an identical meaning, but Swedish displays the PPP and German does not. The PPP can therefore not be explained on the basis of the present tense.
In the next section, I remind the reader of the meaning of the present perfect in German, Swedish and English.

3. The meaning of the present perfect

As shown in chapter 2, the perfect is best analysed as an ExtendedNow. The perfect introduces a time interval in which the event time is located. This interval is called the *perfect time span* (PTS). The English present perfect has the meaning in (19). The meaning of the Swedish present perfect is the one in (20), the German present perfect is analysed in (21). We state that RB is always identical with (R) in Swedish and in English, while this is not the case in German. In German, PTS is dynamic. By default, RB is the final subinterval of (E). RB is only distinct from (E) if context requires it.

(19) English present perfect:

a:

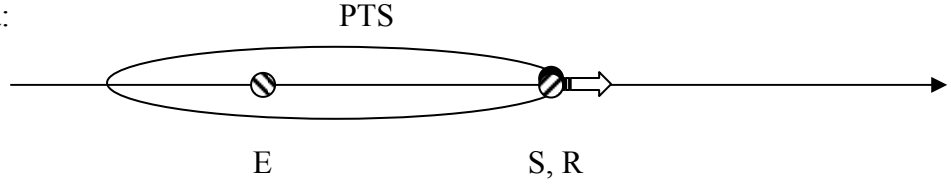


b:

S^3 R E PTS LB RB
S = R PTS (LB, RB) RB = R E ⊆ PTS

(20) Swedish present perfect:

a:



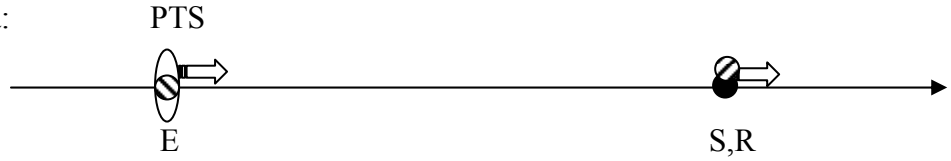
[3] "S" is an indexical discourse referent.

b:

S R E PTS LB RB
S ≤ R PTS (LB, RB) RB = R E ⊆ PTS

(21) German present perfect:

a:



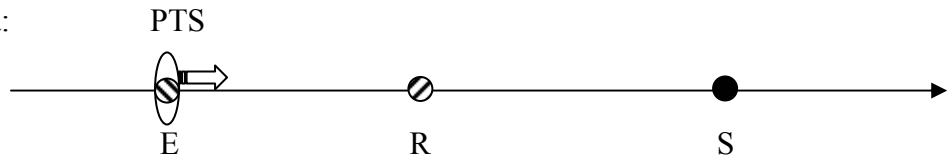
b:

S R E PTS LB RB
S ≤ R PTS (LB, RB) RB ≤ R E ⊆ PTS

The meaning of the pluperfect is as follows:

(22) Pluperfect in English, Swedish and German:

a:



b:

S R E PTS LB RB
R < S PTS (LB, RB) RB ≤ R E ⊆ PTS

We now turn back to the question how to analyse the *perfect puzzles*. To begin with, we will have a closer look on the actual adverbial restrictions set by the present perfect.

4. On temporal adverbials

Temporal adverbials can be roughly divided into three groups. Durational adverbials specify the duration of temporal entities: *zwei Tage lang* 'for two days'. Positional adverbials locate the position of temporal entities (*gestern* 'yesterday'). Frequency adverbials quantify over temporal entities (*einmal* 'one time', *immer* 'always').

Durational and frequency adverbials are possible with the present perfect, cf. (23) to (25). They will be neglected here.

(23) Han har varit två gånger i Paris. (Swedish)
He has been two times in Paris
(24) Jag har alltid älskat dig. (Swedish)
I have always loved you
(25) Han har bott tre år i London. (Swedish)
He has lived three years in London

It is widely acknowledged that the *present perfect puzzle* is restricted to a subclass of positional adverbials. Adverbials that denote a definite position on the time axis are not allowed with the present perfect in both Swedish and English (cf. among others KLEIN (1992) for English, SAG (1999:IV:237) for Swedish).
KLEIN (1992:544) claims that an expression is *p-definite* if its lexical content explicitly specifies a definite position of a time span in relation to the speech time, but this notion of *definite position* remains vague. I therefore modify KLEIN's (1992) definition of *p-definite*:

(26) A temporal expression is positional-specific (p-specific) iff its lexical entry explicitly denotes a specific temporal position on the time axis relative to the speech time and iff it is a possible answer to the question *when exactly* satisfying the degree of information asked for.

It follows from (26) that adverbials like *yesterday* are p-specific. *Yesterday* fixes a p-specific position in the past as it denotes the day before the day that contains the speech time. *Yesterday* also serves as a "satisfying" answer to the question *when exactly*. *Förr* 'before' is a non-p-specific adverbial as it is not a possible answer to the question *when exactly* satisfying the degree of information asked for.

(27) A: When exactly were you in Paris?
B: $^{?}$Before. / $^{\vee}$Yesterday

The *present perfect puzzle* is restricted to p-specific adverbials. In the following sections, I propose a new account to the *perfect puzzles*.

5. On the *present perfect puzzle* and the other *perfect puzzles*

In chapter 2, I argued that there is a cross-linguistic difference concerning the localisation of RB in the present perfect. In German, RB may precede (R) or be identical with it. In the English and Swedish present perfect, RB is always simultaneous to (R). As for the pluperfect in all three languages, RB may precede (R) or be simultaneous to it. In my eyes, the relation between the position of RB and the PPP is the key for the solution of the *perfect puzzles*.

The ExtendedNow approach defines the *perfect time span* as follows. Somewhere within PTS is (E). In other words: the position of (E) is p-inspecific. We can think of this as a semantic requirement that (E) can hold at any point in time within PTS. In case of the English and Swedish present perfect, this means that (E) can hold at any point in time within PTS up to or at (R) as RB is identical with (R). But this is no longer the case, if the position of (E) is restricted by a p-specific adverbial that denotes a point in time prior to (R). Take, for instance, the ungrammatical (28):

(28) *Sigurd has come to Tübingen yesterday.

PTS comes with the semantic requirement that (E) can potentially hold at any point in time within PTS up to or at (R).[4] *Yesterday*, on the other hand, requires (E) to be located somewhere within the day before the day that contains the moment of speech. This means that (E) can hold neither before *yesterday* nor after *yesterday*. This is a clear contradiction: while PTS requires that (E) can obtain at other points in time as denoted by *yesterday*, *yesterday* excludes this.
There is no such ban against p-inspecific adverbials that modify (E). Adverbials such as *before* are fully compatible with the requirement that (E) can hold at any point in time within PTS.
The present account correctly predicts p-specific adverbials including the moment of speech to be possible with the present perfect:

(29) This week, he has been to the movies twice.

This week includes (S) and by substitution (R). The left boundary of PTS is underspecified. This means that LB can be located somewhere within *this week*. Therefore, *this week* is compatible with the requirement that (E) can potentially hold at any point in time within PTS up to or at (R).
In German, RB is not identical with (R). PTS is flexible. In cases like the following, no contradiction results between the time interval denoted by *gestern* 'yesterday' and PTS. As RB is dynamic, event time modification by p-specific adverbials is compatible with the requirement that (E) can potentially hold at any point in time within PTS. As we have seen in chapter 2, there is a default for the setting of RB. In the default, RB is identical to the final subinterval of (E). Therefore, (E) can potentially hold at any point in time within PTS.[5]

---

[4] (E) can however not be entirely included in (R), because this would be the meaning of the present tense. Therefore, at least one subinterval of (E) must hold before (R). We will turn back to this special perfect use in chapter 5, when we define the so called u(niversal)-perfect in more detail.

[5] As will be shown in chapter 5, the position of RB is determined by discourse relations with other tenses. A way to think of the cross-linguistic difference concerning the position of RB in present perfect sentences is to state that in the Swedish and English present perfect, RB is a p-specific expression, but not in German. It is p-specific as there is a semantic requirement saying that RB is identical with (R). There is no such requirement for German. The position of the German RB is not determined by the semantics of the present perfect.

(30) Sigurd ist gestern nach Tübingen gekommen. (German)
Sigurd is yesterday to Tübingen come

The present approach can also account for (3) which I repeat here:

(31) *Since last week, Sigurd had come yesterday.

It is not possible to combine *since*-adverbials with p-specific adverbials in sentences containing a perfect. Event time modification by p-inspecific adverbials turns however out to be grammatical:

(32) Since September 11, he only has been on one single Sunday to New York.

According to the standard assumption, *since*-adverbials modify the left boundary of PTS. In (31), *yesterday* modifies (E). Now, the same semantic requirement as for the *present perfect puzzle* applies. PTS comes with the requirement that (E) can potentially hold at any point in time within PTS. But the p-specific adverbial restricts the position of (E). This turns out to be incompatible with the former requirement. In (31), (E) obtains *yesterday*. It can therefore not obtain at any point in time from *last week* on up to (R).

6. Conclusion

In this chapter, I have argued that there is no immediate correlation between present tense and the *present perfect puzzle*. As the German and Swedish present tenses pattern in exactly the same way, but as their present perfects do not, the present tense cannot be the source of the *present perfect puzzle*.
The adverbial selection of the English and Swedish present perfect suggests that only *p-specific* adverbials are allowed with the present perfect. These are defined as follows:

(33) A temporal expression is positional-specific (p-specific) iff its lexical entry explicitly denotes a specific temporal position on the time axis relative to the speech time and iff it is a possible answer to the question *when exactly* satisfying the degree of information asked for.

PTS comes with the semantic requirement that (E) can potentially hold at any point in time within PTS up to or at (R). *Yesterday*, on the other hand, requires (E) to be located somewhere within the day before the day that contains the moment of speech. This means that (E) can hold neither before *yesterday* nor after *yesterday*. This is a clear contradiction: while PTS requires that (E) can obtain at other points in time as denoted by *yesterday*, *yesterday* excludes this. As a result, there is a *present perfect puzzle* in Swedish and English, but not in German, because the German PTS is flexible.

Chapter 4: *The inferential present perfect in Swedish*

1. Introduction

In the preceding chapter, a new analysis of the *Present perfect puzzle* was proposed. It was stated that the present perfect in Swedish and English does not combine with p-specific adverbials (see (1) and (2)). These are adverbials like *yesterday* that indicate a specific position on the time axis. They are an answer to the question *when exactly*.

(1) *Björnen har gått här igår. (Swedish)
Bear-the has walked here yesterday
(2) *The bear has walked here yesterday.

Imagine now the following (invented) story: Swedish hunters are looking for a bear who escaped several times. They find traces in the snow. One of the hunters tells the others that these traces are not older than one day:

(3) Björnen har tydligen gått här igår. (Swedish)
Bear-the has probably walked here yesterday

This is not possible in English:

(4) *The bear has probably walked here yesterday.
(5) The bear has probably walked here.

The eventuality in (3) is not presented as a fact, but as an inference. This has been called *inferential present perfect*,[1] where a present perfect sentence is used to indicate the author's degree of confidence in his inference (cf. HAUGEN (1972:135)). As (5) suggests, the English present perfect can also be used to make inferences. COMRIE (1976) claims that the present perfect is related to inferentially:

> „With the perfect, a past event is related to a present state, in other words, the past event is not simply presented per se, but because of its relation to a present state. With the inferential, the past event is again not presented simply per se, rather it is inferred from some less direct result of the action (e.g. a second-hand report, or prima facie evidence [...]." (COMRIE (1976:110))

The contrast between (3) and (4) is that the *present perfect puzzle* disappears in Swedish in certain uses, but not in English. I call this the *lost present perfect puzzle*. Although a few investigations into these uses (cf. among others THULSTRUP (1948), HAUGEN (1972)) exist, none of them gives an analysis of the cross linguistic patterns.

---

[1] I will speak of *inferential* and *evidential* as synomyms.

A very careful empirical investigation of the Swedish perfect is found in KINNANDER (1974): he explicitly shows that the *inferential present perfect* is not a performance mistake and that the examples in question have to be taken seriously:

(6) Historien visar emellertid, att om ringmuren funnits, (Swedish)
History-the shows however that if ring-wall-the existed-past-participle-passive
så har dess underhåll under 400-talets lopp illa försummats,
then has its maintenance during 5th century's duration badly neglected-passive
ty när gallarna efter segern vid Allia närmade sig Rom,
for when gauls-the after victory-the at Allia approached themselves Rom,
mötte de inte motstånd vid stadsgränser. (KINNANDER (1974:145f))
met they not resistance at city-boundaries
'History however shows that if the ring-wall had existed then its maintenance during the 5th century would have been badly neglected, for when the Gauls after the victory at Allia approached Rome, they met no resistance at the city boundary.'

In all examples, the Swedish present perfect is used in contexts that our analysis from chapter 3 predicts to be ungrammatical. Still, the examples are fine. Is this a reason to rethink our findings from chapter 3? I claim that it is not and that the inferential present perfect should be treated separately from the "core" use, from the temporal use of the present perfect.
German does not have a *present perfect puzzle* in non-evidential uses and it therefore does not have a *lost present perfect puzzle* either:

(7) Ich habe gestern Véronique gesehen. (German)
I have yesterday Véronique seen
(8) Er hat gestern vermutlich mit ihr getanzt. (German)
He has yesterday probably with her danced

Thus, the German present perfect will not be compared to Swedish and English in this chapter.
My proposals are as follows:

- **Inferential meaning:** I will show that the Swedish present perfect has no inferential meaning. Its inferential readings are derived from additional inferential markers such as inferential adverbials.
- Sometimes, it has been claimed in the literature that the inferential present perfect has **a past tense meaning**. I will show that this is **not** the case.
- I will further show that the inferential present perfect is **not a present perfect**.
- I will show that the inferential present perfect behaves like **an infinitival perfect** that is embedded under a modal verb in the present tense.
- I therefore assume that the inferential present perfect is an infinitival perfect that is embedded under **a phonological null modal verb**. The discrepancy between form (present perfect) and meaning (infinitival perfect) will be explained by independent morphosyntactic parameters in Swedish. More

precisely, I show that there is a link between what has been called **parasitic morphology** and the inferential present perfect.

Swedish differs from English in having parasitic inflectional morphology (cf. (9)) which can be defined as a discrepancy between form and meaning in certain morphosyntactic contexts where verbal entities copy the inflection of their c-commanding verb, but keep their original meaning. Hence, the meanings of (9) and (10) are identical despite their different forms.

(9) Sluta drick kaffe med oss överhuvud taget. (Swedish)
Stop-imperative drink-imperative coffee with us in general
(10) Sluta dricka kaffe med oss överhuvud taget. (Swedish)
Stop-imperative drink-infinitive coffee with us in general

To account for parasitic morphology, I assume in accordance with WIKLUND (2001) an approach based on *Distributed Morphology* (DM) (cf. HALLE & MARANTZ (1993)). In this theory, phonological features are introduced by phonological operations after semantic and syntactic structures have been established. Hence, terminal nodes only contain semantic and syntactic features. They systematically lack all phonological features. These are supplied on a post-syntactic level by Vocabulary Insertion into the terminal nodes. A Vocabulary Item can only be inserted into a terminal node, if the identifying features of the item in question are a subset of the features at the terminal node.
Parasitic complements have underspecified morphosyntactical features. As these must be specified at PF to make Vocabulary Insertion possible, the parasitic complements copy corresponding features of their c-commanding verb. Hence, parasitic morphology is a restructuring effect at PF to avoid failure of derivation.
I suggest that there is a link between parasitic morphology and the *lost present perfect puzzle*. I will show that the inferential present perfect starts out as an underlying semantic infinitival perfect with an underspecified perfect auxiliary. The infinitival perfect is embedded under a silent modal verb that is embedded under an overt tense morpheme. In Swedish, silent verbs cannot be inflected by overt affixes. As a result, the covert modal cannot be tensed and the derivation must fail.
To save the derivation, the morphologically underspecified perfect auxiliary merges with the tense features instead of the covert modal verb. Its morphosyntactic features become specified. Given its parasitic status, it keeps its original infinitival meaning, but inflects like a present tense. As a result, the inferential present perfect is a present perfect at PF, but an infinitival perfect embedded under a modal at LF. This is not possible in English, due to its lack of parasitic morphology.
The chapter is organised as follows: Section 2 discusses former approaches. In sections 3 to 6, I analyse the meaning of the inferential present perfect. Section 7 introduces an analysis of parasitic morphology. In sections 8 to 10, the analysis

of the *lost present perfect puzzle* is proposed. Section 11 questions the compatability of DRT and DM and section 12 concludes.

2. Former approaches

PIPPING (1936:149) states that the present perfect and the past tense never compete for the same domains:

> „[...] svenskan och ett par andra språk alltjämt upprätthålla en tämligen sträng skillnad mellan perfektum och det rena preteritum [...].“
> […] Swedish and a few other languages still maintain rather a strict difference between the perfect tense and the pure preterite tense […].

THULSTRUP (1948:101) argues for an imperfective use of the Swedish present perfect.

> „Det finns alltså även i nusvenskan en tendens att låta perfekt breda ut sig på imperfekts domäner. Denna tendens är i vårt språk inte på långt när så stark som i franskan, tyskan och danskan.“
> There is therefore even in modern day Swedish a tendency to allow the perfect to fall into the domains of the imperfect. In our language, this tendency is by no means as strong as in the French, German and Danish languages.

But KINNANDER (1974:129) and THORELL (1973:§407) state that in uses where the present perfect is said to substitute the past tense, it has a modal meaning. It is not an imperfective use, but indicates the author's present degree of confidence in his inference about a past event:

> „Författaren står inte i direkt relation till händelseplanet [...], utan hans ‚händelser‘ är de utsagor som framkommit i utredningen [...]. Sålunda har ett nytt vad man kunde kalla *referensplan* inskjutits mellan författaren och sakförloppet, ett redan format dåtids-skede.“ KINNANDER (1974:129)
> The author is not in direct relation to the way things develop [...], rather, the events he described are the statements made during the investigation [...]. Thus, a new, what you might call *reference plan* has been interposed between the author and the way things developed, an already shaped past event.

> “Perfektum ... saknar här den vanliga temporala relationen till nutid: den talande vill med perfektum framhålla att det är fråga om slutsatser som grundar sig på undersökningar, vittnesmål o.d. Perfekum har snarast en modal karaktär; det rör sig om realitetsförhållanden sedda ur den talandes synvinkel.” THORELL (1973: § 407)
> The perfect tense… lacks here the usual temporal relationship to the present: the person speaking by using the perfect tense wants to stress the fact that it is a question based on investigation, evidence and similar. The perfect tense has more of a modal character; it's about reality conditions viewed from the perspective of the person who is speaking.

SAG (1999) claims that the inferential present perfect can be used as an alternative to the past tense.

> ”I vissa fall kan en aktion i det förflutna stå i perfekt, fastän kontexten anger en förfluten tidpunkt som det vore naturligt att välja som yttrandets tematiska tid. Detta gäller när talaren bygger sin kunskap på en annan trovärdig persons utsagor eller har dragit en slutledning på grundval av olika indicier. I så fall kan modalt perfekt användas som alternativ till preteritum.” (SAG:1999:IV:242)
> In some instances, an action in the past may remain in the perfect, although the context indicates a past event that it would be natural to choose as the utterance’s thematic time. This applies when the speaker bases his knowledge on another trustworthy person’s statements or he has come to the conclusion based on different circumstantial evidence. In such a situation the modal perfect may be used as an alternative to the preterite.

In the next section, I will show that this is not always the case.

3. On the status of the inferential present perfect

3.1 The inferential present perfect is not a present perfect

The inferential present perfect does not behave like a present perfect. It combines with p-specific adverbials and does not show *life time effects*. Consider (11), where the present perfect sentence has a subject DP referring to a person (Stagnelius) that is not alive at the moment of utterance, and which contains a past time adverbial, *på försommaren 1814* “in the early summer of 1814’.

(11) På försommaren 1814 har Stagnelius säkerligen återvändt till hemmet (Swedish)
In early-summer-the 1814 has Stagnelius surely returned to home-the
i Kalmar. (KINNANDER (1974:129))
in Kalmar
‘Stagnelius most likely returned to his home in Kalmar in the early summer of 1814.‘

Contrary to the present perfect, the inferential present perfect can be used for narration:

(12) Troligt är att någon av de båda männen fallit i vattnet. I samband med räddningsförsök kan båten ha kantrat och tagit in vatten. Båten har roligen [sic] drivit in i fisknätet i samband med att den vattenfylldes. Vid olyckstillfället under torsdagen var det nio grader varmt i vattnet. Männen blev när de föll i vattnet nerkylda och eftersom båda saknade flytvästar var möjligheterna att simma i land inte särskilt stora. (Swedish)

kan båten ha kantrat och tagit in vatten. Båten har roligen
May boat-the have sunken and let in water. Boat-the has probably

‘It is most likely that one of the two men had fallen into the water. During the attempts to save them, the boat may have turned over and let in water. The boat most likely got caught up in the fishing net as it filled with water. At the time of the accident on Thursday, the temperature of the water was nine degrees. When the men

fell in the water they were affected by the cold and seeing as they weren't wearing life-jackets the prospects of their swimming ashore were not that great.'

It therefore seems to be the case that the inferential present perfect is not a present perfect, but something else.

3.2 The inferential present perfect is not a past tense

It has been claimed that the inferential present perfect behaves like a past tense (cf. SAG (1999:IV:242)). But contrary to the past tense, the inferential present perfect allows for a current relevance reading. Example (3), which I repeat below, clearly expresses some kind of relevance for the present situation. The situation was the following. Swedish hunters are looking for a bear who escaped several times. They find traces in the snow. One of the hunters tells the others that the traces are not older than one day. This is presented as being relevant at the moment of speech.

(13) Björnen har tydligen gått här igår. (Swedish)
Bear-the has probably walked here yesterday

The current relevance reading is typical for all perfects. (14) contains a current relevance reading of a present perfect sentence. Having been turned down is relevant for the present state of the addressee.

(14) Du ser dyster ut; har du fått en korg? (Swedish) (PIPPING (1936:152))
You look sad particle have you got a basket
'You look sad. Have you been turned down?'

The current relevance reading is not that straightforward with the past tense. According to (15), it is not relevant now that at some time in the past there was a bear walking around.

(15) Björnen gick tydligen här. (Swedish)
Bear-the walked probably here

Moreover, it seems that the inferential present perfect allows for a universal perfect reading saying that the eventuality described by the main verb still holds at the moment of speech:

(16) Jag har väl alltid varit en ledartyp. (Swedish) (universal perfect)
I have probably always been a leader-type
'I have always been a leader type.'

(17) Torsten Sjögren vill inte förstå, att bullret från en väg i ett nedsprängt schakt, på sydsidan kantat av ett långt kontorshus, reflekteras mot vägens motsatta sida, så att tusentalet boende aldrig kan ha ett fönster öppet mot solen, långt mindre använda sina balkonger. Han har tydligen aldrig hört talas om avgaser från stillastående bilköer. (Swedish)

> Han har tydligen aldrig hört
> *He has probably never heard*
>
> 'Törsten Sjögren doesn't want to understand, that the noise from a road in a shaft, bordered by a long office building on the south side, is reflected onto the opposite side of the road so that thousands of people living in the area can never have their windows open towards the sun, with even less of a chance of using their balconies. It seems he has never heard about exhaust fumes from stationary vehicle queues.'

Furthermore, if the inferential present perfect had the same meaning as the past tense, we would expect substitution between these two to be always possible. As the behaviour of the inferential present perfect under binding shows, this is not borne out. As we have seen in chapter 2, a present perfect that is used in indirect speech only allows for a "prior to time of matrix verb reading". This is also the case for the inferential present perfect: (18) only allows for the reading that at the time when Peter said this, he had already been sick. This reading is called *de re reading*. (19), on the other hand, a past tense is used in indirect speech. Like in (18) it can have a *de re reading* under which he has already been sick before he says this. But there is also a second reading which we call *de se reading*. According to this reading, he can be sick at the time Peter says this. As the inferential present perfect cannot always substitute for the past tense, it cannot be a semantic past tense.

(18) Peter sade att han tydligen har varit sjuk. (Swedish) (*de se / de re)
Peter said that he probably has been sick

(19) Peter sade att han tydligen var sjuk. (Swedish) (de se / de re)
Peter said that he probably was sick

To sum up, the inferential present perfect is clearly not a past tense as it has current relevance readings and universal perfect readings. These are typical characteristics of the perfect tenses such as the present perfect or the infinitival perfect. Furthermore, it does not allow for substitution by a past tense. As we have seen in the preceding section, it is neither a present perfect, because it combines with p-specific adverbials and can be used for narration. Hence, we need an analysis that keeps the present perfect a perfect and that takes away the present perfect meaning. Another possible analysis could be to attribute some inferential meaning to the present perfect. We will think of this in the next section.

4. The inferential meaning of the present perfect

Let me start with the following pair of examples:

(20) Björnen har gått. (Swedish)
Bear-the has left

(21) The bear might have left.

(21) has always the modal interpretation that there might have been at some time in the past a bear that left. (20), on the other hand, has no such reading unless there occur additional modal markers such as *tydligen* 'probably'. Contrary to (20), (22) has an inferential reading.

(22) Björnen har tydligen gått. (Swedish)
Bear-the has probably left

Without *tydligen* 'probably', the modal interpretation is very hard, if not impossible to get. The inferential reading of a present perfect is therefore either licensed by certain adverbials or in contexts whose evidentiality is common ground (historical contexts, archaeological reports (cf. KINNANDER (1974:134)).

(23) Över huvud har Margareta under hela sin bana efter Falköpingsslaget (Swedish)
On the whole has Margareta during whole her reign after Falköpingsslaget
knappast någonsin hotats av större faror än under dessa månader
hardly some-time threatened-been by greater danger than under these months
närmast efter 1393 års Falsterbomöte. (KINNANDER (1974:133))
immediately after 1393 year's Falsterbo meeting
'On the whole, Margareta throughout all of her reign after the Battle of Falköping, was hardly threatened by any greater dangers than under these months immediately after the Falsterbo meeting of 1393.'

Given that there is no inferential reading of the present perfect without additional modal markers, the present perfect itself does not have an inferential meaning.
There are examples where the English present perfect sentence also has an inferential reading. Again, this reading depends on certain adverbials. I only give some examples:

(24) The invasion of Iraq has probably begun.
www.strategypage.com/strategypolitics/articles/20021219.asp
(25) I think Spain has maybe had its days in the sun.
www.xtratime.org/forum/archive/index.php/t-109690.html
(26) The concept of European Research Area has certainly served as a platform for launching a renewed debate on European research policy.
www.6cp.net/documents/Abstract_Boekhult2003.doc

But unlike in Swedish, the inferential use in English does not license a *lost present perfect puzzle*:

(27) *The invasion of Iraq has probably begun in 1991.

Further, IZVORSKI (1997) states that the evidential interpretation has a present tense orientation. Past events are reported via present inferences. In (28) and (29), the wet street serves as a premise for the inference for the past event *to*

rain. It is not clear how the present tense orientation of inferential present perfects could license the *lost present perfect puzzle*.

(28) Gatan är våt. Det har tydligen regnat. (Swedish)
Street-the is wet. It has probably rained
(29) The street is wet. It probably has rained.

To sum up, the Swedish present perfect does not have an inferential meaning. An evidential use of the present perfect is also possible in English. But only in Swedish, there is a *lost present perfect puzzle*.

5. The meaning contribution of evidential markers

As we have seen above, the evidential use of the present perfect depends on additional evidential adverbials. It could now be tempting to explore the meaning contribution of the evidential adverbials to the *lost present perfect puzzle*. There are at least three different analyses possible. As we will see, none of them works.

First, we could try to find scope differences between the evidential adverbial and the present perfect in English and Swedish. If we do not want to stipulate this, we expect different adverb placement in the two languages. This is not borne out. Both in Swedish and in English, the evidential adverbial can precede the participle, the auxiliary and the entire sentence. This is shown in (30) to (33).

(30) Han har tydligen inte ärvt mitt dåliga självförtroende när det gäller tjejer, (Swedish)
He has probably not inherited my poor self-confidence when it comes-to girls
säger Olle och skrattar.
says Olle and laughs
'When it comes to girls, says Olle laughing, it doesn't seem as though he has inherited my poor self-confidence.'
(31) Men tydligen har inte domare Olsson gjort något tjänstefel när (Swedish)
But probably has not Judge Olsson committed a breach-of-duty when
han väljer att fria i den aktuella situationen.
he chooses to acquit in this particular sitation-the
'But it seems that Judge Olsson has not committed a breach of duty when he chooses to acquit in this particular situation.'
(32) "In Britain, heterosexual Aids has probably never existed" is a conclusion of the BBC "Fine Cut" documentary programme "The end of Innocence". www.libchrist.com/std/uk/html
(33) The United States under the Bush Administration probably has lost its former moral autorithy – and that is a great tragedy.
www.theglobalist.com/DBWeb/Storyld.aspx?Storyld=3491

Another possible analysis could be to explore cross linguistic meaning differences of evidential modality. But as has been shown by AIJMER (1999/2002), there are many similarities between English and Swedish inferential modality.

A third analysis could be to explore the meaning contribution of the inferential markers. AIJMER (1999) found out that in translations from English to Swedish, an English modal is often translated either by a modal and an adverb or sometimes only by an adverb. It could therefore be tempting to analyse the *lost present perfect puzzle* as depending adverbials, but as shown above there are many different inferential expressions involved. Sometimes, the whole context, (archaeological reports and so on), can also "mark" evidentiality, see (23).
To sum up, there is no evidence for basing the analysis of the *lost present perfect puzzle* on the evidential markers. In the next section, we will see if there is not a more promising solution.

6. The inferential present perfect is an infinitival perfect

There is an interesting remark in the *Svenska akademiens grammatik* (SAG) on the inferential present perfect:

> "Ofta kunde ett lär eller torde också ha använts för att tydligare visa talarens underlag för sitt påstående." (SAG (1999:IV:242))
> Often a *lär* 'modal verb with meaning probably / it is said' or *torde* 'ought' could also have been used to make it more clear as to what the speaker was trying to say.

A similar line of reasoning is found in KINNANDER (1974:129):

> "Enstaka fall av perfektum med tidsbestämning eller i varje fall klart dåtidssammanhang blir förklarliga som uttryck för fakticitet, vetskap eller förmodan, grundade på underförstådda vittnesbörd och utsagor, i vissa fall författarens egen överläggning (typen *har varit* = 'torde/måste ha varit')."
> Individual instances of the perfect with a time specification or in any case a clear reference to the perfect are explainable as an expression of factuality, knowledge or presumption, based on implied testimony and evidence, in some cases the author's own deliberation (the type *has been* = ought/must have been).

According to the two views, the inferential present perfect could be an underlying infinitival perfect being embedded under a modal verb. But this has not been shown so far. Let us therefore investigate the parallels between infinitival perfects and the inferential present perfect.
Like the inferential present perfect, the infinitival perfect does not display the *present perfect puzzle*. For reading convenience, I repeat the examples concerning the inferential present perfect.

(34) Jag rycker till vid tanken på att skadan kan ha uppkommit 1945 (Swedish)
I shudder at thought-the particle that damage-the may have originated 1945
och till och med försvårats 1956.
and particle and particle aggravated-been 1956
'I shudder at the thought that the damage may have originated in 1945 and may even have been aggravated in 1956.'

(35) På försommaren 1814 har Stagnelius säkerligen återvändt till hemmet (Swedish)
In early-summer-the 1814 has Stagnelius surely returned to home-the
i Kalmar. (KINNANDER (1974:129))
in Kalmar
'Stagnelius most likely returned to his home in Kalmar in the early summer of 1814.'

Typically, the present perfect is not used to report sequences of events that happened in the past. Stories about past events are narrated in the past tense. Contrary to the present perfect, the inferential present perfect can, however, be used for narration of past events:

(36) Mattor och vävnader breddes ut över marken framför honom, palmgrenar och gröna blad ströddes ut, bjärta blommor kastades för hans fötter. Oasens hela befolkning trängdes kring Alexander, låg framstupa i rader där han gick fram, sträckte ut händerna för att få snudda vid hans mantel, mötte honom med ett sorl av välsignelser. Redan då kan Alexander ha lagt märke till att det fattades kvinnor i den hänförda folkhopen, och kan ha tänkt att de höll sig inomhus: med ökenfolks stränga vanor ansågs det väl inte lämpligt att de visade sig. Men senare fann han att det så gott som helt saknades kvinnor i Siwa-oasen: den var känd för sin allmänt omfattade homosexualitet. Männen levde där tillsammans i formliga äktenskap och befolkningen uppehölls genom att barn fördes dit från andra håll. (Swedish)

kan ha tänkt
may have noticed

'Mats and fabrics were spread out over the ground in front of him, palm branches and green leaves were strewn about, and gaudy flowers were thrown at his feet. All those people who lived at the oasis jostled around Alexander, they lay prostrate in rows where he walked, stretched out their hands to touch his cloak, met him with a drone of blessings. Even then Alexander may have noticed that there weren't any women around amongst the enthusiastic crowds; maybe he thought they had stayed indoors: the strict habits of the desert people considered it unsuitable that they showed themselves.'

(37) Troligt är att någon av de båda männen fallit i vattnet. I samband med räddningsförsök kan båten ha kantrat och tagit in vatten. Båten har roligen [sic] drivit in i fisknätet i samband med att den vattenfylldes. Vid olyckstillfället under torsdagen var det nio grader varmt i vattnet. Männen blev när de föll i vattnet nerkylda och eftersom båda saknade flytvästar var möjligheterna att simma i land inte särskilt stora. (Swedish)

kan båten ha kantrat och tagit in vatten. Båten har troligen
May boat-the have sunken and let in water. Boat-the has probably

'It is most likely that one of the two men has fallen into the water. During the attempts to save them, the boat may have turned over and let in water. The boat most likely got caught up in the fishing net as it filled with water. At the time of the accident on Thursday, the temperature of the water was nine degrees. When the men fell in the water they were affected by the cold and seeing as they weren't wearing life-jackets the prospects of their swimming ashore were not that great.'

Both the inferential present perfect and the non-finite perfect do not show *life time effects*.

(38) En dikt som kunde ha varit med är Ragnar Thoursies (Swedish)
A poem that could have been with is Ragnar Thoursies
Sundbybergsprologen från 1951. Olof Palme lär ha citerat den ofta [...].
Sundbyberg's-prologue from 1951 Olof Palme it-is-said have quoted it often
'A poem that could have been included is Ragnar Thoursies Sundbyberg's prologue from 1951. Olof Palme, it is said, quoted it often […].'

Like the inferential present perfect, it allows for present relevance readings:

(39) Enligt SMB verkar regeringen nu ha backat. Det betyder (Swedish)
According SMB seems government-the now have reversed-their-decision. It means
att även de statligt anställda oljearbetarna kan få samma villkor
that even the government employed oil-workers can receive same conditions
som de privatanställda har.
as the private employees have
'According to SMB, it seems the government has now reversed their decision. It means that even the government employed oil workers can receive the same conditions as the private employees.'

(40) Björnen har tydligen gått här igår. (Swedish)
Bear-the has probably walked here yesterday

In binding contexts, both only allow for *de re reading*s:

(41) Inte heller Larry sa någonting till George, han följde bara efter henne (Swedish)
Not even Larry said anything to George; he followed just after her
in i köket där mrs Riley log välkomnande mot dem båda och sa att hon
in in kitchen-the where mrs Riley smiled welcoming to them both and said that she
måste ha känt på sig att de var i faggorna, för hon hade just bryggt en kanna
must have felt on her that they were in coming, because she had just made a pot of
te.
tea
'Not even Larry said anything to George; he just followed her into the kitchen where Mrs Riley welcomed them with a smile and said that she must have felt that they were coming because she had just made a pot of tea.'

(42) Han sade att han tydligen har varit sjuk. (Swedish)
He said that he probably has been sick

Like the inferential present perfect, the infinitival perfect allows for universal perfect readings:

(43) Det framgår av ett manusutkast till avsnittet som finns på internet. (Swedish)
It is-evident from a script-draft of chapter-the that is-available on Internet-the
För fansen lär uppgiften inte komma som någon överraskning,
For fans-the is-likely information-the not come as a surprise
Patty lär alltid ha känt en dragning till homosexualitet och i det kommande
Patty is-likely always have felt an attraction to homosexuality and in the coming
avsnittet faller hon för en kvinnlig golftränare.
Chapter-the falls she for a female golf-professional
www.lontagaren.fi/lt2004/lt0406/lt040702-k2.html
'It is evident from a draft of a script of the chapter that is available on the Internet. For the fans, the information will most likely not come as a surprise, Patty it is said has always been homosexually inclined and in the coming chapter she falls for a female golf professional.'

The parallels between the infinitival perfect and the inferential present perfect are summarized in the following table:

	Inferential present perfect	Under a modal embedded infinitival perfect
No *present perfect puzzle*	+	+
Can be used in narration	+	+
No *life time effects*	+	+
Current relevance reading	+	+
Only *de re reading* under binding	+	+
Allows for universal perfect	+	+

Table 1

As the two perfects pattern in the same way, it is not implausible that the inferential present perfect is derived from an infinitival perfect that is embedded under a phonologically null modal verb carrying the inferential meaning.
There are three further arguments favouring such an analysis: The first one concerns substitution. Infinitival perfects can always substitute for the inferential present perfect as long as they are embedded under a modal verb with evidential meaning and in the present tense. Second, no meaning differences arise between the two constructions as the following pair of examples shows:

(44) a. Björnen har tydligen gått. (Swedish)
Björn-the has probably left
b. Björnen lär ha gått. (Swedish)
Björn-the is-probably have left

To sum up, the inferential present perfect is not a present perfect, it behaves like an infinitival perfect being embedded under a modal verb denoting evidentiality. I therefore propose to analyse the inferential present perfect as being embedded under a phonologically null modal verb with evidential meaning.

If we follow this analysis, we now have to account for several things. First, there must be an independent reason why the same analysis is not possible for English. Second, we have to motivate the phonologically null modal verb.
Why should a similar analysis not be possible in English? In English, the infinitival perfect displays no *present perfect puzzle*.

(45) This ranking scheme seems to have been relatively upheld well into the 1960s. www.answers.com/topic/interracial-couple - 30k

It can be used for narration and has no *life time effects*:

(46) Einstein seems to have deeply understood the implications of Reich's research. He spoke about a telescope scintillation of energy in the atmosphere. ww.metahistory.org/CosmosCsnsJHS.php

It can have a current relevance reading:

(47) The film seems to have been made for no other reason than to prove that 2000 was a lousy year for movies. www.dvdtown.com/functions/frontpagelinks.php?id=1967

The infinitival perfect in English allows for universal perfects:

(48) China is a country which has contributed constructively to international dialogue but seems to have always been impatient on the Taiwan question. www.fmprc.gov.cn/eng/wjb/ zzjg/xos/gjlb/3210/3212/t82313.htm

As we have seen, the infinitival perfects in English and Swedish pattern in exactly the same way. It is therefore surprising, that there are no such phenomena as an inferential present perfect and a *lost present perfect puzzle* in English. To account for that cross linguistic difference and to avoid a stipulated analysis, the account must be motivated by independent evidence. I claim that there is a link between parasitic morphology and the inferential present perfect:

(49) Klassklyftor, marginalisering av stora folkgrupper och sociala (Swedish)
Class differences, marginalisation of large ethnic-groups and social
problem av dimensioner vi aldrig hade kunnat tänkt /
problems of the sizes we never had could-past participle imagined-past participle /
tänka oss skulle uppstå i Sverige igen, håller idag på att
imagine-infinitive ourselves could arise in Sweden again, are today particle that
bli en bister realitet.
become a grim reality
'Class differences, the marginalisation of large ethnic groups and social problems of the size we could never have imagined could arise in Sweden again, are today becoming a grim reality.'

(50) Sluta drick / dricka kaffe med oss överhuvud taget. (Swedish)
Stop-imperative drink-imperative / drink-infinitive coffee with us in general

In (49) and (50), the underlined verb form is expected to be an infinitive (cf. the infinitival alternatives are indicated by slashes). The underlined verbs have the

semantics of infinitives, although they do not have the corresponding infinitival morphology. The morphology is copied from the immediately c-commanding verb. With WIKLUND (2001) I use the term parasitic morphology or more generally parasitic for the underlined verb forms:[2]

(51) "A parasitic complement is one where
  a. an expected infinitival form is replaced by a surface form seemingly 'borrowed' from a super ordinate verb
  b. despite the morphology of the verb, its semantics remains the same as for an infinitive." (WIKLUND (2001:202))

(49) and (50) can only be rendered in English by the corresponding infinitives. In other words, there is no parasitic morphology in English:

(52) *Stop drink coffee.

In the following sections, I first provide an analysis of parasitic morphology and then come back to the inferential present perfect.

7. On parasitic morphology in Swedish

7.1Parasitic morphology sheds light on architecture of grammar

To account for (49) and (50), the strong lexicalist hypothesis must assume ambiguity between the items used in parasitic and non-parasitic contexts. In the parasitic use, the past participle has the meaning of an infinitive, in non-parasitic uses it denotes anteriority.[3] The strong lexicalist hypothesis requires *early insertion* of items. This means that the Vocabulary items have to be fully specified for both meaning and form, for semantics, morphology, syntax and phonology, when they are picked up from the lexicon. Hence, a monosemous analysis for the corresponding parasitic and non-parasitic forms in (49) to (50) is impossible in terms of a strong lexicalist approach. If we do not want to complicate the lexicon, we have to look for another solution.

The existence of parasitic morphology argues for a grammar model that allows for discrepancies between form and meaning. Semantically, the parasitic items in (49) to (50) are infinitives, morphologically they are not.

To account for the discrepancy in question, WIKLUND (2001) proposes an analysis in terms of *Distributed Morphology* (DM) as developed by HALLE & MARANTZ (1993). In the following, I adopt WIKLUND's account of parasitic morphology with some modifications.

---

2 Cases with parasitic morphology are not performance mistakes, cf. for instance LJUNGGREN (1934) for an impressive overview.

3 For the definition of anteriority, see section 10.8 in chapter 2.

7.2 Distributed morphology

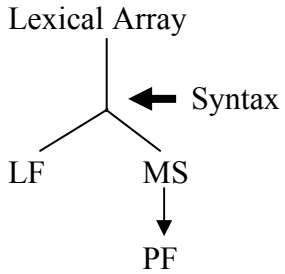
In *Distributed Morphology*, word formation is distributed over Syntax and Morphological Structure. Phonological features are not present during syntactic computation and also not in the presyntactic lexicon. Terminal nodes contain semantic and syntactic features and lack all phonological features. Syntax generates the terminal nodes according to its own principles. The terminal nodes are linearized by Merge and Move. Phonological features are supplied on a post-syntactic level, once the linearization of terminal nodes has been completed. The phonological features are added in Morphological Structure (MS) by insertion of Vocabulary Items into terminal nodes. This is referred to as *Vocabulary Insertion*. At MS, no semantic or syntactic features are added to the terminal nodes.

Vocabulary Insertion into a terminal node takes place, if the identifying features of the Vocabulary Item are a subset of the features at the terminal node. There might be no Vocabulary Insertion if the Item in question has identifying features not appearing at the terminal node. The Item need, however, not contain every feature of the terminal node it is inserted to. Vocabulary Insertion into terminal nodes does not require fully specified Vocabulary Items; rather the Vocabulary Items can be underspecified with respect to the features of the terminal nodes. Several Vocabulary Items can therefore compete for the insertion in the terminal node and only the Item with the most highly specified identifying features for the terminal node Item will be inserted.

HALLE & MARANTZ (1993) assume that there is *syntactic hierarchical structure all the way down*: hence, the linearization of terminal nodes is determined solely by the principles of syntax. Further operations may modify the hierarchical syntactic structures to a certain extent. The linearization of the terminal nodes is subject to further distinct morphological operations at MS in the PF component. These operations are however constrained by strict locality conditions requiring the constituents in question to stand in a government relation with respect to each other or to be structurally adjacent.

The assumptions *Distributed Morphology* makes can be represented as follows:

(53)



The syntactic approach to morphology presented here analyses some aspects of word formation by syntactic operations such as head movement. These occur in the syntax. Other aspects of word formation are explained by operations on the PF branch. This fact has given rise to the term *Distributed Morphology*.

Let us now turn to the operations at MS. As already indicated, the terminal nodes are subject to further distinct operations at MS. In syntax, there is only hierarchical nesting of constituents, but no linear ordering. Left-to-right order among the morphemes that sentences show at PF is established by principles that relate syntax to PF. These operations occur at MS and may be both universal and language-specific well-formedness conditions. The operations in question may change the number of terminal nodes that are phonologically realized.

Among the most important operations at MS are Fusion, Fission and Merger. Adjacent nodes may be fused into a single terminal node or a terminal node may be fissioned into two. Merger joins two terminal nodes under a category node of a head. The terminal nodes stay independent under this category node. Fusion joins two originally independent nodes under one single terminal node. Only one Vocabulary Item may now be inserted. Hence, Fusion reduces the number of independent morphemes. A well-known example of morpheme fusion is the affix expressing both number and case in many Indo-European languages. This kind of affix is the result of the Fusion of the originally independent terminal nodes containing Number and Case features. For present purposes however, Fusion and Fission are not relevant.

Morphological Merger is defined as follows:

(54) Morphological Merger
At any level of syntactic analysis (D-Structure, S-Structure, phonological structure), a relation between X and Y may be replaced by (expressed by) the affixation of the lexical head of X to the lexical head of Y. (MARANTZ (1988:261))

I follow EMBICK & NOYER (2001:561) in assuming at least two types of Morphological Merger. It can either take place as *Lowering* if Merger occurs in MS before Vocabulary Insertion or it can be realized as *Local Dislocation* in MS after or concomitant with Vocabulary Insertion.

Lowering operates in terms of hierarchical structure. As the phonological realization of complex words is added to the terminal nodes post syntactically, *Lowering* is in certain cases required to unify syntactic terminal nodes. This is necessary as these nodes are spelled out together, although they are not adjacent or not in the syntactic position phonology requires them to be. In the following, the head X^0 lowers to Y^0:

(55) *Lowering of X^0 to Y^0*
$[_{XP}\ X^0 \ldots [_{YP} \ldots\ Y^0 \ldots]]$ -> $[_{XP} \ldots [_{YP} \ldots [_{Y}{}^0\ Y^0 + X^0] \ldots]]$

The example EMBICK & NOYER give for *Lowering* is the realization of tense features on the English verb. In English, V does not move to T overtly, but T is realized on V morphologically (with the exception of negation and T-to-C movement). T lowers to V in English:

(56) Mary [$_{TP}$ t_1 [$_{vP}$ loudly play-ed$_1$ the trumpet].[4] (EMBICK & NOYER (2001))

As (56) illustrates, *Lowering* involves not necessarily local adjunction of a head to a head. *Lowering* is therefore (potentially) nonadjacent.

Local Dislocation is a second variety of Merger. It occurs after or concomitant with Vocabulary Insertion. The relevant notion for *Local Dislocation* is not hierarchical syntactic structure, but linear ordering. EMBICK & NOYER (2001) assume that linear ordering is imposed on a phrase marker at Vocabulary Insertion, that is, at the point where phonological features are added.

Local Dislocation differs from *Lowering* in that the notion of "head of a constituent" relevant to Merger is defined differently (cf. MARANTZ (1988)). *Lowering* applies before phonological features are added to the syntactic representation. Hence, linear precedence is irrelevant and the head is defined in terms of syntactic structure: the head of a phrase XP is X^0. When phonological features are introduced, this no longer holds. The head is now defined in terms of peripherality within the constituent.

In the following structure, X takes YP as a complement. YP contains ZP and Y. ZP can either be a complement or an adjunct to Y.

(57) [$_{XP}$ X [$_{YP}$ [$_{ZP}$ Z] Y]]

A potential linearization of this structure is the following where X * Z represents the requirement that X linearly precedes Z and that X is adjacent to Y:

(58) [X * [Z * Y]]

In (58), Y must immediately follow and be adjacent to X. *Local Dislocation* can covert (58) to (59):

(59) [[$_Z{}^0$ Z + X] * Y]

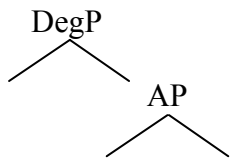
Here, the original relation [Z * Y] has been exchanged, but the linear order that Y must immediately follow and be adjacent to X has been maintained. In (59), Y still follows the internally complex Z^0. (59) is therefore a legitimate transformation of (58). Importantly, *Local Dislocation* must always be local. Only the linear order of adjacent elements can be changed. Intervening adjuncts cannot be ignored.

EMBICK & NOYER (2001:564f) give the following example for *Local Dislocation*. The suffixation of the English superlative morpheme depends on the prosody of the host: only adjectives with one metrical syllable can host superlative morphemes. With ABNEY (1987), EMBICK & NOYER assume that the superlative feature dominates the position of the adjective. I represent

[4] *t* is a marker to indicate the original position of an element affected by Merger. It is not to be interpreted a trace/copy in the technical sense.

this by a simplified structure where the head of DegP (representing a *Degree Phrase*) is supposed to host the superlative features:

(60)



As EMBICK & NOYER argue, the condition for the potential suffixation of the English superlative is the well-known prosodic constraint. Only adjectives with one metrical syllable allow for the superlative morpheme, in all other cases *most* is used. Therefore, the condition applies when phonological features are joined to the terminal nodes. As we have seen, structures are linearized by Vocabulary Insertion. It is not possible that the superlative morpheme lowers to the adjectival head as *Lowering* applies before phonological features are added. The suffixation of the English superlative morpheme is realized on linear structure in terms of *Local Dislocation*:

(61) Mary is the *t* smart-est person ...

As being defined over a linearized structure, the adjective cannot host the superlative morpheme when there is an intervening adverbial:

(62) *Mary is the *t* amazingly smart-est person ... (EMBICK & NOYER (2001:565))

In (62), *amazingly* is structurally between the position of the superlative morpheme and the adjective *smart*. The presence of *amazingly* prevents the superlative morpheme and its adjectival host from being merged. *Local Dislocation* is therefore not possible. The superlative morpheme must therefore be realized as in (63).

(63) Mary is the most amazingly smart person ... (EMBICK & NOYER (2001:565))

To sum up, in this section some of the key notions of *Distributed Morphology* that are relevant for our purposes were presented. The most important insight is that phonological features are introduced to the derivation after syntactic and semantic features have been established. This separation of form and meaning will allow us to account for parasitic morphology in the next section.[5]

[5] I won't repeat the problems of combining DM and DRT, because I discussed some issues already in chapter 1. As far as I can see, the syntax proposed in the relevant tree (88) can serve without further problems as input structure for the DRS construction.

7.3 An account to parasitic morphology in the framework of DM

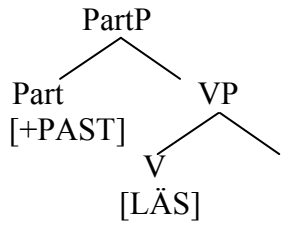
Let me start by looking at the terminal nodes before Vocabulary Insertion. Features will be represented in privative oppositions, that is, positively or negatively specified as [+FEATURE] and [-FEATURE].

The Vocabulary Item *läst* (read-past-participle) consists of (at least) two terminal nodes: a V in which the meaning *to read* is contained and a Part node denoting pastness. This is represented by V [LÄS] and Part [+PART] respectively.[6] If the head Part contains the feature [+PAST], we will end up with a past participle *läst*.

(64) Terminal nodes selected: V [LÄS]
Part [[part], [+PAST]][7]

The corresponding structure is as follows:

(65)



In accordance with general assumptions of *Distributed Morphology*, I assume possible feature underspecification to account for parasitic morphology. Features in terminal nodes might be underspecified in a way that affects the syntactic interpretation of the terminal node, but not its semantic interpretation. This is the case of parasitic items whose morphosyntax differs from the morphosyntax of the corresponding non-parasitic items. The meanings of both the parasitic and the corresponding non-parasitic items are identical, but their forms differ. As syntactic/semantic features and phonological features are supplied at different stages in the derivation, discrepancies between form and meaning may naturally result.

Feature underspecification does therefore only affect the syntactic part of the feature, but not its semantic part. With WIKLUND (2001:213), I shall therefore assume that as for the semantic interpretation of the structure, a privative feature opposition corresponds to [FEATURE] vs. no statement of [FEATURE]. According to this, there is no semantic difference between a feature positively specified and the same feature underspecified. In other words, [+INF] in V leads to the same meaning interpretation as [ ] in V.

With WIKLUND (2001:219) we can now define parasitic complements in a more formal way:

---

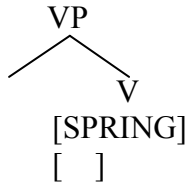
6 The feature [+PAST] represents the meaning of the past participle (=supine) as developed in chapter 2.

7 WIKLUND (2001) assumes an AspP carrying aspectual meaning for the past participle (=supinum). For reasons I have exposed in chapter 2, I do not believe that the supinum carries aspectual meaning.

(66) Parasitic complement$_{def}$.[8]
A parasitic complement is a complement containing underspecified features (at LF).

Let us assume that in (67), the feature marking of the infinitive *springa* is underspecified. This is represented as follows:

(67) Parasitic item selected: V [SPRING]
[[ ]]

(68)


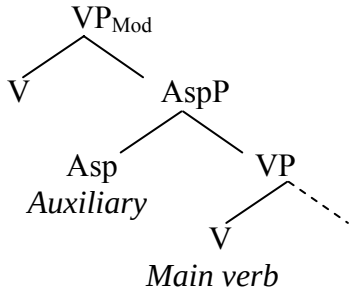
With PLATZACK (1998:147) and many others, we assume that the functional projection of infinitival complements does not involve a CP, as there is no infinitival marker *att* 'that' indicating the presence of a C^0.

(69) *Han kan att läsa boken. (Swedish)
he can to read book-the

Furthermore, there is no sentential negation possible signalling a TP projection.

(70) *Han kan ha inte läst boken. (Swedish)
he can have not read book-the
(71) Han kan inte ha läst boken.
he can not have read book-the

WIKLUND (2001) assumes that all auxiliaries are base generated in AspP:

(72)


She further assumes (72) to be the structure of bare infinitive complements. But, (72) makes a wrong prediction. Bare infinitive complements can be topicalised in Swedish:

(73) Titta på teve kan vara väldigt avslappnande [...]. (Swedish) (SAG (1999:III:269)
Watch particle TV can be very relaxing
'Watching television can be very relaxing […].'

[8] This is a paraphrase of WIKLUND (2001) as I modify her analysis somewhat.

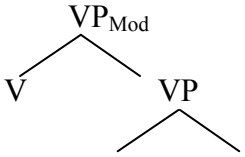
(74) Gå här och stämpla kan/vill jag verkligen inte (Swedish) (SAG (1999:III:593)
Go here and hang-around can/want I really not
[...] längre
[...] longer
'I really don't want to / can't come here and clock on/off any more.'

If the auxiliary were base generated in AspP and if there were no VP_{Aux}, but a structure like WIKLUND proposed in (72) was valid for both the infinitive and the perfect, then we would expect topicalisation of infinitival perfects to be possible as well. This is not borne out:

(75) *Ha gömt kan hon sedlar i madrassen och juveler i sykorgen (Swedish)
Have hidden can she money in mattress-the and jewels in sewing basket
mycket väl.
very well
'She may very well have hidden money in the mattress and jewels in her sewing basket.'

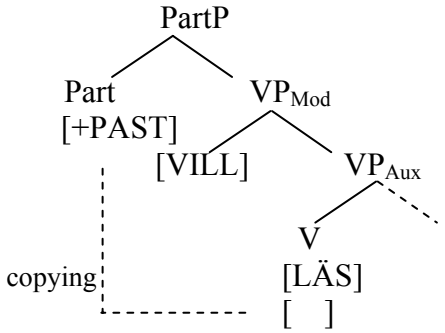
To account for topicalisation, the perfect and the bare infinitive cannot have the same projection, hence no Asp in bare infinitives. With PLATZACK (1998:149), I therefore assume the following structure for bare infinitival complements:[9]

(76)



We now turn back to the parasitic morphology. In Swedish, Vocabulary Insertion fails if the given item has underspecified features. To avoid the failure of Vocabulary Insertion, a repair strategy takes place: the syntactic features are copied from the functional projection of an immediately c-commanding verb via morphological merger. In (77), this is represented by the dashed lines.

(77) *velat läst*
wanted read-past participle



[9] For reasons of simplicity, we do not say anything about PLATZACK's AgroP in the bare complement.

I assume that parasitism (copying of inflection) is the result of Morphological Merger.[10] It must occur before Vocabulary Insertion to make the insertion of Vocabulary Items possible. Hence, the operation of Morphological Merger applies to hierarchical structure. As we have seen, this kind of Morphological Merger is referred to as *Lowering*. *Lowering* serves as operation on MS, as a repair strategy for parasitism. The underspecified features of the complement are specified by copying the relevant feature from the functional projection of the immediately c-commanding verb.
In the preceding section, *Lowering* was defined as having potential non-local, that is, nonadjacent, character. *Lowering* affixes may skip potentially intervening adjuncts.
In the case of parasitism, *Lowering* must be restricted by locality conditions. Intervening infinitives do not allow parasitic items to copy inflection from higher functional projections:

(78) Han hade velat kunnat simmat. (Swedish) (WIKLUND (2001:202))
He had wanted-past participle could-past participle swum-past participle
(79) *Han hade velat kunna simmat. (Swedish)
He had wanted-past participle can-infinitive swum-past participle
(80) Han hade velat kunna simma. (Swedish)
He had wanted-past participle can-infinitive swum-infinitive

But this also goes for *Lowering* in non-parasitic contexts. *Lowering* of verbal affixes never affects non-local verbal heads:

(81) att han [$_T$ t_i [$_V$ få-r_i [$_V$ gå ...]]] (Swedish)
that he can-present tense go
(82) *att han [$_T$ t_i [$_V$ må [$_V$ gå – r_i ...]]] (Swedish)
that he can go-present tense

Therefore, the triggering conditions for parasitic morphology must be as follows:

(83) Conditions on *parasitic copying*:[11]
- A verb selects a verbal complement with underspecified features.

---

[10] WIKLUND assumes parasitic copying to be triggered by Morphological Merge which she defines to be "yet another instance of Merge" (214). But as suggested in section 7, Merge is an operation responsible for syntactic linearization. It applies in syntax before MS. The locality conditions that WIKLUND assumes for Morphological Merge cannot be the same instance of a Merge operation and seem to be stipulated.

[11] WIKLUND assumes that both the infinitive and the past participle project an AspP and that the features can therefore be copied. This leads to the generalisation that feature copying is restricted to identical functional projections. WIKLUND therefore correcly predicts copying from T features not to be possible in bare complements (these are complements not projecting a TP), but in non-bare complements:

(1) Han kan [*gör / göra det]. (Swedish) (WIKLUND (2001:217))
He can do-present tense / do-infinitive it

But as I suggested above, auxiliaries cannot be base generated in AspP. The assumption that only features from identical functional projections can be copied can therefore not be maintained. I must however admit that I do not know how to account better for these facts than WIKLUND does.

- Vocabulary Insertion fails unless Morphological merger in the form of *Lowering* applies.
- An underspecified X^0 may copy features by *Lowering* from a commanding Y^0 of the same type iff there is no intervener Z^0 of the same type between X^0 and Y^0.
- In a configuration $[Y^0\ [Z^0\ [X^0]]]$, Z^0 blocks Morphological Merger of X^0 and Y^0, if Z^0 is not a functional projection of X^0 and if Z^0 is of the same type as Y^0.

To conclude, in this section I followed a proposal by WIKLUND to account for parasitic morphology in terms of a DM based approach. As phonological features are supplied after syntax and semantics have been established, we expect discrepancies between form and meaning. This is borne out with the existence of parasitic morphology in Swedish. In those cases, features are underspecified when Vocabulary Insertion applies. Phonological features are added once the underspecified features have been specified by a copying process at MS.

The present section has argued for an approach to parasitism in the framework of *Distributed Morphology*, that is, a grammar model where phonological features are supplied after syntax and semantics have been established.[12] By separating the insertion of phonology from syntax and semantics, it was possible to account for parasitic morphology. Parasitic complements are items denoting a mismatch between form and meaning. The form is copied from the immediately c-commanding verb by *Lowering*. *Lowering* was restricted to locality conditions.

8. Coming back to the perfect: perfect parasitism in inferential contexts

So far, it has been argued that there is no such thing as an inferential present perfect. Instead, we argued that the inferential present perfect is an underlying non-finite perfect that is embedded under a phonologically null modal verb. We further suggested a link between the availability of parasitic morphology and the *lost present perfect puzzle*. But what does this link look like? Is it possible that the auxiliary copies the inflection of an embedding modal verb and that the inferential present perfect therefore looks like an infinitival perfect where the modal has for some reason been elided?

Such examples seem to exist; consider (84) from the corpus *PAROLE*:

(84) Från henne fick han insikt om nazismen och förintelsen, (Swedish)
From her received he awareness of Nazism and holocaust-the
och moderns upplevelser lär har präglat Jan Nygren
and mother-the's experiences is-likely have-present tense influenced Jan Nygren

[12] As shown so far, parasitic morphology is a strong argument for an architecture of grammar such as proposed in *Distributed Morphology*. This does, however, not mean that *Distributed Morphology* correctly accounts for any linguistic phenomenon. The reason why I choose *DM* is that it accounts so straightforward for parasitic morphology. It would be ad hoc to discuss the adequate grammar model here, as we may not draw conclusions about the nature of grammar on the basis of one phenomenon.

starkt.
a-lot
'From her he received an awareness of Nazism and the holocaust, and the mother's experiences most likely influenced Jan Nygren a lot.'

But as WIKLUND (2001) correctly states, copying of T features is impossible with bare complements, that is, complements that do project a TP:

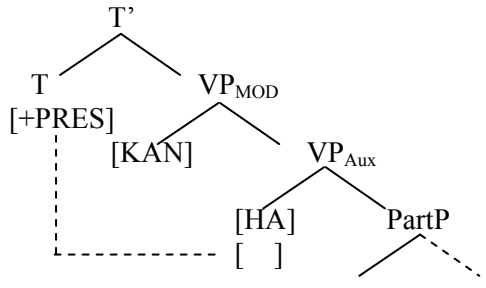
(85) Han kan [*gör / göra det]. (Swedish) (WIKLUND (2001:217))
He can do-present tense /do-infinitive it.

Examples with copied T features in bare complement contexts seem to exist, but have been judged ungrammatical by my informants[13] and myself:

(86) Sedimentet fyller kratern, och råkar kratern befinna sig i närheten (Swedish)
Sediment-the fills crater-the, and is crater-the be himself in nearness-the
av en s k plattgräns på havsbottnen dras den obevekligt ner
of a so called plate-boundary on sea-bottom-the pulled-passive inexorably down
i jordmanteln och kan försvinner med en hastighet om några
into earth-crust-the and can dissapear-present tense with a speed of few
centimeter om året, dvs några kilometer på 100 000 år.
centimeters on year-the, i.e. few kilometres per 100,000 years.
'Sediment fills the crater, and if the crater is any way near a so called plate boundary on the bottom of the sea it is pulled inexorably down into the earth's crust and can disappear with a speed of a few centimetres a year.'

Neither (84) to (86) were confirmed. Hence, the link between parasitic morphology and the inferential present perfect doesn't simply consist of copied T features, as structures like the following are not possible, since T features cannot be copied. An analysis as sketched in (87) is therefore not possible:

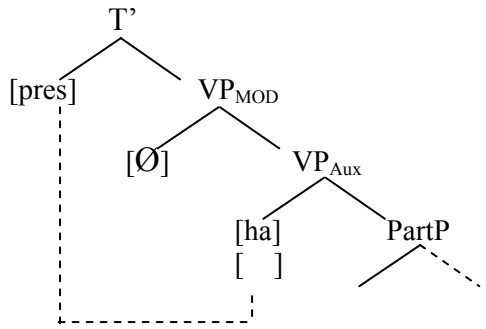
(87) **kan har + past participle*



To begin with, I assume the following tentative structure:

[13] In this case, I asked five linguists and journalists.

(88)



In (88), the inferential present perfect starts out as an underlying semantic infinitival perfect.[14] Its perfect auxiliary contains underspecified features. The infinitival perfect in question is embedded under a phonologically null modal verb which I represent by Ø. Unlike English modal verbs, modal verbs are base generated in VP_{Mod} in Swedish.[15] The modal verb must be inflected. Under the assumption that the tense features have phonological content, the modal verb in question is supposed to host overtly realized tense inflection. But in Swedish, phonologically null verbs cannot host overt affixes:

(89) Det var väl så att han varit i Frankrike förra veckan. (Swedish)
It was probably so that he been in France last week-the

(90) Det var väl så att han (ha-r) varit i Frankrike förra veckan. (Swedish)
It was probably so that he (have-present tense) been in France last week-the

(91) *Det var väl så att han Ø-r varit i Frankrike förra veckan. (Swedish)
It was probably so that he Ø-present tense been in France last week-the

This leads to the following affixation rule for Swedish.

(92) Affixation-rule (for Swedish):
Overt inflection can not be merged with covert stems.[16]

According to (92), the derivation must fail, if nothing is done to the structure. To save the derivation, the underspecified perfect auxiliary is merged with the T features by operations at MS.
Let me now go through this step by step. A possible analysis how T and VP_{Aux} can be merged is that V_{Aux} moves through V_{Mod} to T or, alternatively, that the tense affix lowers from T to V_{Aux}.

---

[14] The tree in (88) serves as input structure for the DRS construction along the lines of the chapters 1 and 2. It leads to the correct meaning of the infinitival perfect. To avoid to much formalism in (88), I will not integrate the DRS construction in (88).

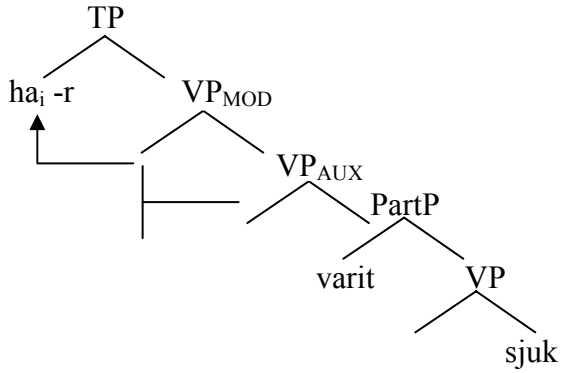
[15] One argument for base generating modal verbs in V_{Mod} is their multiple occurrence within the same TP. To exclude multiple occurrences of English modal verbs, these are base generated in T.

(1) Han skulle kunna få gå på bio om ...
He should can be-allowed go to movies if

(2) *He may can ....

[16] Overt means phonological content, covert means no phonological content.

(93)



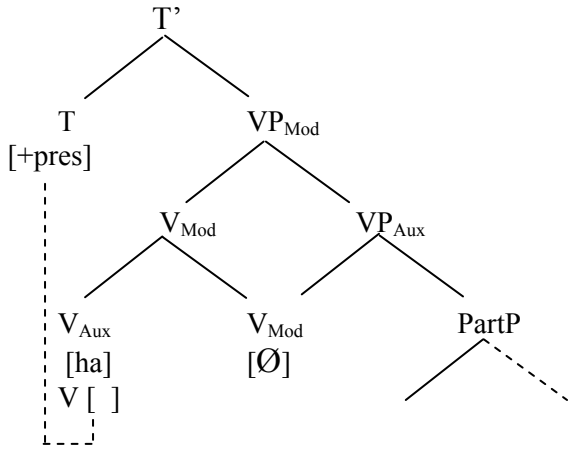
But (93) violates *head movement* as V_{Mod} is occupied by the covert modal verb. Moreover, as we have seen in section 7, Move does not apply at MS. This also rules out *long head movement* from V_{Aux} to T. As for *Lowering*, its application would give rise to examples such as (82).

As stated in section 7, *Lowering* and *Local Dislocation* are available operations at MS. Parasitic copying of features applies according to mechanisms from *Local Dislocation*. In the case of (88), there is no parasitism in the technical sense as features are not copied from a c-commanding functional projection, but merged with a terminal node. As there is no parasitism, T features can be involved in the operation. But there is an intervening terminal node that blocks simple merger. Therefore, the T features should merge with the terminal node V_{Aux}.

The T features are therefore hostless. The derivation will crash, if nothing is done to the structure. The structure in (88) contains an underspecified V_{Aux} whose features must be identified before Vocabulary Insertion. A possible way to specify its features is to merge it with the hostless T features. Merging the hostless (present tense) T features with underspecified V_{Aux} gives rise to a present perfect. This phonological present perfect is an underlying semantic infinitival perfect.

But the obvious question is how the hostless T features and the underspecified V_{Aux} are merged together. I claim that this is due to *Local Dislocation*. The structure I assume is as follows:

(94)



We defined *Local Dislocation* as operating on linear structure after or concomitant with Vocabulary Insertion. This is precisely the case in (94) where according to the affixation-rule in (92) phonological features determine that the T features and V_{Mod} cannot be merged and, thus, exclude *Lowering*. As phonological features play a role, the relevant morphological Merger for (94) is *Local Dislocation*.
According to *Local Dislocation* a hierarchical structure as in (95) can potentially be linearized as (96).

(95) $[_{XP}\ X\ [_{YP}\ [\ _{ZP}\ Z\ ]\ Y\ ]]$
(96) [X * [Z * Y]]

Local Dislocation can convert the linear order of (96) to (97):

(97) $[[_{Z}{}^{0}\ Z + X] * Y]$

When comparing the original structure in (88) to (94), we see that that is precisely what happened. A possible linearization of (88) is the following:

(98) $[T * [V_{Mod} * V_{Aux}]]$

This linear order can be changed by *Local Dislocation* to (99) which corresponds to the structure in (94):

(99) $[T * [_{V}{}^{0}{}_{Mod}\ V_{Aux} + V_{Mod}\ ]]$

As there is no intervening head between V_{Aux} and T in (94) and (99) respectively, nothing prevents V_{Aux} from being merged with the tense features of T leading to the phonological shape of a present perfect. Semantically, (94) is an infinitival perfect, phonologically a present perfect. Note that this correctly excludes (84) to (86). Here, there is no phonologically null modal verb and therefore T cannot be merged by repair strategy with V_{Aux}.
In the following section, we will motivate the null modal verb in (94).

9. The null modal hypothesis

The assumption of a null modal as in (94) looks somewhat stipulated. So several questions have to be answered: First, why should there be something like a null modal in the inferential present perfect? Second, is there independent evidence for something like a verb lacking phonological content? Third, how is this null modal licensed?
As to the first question: I showed in section 6 that the inferential present perfect patterns in exactly the same way as an infinitival perfect being embedded under a modal verb. This does not necessarily motivate the presence of a null modal in the inferential present perfect, but at the same time these parallels are suggestive.

Phonologically null elements have been used in the literature for quite some time. Phonologically null elements are not cases of ellipses, as they are not simply items whose phonological non-realisation is optional. They occupy a position in the syntactic tree which cannot be filled with overt phonological material at all.
The most famous phonological null element in the nominal domain is certainly PRO, an unexpressed pronoun in the subject position of non-finite clauses. Its reference is controlled either by antecedents outside the minimal clause or by grammatically unspecified antecedents. Its presence can be motivated by theta-theory. In control constructions, the theta-role of PRO may differ from the theta-roles assigned by the finite verb. Therefore, there must be a phonologically non-realized subject. While the subject of *prata* 'to talk' is an agent, the subject of *lyssna* 'to listen to' is an experiencer.

(100) De pratade om att PRO lyssna på hennes nya skiva. (Swedish)
They talked about that PRO listen to her new album

Phonologically null elements are less known in the verbal domain. The most acknowledged item is null *have* (cf. ROSS (1976)). Recently, the existence of other null verbs has been claimed. MARUŠIČ & ŽAUCER (2005) have made a case for null *go* and null *feel-like* in Slovenian and van RIEMSDIJK (2002) has given evidence for a null *go* in some Germanic languages.
To sum up, there is independent evidence for the assumption of null verbs. This strengthens our postulation of a null modal in the inferential present perfect.
But what are the licensing conditions for phonological null verbs? It is plausible to assume that their occurrence is restricted as their meaning must somehow be detectable from context. The occurrence of PRO is for instance restricted to non-finite verbal complements of certain verbs.
There is little agreement in the literature on the licensing conditions for null verbs. While van RIMSDIJK (2002) assumes structural licensing conditions for null verbs, MARUŠIČ & ŽAUCER (2005) claim the contrary by showing that the licensing conditions for phonological null verbs are not uniform.

> "The only thing that null verbs need is something to make them visible/recoverable/learnable, something to mark their presence in the sentence."
> MARUŠIČ & ŽAUCER (2005:247)

This is referred to as *flagging*, a term due to van RIEMSDIJK (2002). Literally speaking, there must be some flags signalling *here is the phonological null verb* to make these verbs visible or recoverable.
As shown in section 4, the present perfect has only an inferential reading in the context of additional inferentiality markers. These are certain adverbials (such as *antagligen* 'probably') or contexts whose inferentiality is common ground (historical contexts, archaeological reports (cf. KINNANDER (1974:134)).

We concluded in section 4 that the present perfect itself has not an inferential meaning. Only additional markers license the inferential use. It is obvious that these markers function as flags to signal the presence of the phonologically null modal and hence leading to the inferential interpretation.

10. The *lost present perfect puzzle*

Let us now turn to the *lost present perfect puzzle* or the question why the *present perfect puzzle* only disappears in inferential contexts and why this is only the case in Swedish.

As shown in chapter 3, a language exhibits the *present perfect puzzle* only if the right boundary (RB) of the *perfect time span* (PTS) is p-specific.

We showed in chapter 2 that in the Swedish and English present perfect, RB is always p-specific. Therefore, (E) cannot be p-specific. In the infinitival perfect, RB is not p-specific. Its position in time is determined by basically the same principles we will introduce in the next chapter. These principles are based on context dependence.

Infinitival perfects exhibit a p-inspecific RB, since the *perfect time span* introduced by the infinitival perfect can end before the reference time set by the tense of the finite verb. In accordance with our argumentation in the chapters 2 and 3, this can be shown by the behaviour of the perfect with adverbials requiring a universal perfect reading. In the universal use of the infinitival perfect, the eventuality denoted by the past participle does not necessarily end at the reference time set by the finite verb. Take, for instance, the following example as an illustration. The speaker isn't any longer the nice brother at the reference time set by the tense of the auxiliary:

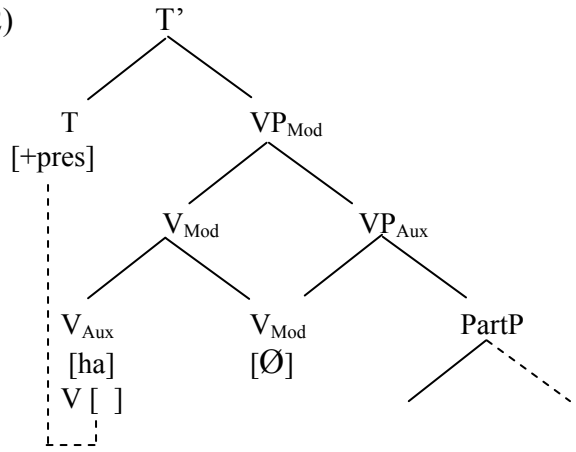
(101) Tjuvlyssnade här om dan på en kvinna i bussen till Forneby flygplats i Oslo: "Att vi bankade dom gul och blå i Lillehammer kunde dom tydligen stå ut med, men att vi också slog dom i Melodi Grand Prix blev tydligen för mycket. " Från att alltid ha varit " söte bror " i Norge blev jag helt plötsligt "sura bror". Varför har vi svenska reagerat så surt åt Norges seger på Irland? Och varför kunde vi inte gett vårt broderland åtminstone en enda futtig poäng? (Swedish)

alltid ha varit " söte bror " i Norge blev jag helt plötsligt.
always have been sweet brother in Norway became I totally suddenly
"sura bror"
surly brother

'I eavesdropped the other day on a woman who was on the bus on the way to Forneby Airport in Oslo: "That we beat them black and blue at Lillehammer was something they could apparently put up with, but the fact that we beat them as well in the Melodi Grand Prix, was seemingly too much [for them]. "From always having been "sweet brother" in Norway, I suddenly became "surly brother" '.

According to this, there is no *present perfect puzzle* in the infinitival perfect and hence, no *present perfect puzzle* in the inferential present perfect.
We now have to explain why there is cross-linguistic variation of the *lost present perfect puzzle*.
First, there is no parasitic morphology in English. A structure like (94) repeated below is therefore impossible:

(102)



Second, English modal verbs are base generated in T. This explains their defective inflectional paradigm (no past tense in most cases, no future and so on) and their non-ability to co-occur with other modal verbs as there is only one tense projection in the sentence:

(103) *He may can go to the movies.

Swedish modal verbs co-occur with other modal verbs.[17] In Swedish, modal verbs are therefore base generated in V under the assumption that multiple VPs are possible in a sentence, but not multiple TPs:

(104) Nej vem skulle kunna göra det? sa Susanne. (Swedish)
No who should can-infinitive do this said Susanne

The inflectional paradigm of Swedish modal verbs is less defective and idiosyncratic than that of their English counterparts. Most Swedish modal verbs can be used in the past tense and as an infinitive.
It follows that in Swedish the tense inflection and the modal verb are base generated in different terminal nodes, in T and V_{Mod} respectively. In English, this is not the case. The defective tense inflection suggests that the English modal verbs are base generated together with their inflection in T. This makes a structure like (102) impossible for English.

[17] I abstract away here of idiosyncrasies of certain Swedish modals.

11. DRT and DM

In the preceding chapters, a DRT based approach to the perfect has been defended. In the present chapter, I analysed the *lost present perfect puzzle* in terms of DM. This raises a number of questions.

To my knowledge, the compatibility of DRT and DM has never been worked out in detail. The discussion of this compatibility is beyond the scope of this thesis. In the following, I only mention some problems: First, it is not clear how DRT handles the syntactico-semantic features drawn from the set made available by universal grammar.

Second, DM assumes that there are no "parts of speech" in the traditional sense. The different parts of speech, V, A, N etc, are defined as roots. These stand in certain local relations with category-defining morphemes. A verb is for instance a root whose nearest c-commanding morphemes are v, tense and so on. It is not clear how much semantic information the roots contain. Is there simply ontological and language-independent meaning? Is there information whether the root is a state, an event or a process?

Third, nominalisations such as *Messung* can have two readings as the following contexts suggest:

(105) Die Messungen wurden präzise durchgeführt.
The measurements were exactly taken

(106) Die Messungen wurden in einer Zeitschrift veröffentlicht.
The measurements were in a review published

Messung has an event reading in (105) and an object reading in (106). A DM based account now assumes two distinct structures for *Messung* where the event reading involves at least some VP-projection which is not present in the object reading. If syntax now serves as input for the DRS construction, it is not clear how the context dependence of the two readings is achieved, if syntax already disambiguates between (105) and (106).

Hence, the combination of DM and DRT raises many questions. The discussion of these is beyond the scope of the present study. DM is needed in chapter 4; DRT is needed in chapter 5. Chapter 4 is rather isolated in the present study. It does not speak about semantics or discourse in the sense that a formal analysis is needed or relevant. It only shows that the so called inferential present perfect is an underlying semantic infinitival perfect. The discrepancy between form and meaning is due to operations at MS and due to the underspecified syntactic features of the auxiliary. The rest of the study (chapters 2, 3 and 5) makes use of the traditional parts of speech in the syntactic tree for the sake of simplicity. Insofar, problems concerning the compatibility of DM and DRT do not arise immediately. The combination of DM and DRT is therefore more or less immaterial to the immediate aim of this study, but remains a general problem.

12. Conclusion

In this chapter, I argued that the inferential present perfect is an underlying infinitival perfect embedded under a null modal. What appears as a (inferential) present perfect at PF is the result of a repair strategy.

The inferential present perfect starts out as an underlying semantic infinitival perfect. Its perfect auxiliary contains underspecified features. The infinitival perfect in question is embedded under a phonologically null modal verb. The temporal features of the modal verb are overt. Therefore, this modal verb is supposed to host the overtly realized tense inflection. But in Swedish, phonologically null verbs cannot host overt affixes. As a result, the derivation must fail, if nothing is done to the structure. To save the derivation, the underspecified perfect auxiliary is merged with the T features by operations at MS. Given that parasitic morphology is language specific, the contrast between English and Swedish is explained.

Chapter 5: *perfect readings*

1. Introduction

In the preceding chapters, an *ExtendedNow* approach to the present perfect has been developed. Despite the very different uses of the present perfect, it was assigned a single uniform meaning. The uses are the topic of this chapter.
Cross linguistically, one distinguishes between a universal, an existential, a resultative and a hot news use of the present perfect. The preliminary definitions of these uses are: The universal present perfect denotes an event time that holds throughout the entire PTS, stretching from a certain point in the past up to the present, compare (1). The existential perfect asserts that the subject had a certain experience (see (2)). It does not say anything about whether the eventuality of the main verb still holds at the moment of speech. The hot-news perfect reports an eventuality that happened in the recent past (cf. (3)) and the Perfect of result or resultative present perfect expresses a result that holds at the reference time set by the tense of the auxiliary (see (4)).

(1)	Ich habe Dich schon immer geliebt. *I have you particle always loved* 'I have always loved you.'	(German)	(universal)
(2)	Ich habe *Faust* dreimal gelesen. *I have Faust three-times read* 'I have read Faust three times.'	(German)	(existential)
(3)	Ich habe gerade meine Prüfung bestanden. *I have just my exam passed* 'I have just passed my exam.'	(German)	(hot news)
(4)	Ich habe meine Brille verloren. *I have my glasses lost* 'I have lost my glasses.'	(German)	(resultative)

In this chapter, it will be argued that the uses of the present perfect in (1) to (4) can all be summarized under one single uniform meaning. It will be shown that the interplay of situation type aspect, adverbial modification and context determines the choice of the available readings. The uses of the perfect in (1) to (4) are called perfect uses of the present perfect.
As already mentioned several times, there is an additional use of the present perfect in German: the present perfect can often substitute the past tense[1] (cf. (5) and (6)). According to both tenses, the event time (E) is before (S). Contrary to the English present perfect, both the German past tense and the present perfect can be combined with adverbials such as *gestern* 'yesterday':

[1] I shall speak of the past tense as a morphological tense and of the preterit reading as a reading the German present perfect can have in certain contexts.

(5) Sigurd ist gestern angekommen (German) (preterite)
Sigurd is yesterday in Tübingen arrived
und gleich wieder abgefahren.
and at-once again left
'Sigurd arrived yesterday and left at once.'

(6) Sigurd kam gestern an und fuhr gleich wieder ab. (German) (perfect)
Sigurd arrived yesterday and left particle at-once again verb-particle
'Sigurd arrived yesterday and left at once.'

If a present perfect can be replaced by a past tense without a significant change in meaning, it has a preterite reading. If the past tense cannot replace a present perfect, this present perfect has a perfect reading.[2]
The goal of this chapter is to propose a systematic account for the different present perfect readings in terms of KAMP & ROHRER's (1985) and KAMP & REYLE's (1993) discourse-based approach to tense. Temporal and rhetorical relations between tenses in a given text will be used to account for the different readings of the present perfect.
Again, there is an ongoing discussion how to analyse the readings of the present perfect. The contributions I want to make are:

- **Monosemy:** All readings of the German present perfect have the same underlying uniform meaning.
- It is only possible to account for the readings within an approach that considers **situation type aspect, adverbial modification and context**.
- The readings of the present perfect are **context sensitive**. I therefore assume the discourse based approach to tense as first developed by KAMP & ROHRER (1985).

The chapter is organised as follows. Section 2 repeats the meaning of the present perfect. Section 3 defines the various readings of the present perfect. Section 4 contains a discussion of MUSAN's (1999/2002) approach. The sections 5 and 6 show the interplay of event time modification and situation type aspect with the preterite and the perfect reading. Section 7 outlines a discourse based approach to tense as first developed by KAMP & ROHRER (1985). Section 8 and 9 transfer KAMP & ROHRER's analysis to the present perfect. Section 10 discusses context free interpretations of the present perfect. In section 11, an analysis of the universal and experiential uses of the present perfect is given. Section 12 summarizes the findings of this chapter.

2. The meaning of the present perfect

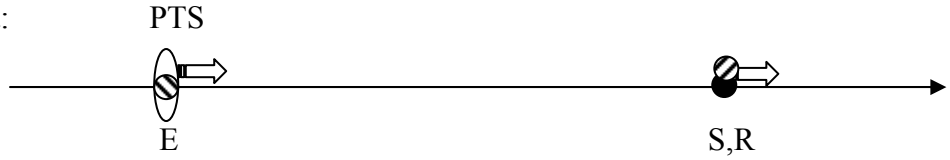
According to (7), the German present perfect locates (R) at or after (S). The present perfect introduces a *perfect time span* (PTS) which contains the event

[2] The term perfect is used in opposition to preterit. It does not refer to aspect in the technical sense.

time (E) at which the eventuality obtains. PTS is an interval that can be completely separated from the reference time of the auxiliary. The positions of its left and its right boundary (LB/RB) are not specified or can be given by adverbials like *since.* The final subinterval of PTS can abut (R). Within PTS is the event time. If there is no evidence to the contrary, PTS is not distinct from the event time.

(7) The German present perfect:

a:



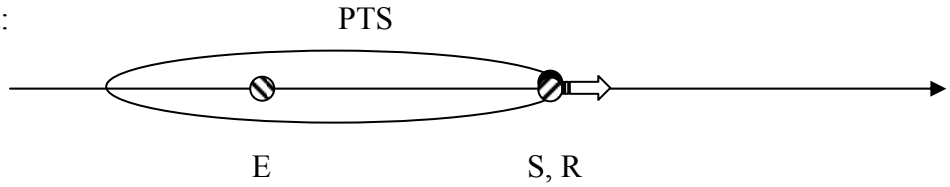
b:

S R E PTS LB RB
S ≤ R
PTS (LB, RB)
E ⊆ PTS
RB ≤ R

Contrary to the German present perfect, RB is fixed at (R) set by the tense of the auxiliary in English and Swedish:

(8) Swedish present perfect:

a:

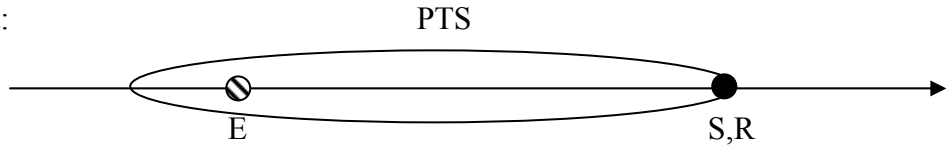


b:

S R E PTS LB RB
S ≤ R
PTS (LB, RB)
E ⊆ PTS
RB = R

(9) English present perfect

a:



b:

S R E PTS LB RB
S = R PTS (LB, RB) E ⊆ PTS RB = R

As will become clear in the following, the position of RB determines the number of available readings of the present perfect.

3. The readings of the present perfect

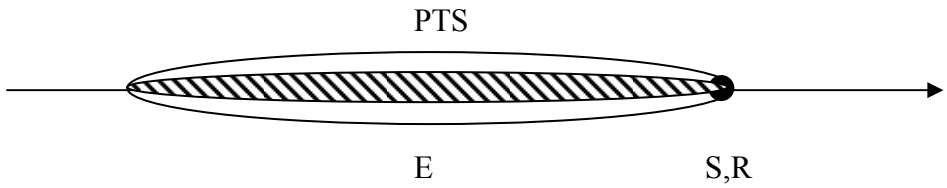
In the literature, five major uses of the German present perfect have been identified (see EHRICH & VATER (1989) and others): the preterite reading, the universal, the existential, the resultative and the *hot news*. The last three are sometimes summarized as experiential readings. I call the experiential readings and the universal use perfect readings. Perfect reading is used in opposition to preterite reading.

In the universal present perfect, the event time (E) introduced by the present perfect holds throughout the entire PTS without interruption. In other words: in the universal present perfect, there is no point in time within PTS at which (E) does not hold.

Normally, the event time (E) of a universal perfect ends at the reference time set by the tense of the auxiliary. In (10), the speaker loves his addressee from a certain point in the past at least up to the moment of speech:

(10) Ich habe Dich schon immer geliebt. (German) (universal)
I have you particle always loved
'I have always loved you.'

(11) Universal present perfect:



It is sometimes also possible that the German present perfect has a universal interpretation although (E) does not hold any longer at (S). Consider the following example which is repeated from chapter 2:

(12) Ich habe immer in Berlin gewohnt, (German)
I have always in Berlin lived
aber vor kurzem bin ich nach Tübingen gezogen.
but recently am I to Tübingen moved
'I always lived in Berlin, but recently, I moved to Tübingen.'

The second part of the sentence suggests that the living in Berlin cannot go on at the moment of speech. I consider cases like (12) to be universal present perfects, because (E) holds at all points in time within PTS.
Cases like (13) are not universal perfects. Here, (E) does not hold at all points in time within PTS:

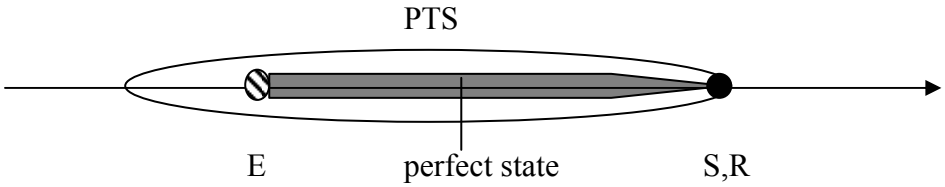
(13) Ich habe es Dir schon oft gesagt, dass … (German)
I have it you already often said that
'I often told you that ...'

The existential present perfect asserts that the subject had a certain experience. The subject is so to speak in the *perfect state* of having participated in the underlying eventuality denoted by the present perfect. According to (14), the subject had three times the experience of reading "Faust" within a time span reaching up to the moment of speech:

(14) Ich habe *Faust* dreimal gelesen. (German) (existential)
I have Faust three-times read
'I have read *Faust* three times.'

In chapter 2, it was stated that the perfect state is only available if RB is distinct from (E). As there is a perfect state involved in the interpretation of (14), RB must be distinct from (E). RB is linked to (S), because the perfect state holds at (S) and by substitution also at (R).
The existential present perfect is therefore a perfect that introduces a *perfect time span* which contains (E). PTS of the existential perfect ends at (R). Contrary to the universal perfect, the existential perfect may contain points in time at which (E) does not hold. This can be represented as follows:

(15) Existential present perfect:



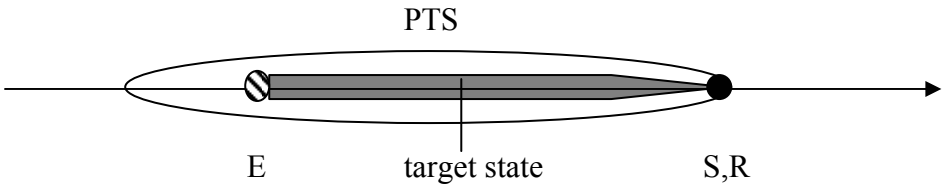
The hot news perfect reports an eventuality that just happened:

(16) Ich habe gerade meine Prüfung bestanden. (German) (hot news)
I have just my exam passed
'I have just passed my exam.'

Like the existential present perfect, the *hot-news*-present perfect introduces a PTS which contains (E). PTS ends at (R). Contrary to the existential reading, (E) is located shortly before (R). This makes the hot news perfect a special case of the existential perfect.
The perfect of result or the resultative perfect is also a perfect which introduces a PTS which ends at (R). PTS contains (E). The perfect of result is only possible from telic verbs whose meaning introduces a target state in the sense of PARSONS (1990). In the resultative perfect, the target state holds at (R). Under the resultative interpretation, (17) has the following reading: The target state of losing my glasses holds at the reference time of the tense of the auxiliary.

(17) Ich habe meine Brille verloren. (German) (resultative)
I have my glasses lost
'I have lost my glasses.'

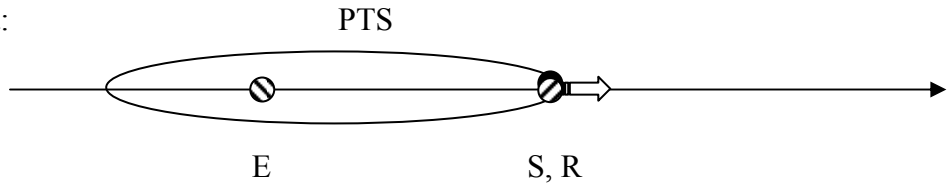
(18) Resultative present perfect:



The universal, existential, hot news and resultative perfect are also possible in English and Swedish. This is correctly predicted by the approach here. A necessary condition for the four uses is that RB is identical with (R). This is, however, different for the German universal perfect where RB may be before (R), see (12). This requirement is always fulfilled with the English and Swedish present perfect where, as we have seen in detail in chapter 2, (R) is always RB:

(19) Swedish present perfect

a:

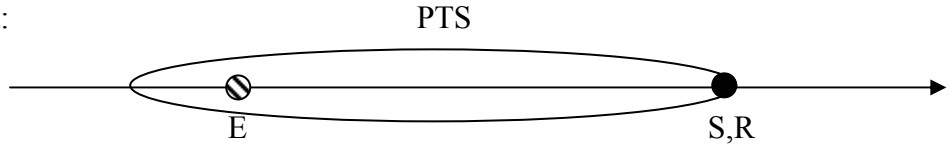


b:

S R E PTS LB RB
S ≤ R
PTS (LB, RB)
E ⊆ PTS
RB = R

(20) English present perfect

a:



b:

S R E PTS LB RB
S = R
PTS (LB, RB)
E ⊆ PTS
RB = R

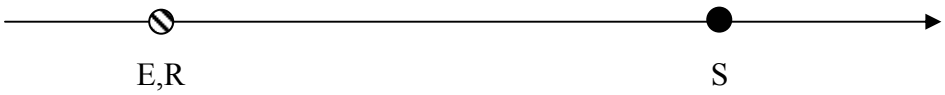
There is a further use of the present perfect which is only possible in German. This is the preterite reading where the past tense can be replaced by the present perfect without any significant change in meaning. One of the relevant pair of examples is the following:

(21) Peter hat gerade gespült, als ich heimkam. (German) (preterite)
Peter had in-the-moment done-the-dishes when I home-came
'Peter was doing the dishes when I got home.'

(22) Peter spülte gerade, als ich heimkam. (German) (preterite)
Peter did in-the-moment the-dishes when I home-came
'Peter was doing the dishes when I got home.'

The meaning of the German past tense as has become standard by now is given in (23) (see among others EHRICH (1992), MUSAN (2002)). The past tense locates (E) at (R) and (R) is before (S).

(23) German past tense: E,R < S



S R E

R < S
E, R

Both the present perfect (in the non-future interpretation) and the past tense locate (E) before (S). Substitution is therefore possible in contexts where it only matters where the event time is located. The two tenses differ, however, in two crucial respects. First, whereas (R) in the past tense is linked to (E), this is not the case with the present perfect. Second, the present perfect introduces a *perfect time span* (=PTS) (see (7)), but the past tense does not.
The fact that only the perfect denotes a PTS, but not the past tense now explains why the tenses in question differ. In chapter 2, we saw in detail that there is a perfect state in present perfect constructions, if the right boundary (=RB) of PTS is distinct from (E) (consider chapter 2, section 11.5). The perfect state was defined as a lexical state of the underlying already culminated eventuality which is available in only those present perfect constructions where RB is distinct from (E). If there is a perfect state involved in a present perfect construction, the underlying eventuality must have culminated. This explains the often made intuition that the present perfect denotes some kind of perfectivity.
It has also often been observed that an interpretation where the eventuality has obligatorily culminated before (S) is not available with the past tense (see also THIEROFF (1992), KLEIN (1994)):

> „It should [...] be noted that use of past tense only locates the situation in the past, without saying anything about whether that situation continues to the present or into the future, although there is often a conversational implicature that it does not continue to or beyond the present.“ (COMRIE (1985:41))

Substitution of a present perfect by a past tense is therefore only possible in those contexts where there is no perfect state involved, because the existence of a perfect state in the present perfect obligatorily requires the eventuality to have culminated.
In line with our reasoning from chapter 2, this means that the present perfect can only substitute the past tense, if there is no perfect state. The necessary condition for the perfect state is that RB is distinct from (E). We arrive at the following definition of the preterite interpretation of the present perfect: in cases where RB is not distinct from (E), but distinct from (R), the present perfect has a preterite reading.

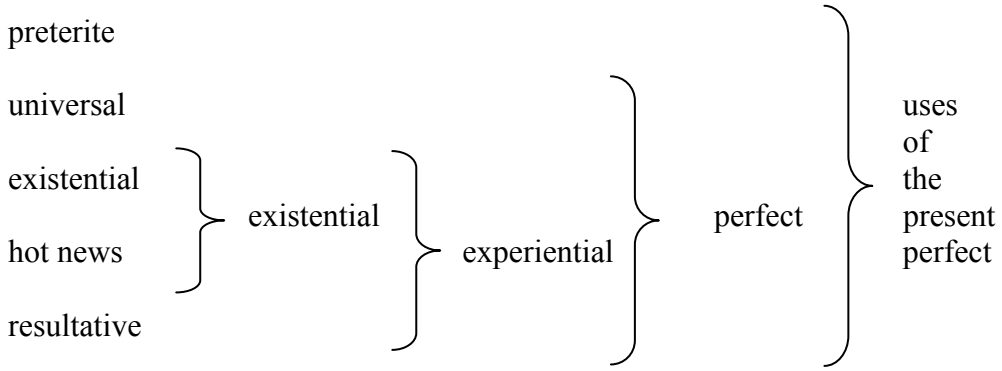
Importantly, it is not possible to assume that the German present perfect has two distinct meanings: the one in (7) for the universal, existential, *hot-news* and resultative perfect and a meaning like the one (23) which would be the one for the preterite interpretations of the present perfect. In chapter 2, it was argued that the German present perfect cannot be assigned the meaning of the German past tense, because the present perfect cannot always substitute the German past tense.
The definitions of the five readings of the perfect are summarized in (24):

(24)

(i)	Universal perfect:	(E) holds at all points in time within PTS. RB may be identical to (R)
(ii)	Experiential perfect:	(E) holds at some point in time within PTS. Nothing is said about whether it holds at all points in time within PTS. RB is identical to (R).
(iii)	*hot news* perfect:	(E) holds at some point in time within PTS. Nothing is said about whether it holds at all points in time within PTS. RB is identical to (R). (E) is shortly before (R).
(iv)	resultative perfect:	(E) holds at some point in time within PTS. RB is identical to (R). The target state of the underlying eventuality holds at (R).
(v)	preterite perfect:	RB is identical to the final subinterval of (E). RB is not identical with (R).

The existential, the resultative and the *hot news* perfect can be summarized as experiential readings. In all cases, RB is (R). The hot news perfect is, as stated above, a special case of the existential perfect. I call the experiential readings and the universal use perfect readings. Perfect reading is used in opposition to preterite reading. The preterite reading differs from the perfect readings in not allowing RB to be identical with (R). In the preterite reading, RB is the final subinterval of (E). Graphically, this can be represented as follows:

(25)



The Swedish and English present perfects only display the perfect readings. This is due to the fact that the right boundary in these languages is simultaneous to the reference time of the tense of the auxiliary and as we have seen above, the preterite reading requires RB to precede (R). In the perfect readings, RB is simultaneous to (R) which is compatible with the meanings of the present

perfect in Swedish and English (cf. (19) and (20)). The universal present perfect in English and Swedish must therefore be defined as follows:

(26) Universal perfect: (E) holds at all points in time within PTS. RB is (R)

It has been discussed in the literature whether the five uses of the present perfect in (24) can be summarized by one single meaning or whether its is necessary to distinguish them semantically. The first case is often referred to as pragmatic solution. Under the pragmatic solution, all five uses would have the meaning elaborated in chapter 2:

(27) German present perfect: $S \leq R$ & PTS (LB, RB) & $E \subseteq$ PTS & $RB \leq R$

The pragmatic solution considers the five uses just to be different interpretations of the single uniform meaning in (27). The different interpretations are obtained by considering the context in which the perfect in question is used.
Under the semantic solution, (24)(i) differs from (24)(ii) in the following way:

(28) German universal perfect: $S \leq R$ & PTS (LB, RB) & $E =$ PTS & $RB \leq R$
(29) German existential perfect: $S \leq R$ & PTS (LB, RB) & $E \subseteq$ PTS & $RB = R$

According to (28), the universal perfect would be defined as a perfect where (E) would be identical with PTS, while the existential perfect only considers (E) to be part of PTS without saying that these are identical.
In chapter 2, I argued for a single uniform meaning of the German present perfect covering both the preterite and the perfect interpretations. In this chapter, it will be argued that also the other readings of the present perfect are best accounted for by assuming a single uniform meaning.
In the next section, the approach by MUSAN (1999/2002) will be discussed. In the following sections a discourse based approach to the readings of the German present perfect will be defended. As will be argued in the following sections, the interaction of PTS, (E), situation type aspect, adverbial modification and discourse determine whether the present perfect has a preterite or a perfect reading.

4. The approach by MUSAN (1999/2002)

MUSAN (1999/2002) offers a pragmatic account to distinguish between the preterite and the perfect uses of the German present perfect by establishing three pragmatic principles.
The first principle is the one of informative contrast (PIC) (MUSAN (2002: 74)). It says that in a perfect construction the event time and the time after the event time differ in some relevant way. The PIC is certainly realistic. The present perfect locates two points in time. Consider for instance (30). On a resultative reading, it basically says that there is a time at which the event *lose*

the glasses obtains and that there is a later point in time, here the utterance time, at which the glasses are still lost. This is a relevant difference.

(30) He has lost his glasses.

The second principle that MUSAN (2002:87) establishes is the Principle of frame time/situation time – proportion that claims that the lengths of a situation time and its frame time should ideally be proportionate to each other (and sometimes be the same). This is motivated by examples like (31).

(31) Letztes Jahr nieste Hans. (German) (MUSAN (1999:29/ 2002:87))
Last year sneezed Hans

The intuitive reading of (31) is that Hans did not sneeze only one time last year, but that he sneezed for quite some time during last year. He could for instance have suffered from hay fever. So this principle rightly predicts that a frame time adverbial should be maximally filled by the duration of the event it modifies.
As a third principle, MUSAN claims that in a present perfect sentence there are two possible points in time which can be the topic of the sentence. As she has motivated the PIC, this seems plausible. The event time or the reference time can be topicalised in the sense that it is the more prominent time in a given sentence. Tense topicalisation can be derived by scrambling and intonation, topic-focus-structure and question-answer-contexts. Hence, tense topicalisation basically depends on principles known from nominal topicalisation. The point in time that is "tense topicalised" is called "topic time".[3]
A problem for MUSAN is that her principles are only based on isolated sentences. In isolated sentences, there is the possibility to focus either the event time or the situation time of the post state, but this choice is not free if the present perfect sentence is part of a discourse, because here the topic time of the present perfect is not set within a sentence, but within the whole discourse universe. Tenses are basically discourse phenomena. MUSAN's pragmatic principles are often neutralised, something that she mentions several times, but that she does not explain. A discourse based approach to the readings of the German present perfect is therefore necessary. Let us look at an example.
MUSAN (2002:95) discusses the well-known *Kleve-Klinkerstadt*-examples from EHRICH (1992:91). The basic intuition behind the present perfect sentence (32)b is that Kleve has now become a town with brick houses (=Klinkerstadt) to a large extent. The past tense sentence (32)a on the other hand does not say anything about Kleve at the time of utterance. The building of brick houses may have ended at some point in the past.

[3] MUSAN's (2002) *topic time* is not identical with what KLEIN (1992/1994) calls *topic time* (cf. chapter 1). MUSAN uses the term to refer to temporal information structure. KLEIN's notion of *topic time* is the point in time about which an assertion is made.

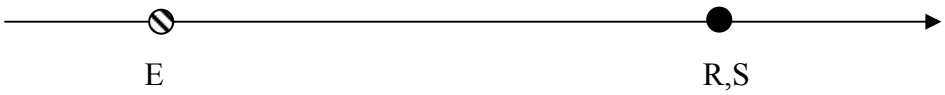
(32) a: Nach dem zweiten Weltkrieg *wurde* Kleve immer mehr zu einer (German)
after the second worldwar became Kleve always more to a
Klinkerstadt. Von der weißen Stadt *blieb* so gut wie gar nichts
brick-stone-town. From the white town is as good as particle nothing
mehr übrig.
more remaining
'After WW II Cleve *turned* into a brick city more and more. Virtually nothing *was left* of the white city.'

b: Nach dem zweiten Weltkrieg *ist* Kleve immer mehr zu einer (German)
after the second worldwar is Kleve always more to a
Klinkerstadt *geworden*. Von der weißen Stadt *ist* so gut wie
brick-stone-town become. From the white town is as good as
gar nichts mehr übrig *geblieben*.
particle nothing more remaining remained
'After WW II Cleve *turned* into a brick city more and more. Virtually nothing *is left* of the white city.'
(The examples a and b are from EHRICH (1992:91)).

c: Nach dem zweiten Weltkrieg *ist* Kleve immer mehr zu einer (German)
after the second worldwar is Kleve always more to a
Klinkerstadt *geworden*. Von der weißen Stadt *ist* so gut wie
brick-stone-town become. From the white town is as good as
gar nichts mehr übrig *geblieben*.
particle nothing more remaining remained
In den Neunzigern wurden aber wieder neue weiße Häuser gebaut.
In the nineties were but again new white houses built
'After WW II Cleve *turned* into a brick city more and more. Virtually nothing *is left* of the white city. In the nineties, however, new white houses were again built.'

MUSAN derives the different readings by saying that in both sentences the adverbial *immer mehr* 'more and more' specifies the event time of the matrix verb. In line with standard assumptions, MUSAN analyses the past tense as event time at reference time and reference time before speech time. The event time of the matrix verb in (32)a does not reach the speech time. In (32)b, we have a present perfect sentence where the event time is allowed to reach the speech time. Recall that MUSAN analyses the present perfect as event time before or partly before reference time and reference time not before speech time. But she explicitly allows the event time to touch the reference time. The meaning she assigns to the present perfect is as follows, where E <| R means that (E) may touch (R):

(33) German present perfect à la MUSAN (2002):



S R E

S ≤ R
E <| R

Together with frame time/situation time principle, this leads to the interpretation that the adverbial *immer mehr* 'more and more' suggests that the length of the event time expressed by the present perfect should extend to the right as far as possible and, hence, touch the reference time or as here in (32)b the speech time. This is fully correct.

Let us now have a look at (32)c which I add to EHRICH's examples. Why do we not get the reading that Kleve is now a *Klinkerstadt*? The frame time / situation time principle works like in (32)b, the PIC as well. There must be something that blocks the principles. MUSAN's answer would be that this depends on the context, in case of (32)c on the following sentence, but she does not explain why this is the case and how this discourse relation actually works.

To conclude, although I agree with MUSAN's central idea that the perfect readings don't have to be distinguished by semantics and although I do not have much to say against her principles, I prefer to look for another solution that considers discourse relations between tenses to be the essential part of the analysis. What is really needed is a discourse based approach to account for the various readings of the present perfect. MUSAN's principles are probably right, but the readings of the present perfect have to be motivated by bigger units in the text, namely by discourse relations between temporal expressions in a coherent text. On this view, MUSAN's principles are just reflexes of the more general discourse relations as long as the present perfect in question is part of a discourse that contains other tenses. This will be worked out in the next sections.

5. Present perfect and event time modification

It could be thought that event time modification by certain adverbials like *yesterday* triggers automatically a preterite reading in German present perfect sentences. But this is, however, not the case. Consider the following example:

(34) Jetzt, wo Carla gestern hier eingezogen ist, (German) (LÖBNER (2002:383))
Now when Carla yesterday here in-moved is
brauchen wir einen Schlüssel fürs Klo.
need we a key for-the toilet
'Now that Carla moved in here yesterday, we need a key for the bathroom.'

Carla has moved into the apartment and as a consequence. A key for the toilet is needed. The temporal expression *jetzt, wo* 'now that' indicates that the target state of Carla having moved to the apartment still holds and, as a result, the present perfect has a perfect reading although its event time is specified by *gestern* 'yesterday'.
Hence, a perfect reading of the present tense is fully possible within the context of a past time adverbial. In the next section, we will see whether situation type aspect has an impact on the preterite and perfect reading.

6. Preterite reading and situation type aspect

Both the preterite and the perfect reading are available with all types of situation aspect. *Jetzt, wo* 'now that' in (35) requires a perfect reading, *in dem Moment, als* 'when' in (36) a preterite reading. As one can see, both are perfectly acceptable with all types of situation type aspect.

(35) Jetzt, wo Carla beim Zahnarzt gewesen ist/ gejoggt ist/hier (German)
Now where Carla at-the dentist been is / jogged is / here
eingezogen ist/ ein Haus gebaut hat, sollten wir eine kleine Feier veranstalten.
in-moved is a house built has should we a little party organize
'Now that Carla has been to the dentist/ has been jogging/ has moved in here/ has built a house we should organize a little party.'

(36) In dem Moment, als Carla beim Zahnarzt gewesen ist/ gejoggt ist/ (German)
In the moment when Carla to-the dentist been is / jogged is /
hier eingezogen ist/ ein Haus gebaut hat, haben wir eine kleine Feier veranstaltet.
here in-moved is / a house built has have we a little party organized
'When Carla was at the dentist's / was jogging / the moment Carla was moving in here / When Carla was building a house / we organized a little party.'

Hence, any monosemous approach to the present perfect must derive the preterite reading by something else than event time modification and situation type aspect. In the next section, we will look at the contexts in which a present perfect can appear. The approach I assume was already presented in chapter 1, but must be repeated, because we are now able to integrate the meaning of the present perfect.

7. Present perfect in discourse

Various interpretations of tenses in texts have been proposed in the last twenty years (among others by HINRICHS (1986), PARTEE (1984) and KAMP & ROHRER (1985) or KAMP & REYLE (1993)). PARTEE (1984) and HINRICHS (1986) propose that events introduce a "reference time point" in the discourse that serves as a default anchoring time point for the event of the next sentence. States do not introduce such "reference time points", but they take over the reference point from their local context. This explains the often observed fact that narrative progression states retard the story while events carry

the story forward. The simplicity of these approaches is very attractive, but there are some problems:

(37) Max fell. John pushed him. (LASCARIDES & ASHER (1993))
(38) John turned off the light. The room was pitch dark.

In (37) the pushing must have occurred before Max fell. In (38), the darkness is the result of switching off the light and cannot already have obtained before turning of the light. On PARTEE's and HINRICH's account, the falling would have preceded the pushing, since the reference time of the falling serves as anchoring point for the event in the next sentence and the predicted reading of (38) would be that the dark room could not be the result of the turning off. Therefore, these analyses fail.
Hans KAMP argued that a simple REICHENBACHian approach to the pluperfect cannot account for its uses in *extended flashbacks* (series of events narrated in the pluperfect) as in (39) (cf. KAMP & ROHRER (1985)). The pluperfect locates an event time (E) before a reference time (R) that is before (S). For reasons of simplicity, I abstract from the *perfect time span*. For instance, in (39), the past tense sentence serves as a reference time point for the preceding event time(s) in the pluperfect. The sequence starts with a past tense that serves as (R) for the pluperfects. The events (e_2) to (e_6) are temporally ordered. Fred first gets up, then takes a shower and so on. In order to be able to give the right temporal order of the events (e_2) to (e_6) one cannot (as for instance HINRICHS (1986)) refer to (R), since (R) for the five instances of the pluperfect in (39) is always the same: it is e_1, the event of Fred arriving.

(39) Fred arrived at 10 (e_1). He had got up at 5 (e_2); he had taken a long shower (e_3), had got dressed (e_4) and had eaten a leisurely breakfast (e_5). He had left the house at 6:30 (e_6). (KAMP & REYLE (1993:594))

KAMP argues that REICHENBACH's reference time must be split up in what he calls a *reference time point* (Rtp) and a *temporal perspective point* (Tpt). Tpt corresponds to what REICHENBACH called reference time, it is the intrinsic unchangeable reference time that serves to locate an (E) in time. To avoid terminological confusion, I keep REICHENBACH's term (R) for what KAMP and co-authors call Tpt.
KAMP et al (2004:71) state the following: "The antecedent discourse gives an Rtp in relation with which the following tense form establishes an anaphoric relation" To avoid terminological confusion with (R), I call KAMP's (Rtp) (D)*iscourse time point*.

(40) Reference time (R):
(R) is a point in time relative to which (E) is located.
(41) Discourse time point ((D)):
(D) is a point in time set by an antecedent discourse in relation with which the following event time establishes an anaphoric relation.

If one takes the notion of (D) to be given, the analysis of (39) becomes easy. $(D)_2$ precedes $(D)_3$ which precedes $(D)_4$ and so on. There is, however, a major problem for this approach. In (39), the order in which the events in the pluperfect are described matches their temporal order. This is not the case in the following example:

(42) Paul überlebte nur knapp. Er war gestürzt. Fred hatte ihn geschubst.
Paul survived only hardly he was fallen Fred had him pushed

The descriptive order in (42) mismatches the temporal order. In (42), Paul fell because Fred had pushed him. The discourse based account proposed by KAMP, van GENABITH & REYLE (2004) doesn't provide the necessary basis for an appropriate analysis of this. In both (39) and (42), the antecedent discourse (in this case the pluperfect) gives a (D) in relation with which the following pluperfect establishes an anaphoric relation.
In order to determine the correct temporal order of the pluperfect sequences in (39) and (42), rhetorical relations between eventualities must also be taken into account. Such an account has been proposed by LASCARIDES & ASHER (1993):

> The basic model of discourse structure we explore is one where units of a discourse are linked by discourse or rhetorical relations modelled after those proposed by Hobbs (1985). These discourse relations determine the hierarchical structure of the discourse, and hence the structural constraints on which sentences can attach together to form text segments. Because we're concerned only with temporal aspects of interpretation, we consider here only certain discourse relations that are central to temporal import. These are listed below, where the clause α appears in the text before β:
>
> - *Explanation (α, β)*: the event described in β explains why α's event happened (perhaps by causing it); e.g., text (2).
> - *Elaboration (α, β)*: β's event is part of α's (perhaps by being in the preparatory phase); e.g., text (5).
> - *Narration (α, β)*: The event described in β is a consequence of (but not strictly speaking caused by) the event described in α; e.g., text (1).
> - *Background (α, β)*: The state described in β is the 'backdrop' or circumstances under which the event in α occurred (no causal connections but the event and state temporally overlap); e.g. text (3).
> - *Result (α, β)*: The event described in α caused the event or state described in β, e.g., text (4).
>
> *Explanation* is in a sense the dual to *Result*; they both invoke causation, but the latter matches the textual and temporal order of the events whereas the former doesn't. Both *Result* and *Narration* encode that textual order matches temporal order, but only the former relation induces a causal link between the events.
> LASCARIDES & ASHER (1993:440)

The examples LASCARIDES & ASHER refer to are listed below:

(43) Examples by LASCARIDES & ASHER (1993:437-438):

(1) Max stood up. John greeted him
(2) Max fell. John pushed him.
(3) Mark opened the door. The room was pitch dark.
(4) Max switched off the light. The room was pitch dark.
(5) The council built the bridge. The architect drew up the plans.

The proposal by LASCARIDES & ASHER is very important for any treatment of temporal progression or temporal interpretation in coherent discourses, because approaches that only consider (compositional) semantics don't provide the necessary interpretation machinery. (44) and (45) have the same syntax, they contain the same tenses and the verbs have the same situation type aspect. Assuming an "ordinary" semantics account would predict that the temporal interpretation of (44) and (45) is identical. As this is not the case, it makes sense to rely on rhetorical relations when it comes to the interpretation of temporal relations.

(44) John pushed Max. He fell.
(45) Max fell. John pushed him.

But, as far as I can see, the proposal over generates, because the meaning contribution of the involved tenses is not paid sufficient attention to. First, there are native speakers of English who do not agree with LASCARIDES & ASHER's judgement on (43)-(2). Contrary to the authors, those speakers claim that the pushing cannot precede the falling. For those speakers, the temporal order of sequences in the past tense must match the descriptive order.
The second point of criticism concerns the cross linguistic validity. LASCARIDES & ASHER (1993) do not speak about French. In French, it is impossible to have a mismatch between temporal and descriptive order with the passé simple. The temporal order always corresponds to the descriptive order.

(46) Jean tomba. Marc le poussa.
Jean fell. Marc him pushed

(46) cannot mean that Jean fell, because Marc pushed him. Although it is not clear to what extent aspect might play a role in the interpretation of (46), the fact that there exist cross linguistic differences such as the one just mentioned is very conspicuous. Again, such differences can only be explained by taking the temporal meaning contribution of the involved tenses more seriously.
The just sketched problems can easily be accounted for, if one commits oneself to the assumption of (D). (D) was defined as a point in time set by an antecedent discourse in relation with which the following tense establishes an anaphoric relation. This allows for a correct treatment of the French passé simple. A passé

simple can only take a (D) which is before (part of) (E) of the passé simple in question. The same goes for the English past tense used by those speakers that do not allow for the interpretation of (43)-(2) under which the pushing precedes the falling. The assumption that rhetorical relations can fully model the relation between descriptive and temporal order is therefore empirically wrong.
Temporal discourse relations in a coherent discourse therefore depend neither solely on rhetorical relations nor only on the meaning of the tenses involved. A combination of both is necessary. The meaning of the tenses involved provides a list of options whether a contextually given (D) is before, (partly) simultaneous or after the (E) with which the (D) in question establishes a discourse relation. Rhetorical relations choose one of these options. The sequence of two past tenses in (43)-(2) allows actually for three relations between (D) and (E). Max might fall before, while or after John pushes him. The rhetorical relations choose the most plausible interpretation of the sequence. The example with the French passé simple does not show all these options. The relation (D) after the event time of pushing is not available due to the meaning of the passé simple and must therefore be represented as part of the meaning of the French passé simple.
There are no such restrictions for the German pluperfect. In (47), the event time of Fred pushing Paul may precede, be simultaneous or be after the time which is chosen as (D). The specification of the temporal relations between (D) and (E) is then due to the rhetorical relations.

(47) Paul war gestürzt. Fred hatte ihn geschubst.
Paul was fallen. Fred had him pushed

In the following, I will only propose a very modest fragment for the temporal interpretation of the perfect. We will mainly be concerned with sequences of a present perfect plus a past tense or plus a present tense.
Consider the following sequence where a present perfect is followed by a past tense:

(48) Peter ist gefallen. Mark fing ihn auf.
Peter is fallen Mark catched him particle
(49) Peter ist gefallen. Mark schubste ihn.
Peter is fallen Mark pushed him
(50) Peter ist gefallen. Mark schrie vor Schreck.
Peter is fallen Mark screamed because-of fright

There are three options for the relation of (D) and (E) in such sequences, where the present perfect sentence serves as a (D) for the event time of the past tense sentence. The point in time which serves as (D) may either precede, follow or be simultaneous to (E). In (48), Peter falls before Mark catches him. In (49), Peter falls after Mark pushes him and in (50), he falls while Mark is screaming. The relation between (D) and (E) in terms of priority, simultaneity or posteriority is specified by rhetorical relations such as the one quoted from LASCARIDES & ASHER (1993). I do not discuss these relations here. Neither do I provide an

account integrating the rhetorical relations into the formalism which I will propose below.
The situation is now somewhat different for a pluperfect/past tense sequence. Under the reading that Peter falls because Mark has pushed him, (51) is infelicitous.

(51) Peter war gefallen. Mark schubste ihn.
Peter was fallen Mark pushed him

In a pluperfect/past tense sequence like the one in (51), the event time of a past tense cannot precede the event time of a pluperfect. How does this come?
Examples like the one in (51) provide one more argument against approaches where the temporal order of eventualities is only explained in terms of rhetorical relations. The relevant restriction here concerns (R). The past tense has the meaning that (E) is at (R) which is before (S). (E) and (R) of the past tense are therefore linked together. Normally, (E)/(R) of the past tense serves as (R) for the pluperfect. As (E) of the pluperfect in (51) is located before (R), (E) of the pluperfect is located before (E)/(R) of the past tense. In a pluperfect/past tense sequence where (E)/(R) of the past tense is (R) of the pluperfect, (E) may only be located before (R).[4]
The relevant restriction is already found in REICHENBACH (1947/1966):

> "When several sentences are combined to form a compound sentence, the tenses of the various clauses are adjusted to one another by certain rules which the grammarians call the rules for the *sequence of tenses*. We can interpret these rules as the principle that, although the events referred to in the clauses may occupy different time points, the reference point should be the same for all clauses – a principle which, we shall say, demands *the permanence of the reference point*. Thus, the tenses of the sentence, "I had mailed the letter when John came and told me the news" may be diagrammed as follows:
>
> | | | | | | |
> |---|---|---|---|---|---|
> | 1st clause: | E_1 | - | R_1 | - | S |
> | 2nd clause: | | | R_2, E_2 | - | S |
> | Third clause: | | | R_3, E_3 | - | S |
>
> It would be incorrect to say: "I had mailed the letter when John has come"; in such a combination, the reference point would have changed."
> REICHENBACH (1966:293)

REICHENBACH's principle has already been criticised in chapter 1. There is a further problem which has not been mentioned in the discussion in chapter 1. This concerns cases where (R) of a preceding pluperfect is not (E)/(R) of a following past tense. Normally, it could be thought that (D) of the past tense is resolved to (R) of the pluperfect and that this requires $(E)/(R)^{\text{past tense}}$ to be identical to $(R)^{\text{pluperfect}}$. But consider the following example:

[4] But there is also the universal use of the perfect where part of (E) can also hold at (R). This somehow changes the above generalisation.

(52) Peter kam erst um zehn Uhr bei Maria an. Er war um fünf Uhr aufgestanden,
Peter arrived only at ten o'clock at Maria particle he was at five o'clock up-got
hatte sich geduscht, ein großes Frühstück wie jeden Morgen verzehrt
had himself showered a big breakfast as every morning eaten
und war anschließend losgefahren. Er war also gerade auf dem Weg zu ihr, als ihm
and was then left he was particle just on the way to her when him
plötzlich ein Reh vors Auto lief. Er hatte keine Zeit mehr zum Bremsen
suddenly a deer in-front-of-the car went he had no time longer to stop
und konnte daher nur noch ausweichen. Er prallte gegen einen Baum. Peter
and could therefore only particle get-out-of-way he hit against a tree Peter
blieb zwar unversehrt, sein Auto aber hatte einen Totalschaden. Er musste
remained certainly unhurt his car but had a total-loss he had-to
den ADAC anrufen und lange warten. Und deshalb kam er auch drei Stunden
the ADAC call and wait long and therefore came he also three hours
später als geplant bei Maria an.
later as planed at Maria particle

(52) starts in the past tense which sets (R) for the following pluperfect sequence. Getting up, taking a shower, having breakfast and leaving precedes the arriving at Maria's. But then there is a switch from the pluperfect to the past tense and all eventualities in the new past tense sequence are prior to the time of arriving at Maria's which serves as (R) for the pluperfects.
It is therefore not necessarily the case that (R) of a pluperfect and (R) of a following past tense are identical. In the above example, (E)/(R) set by the past tense of the first sentence is identical with (R) of the following pluperfects. It therefore occurs to me that identity of the (R)s of a pluperfect and a past tense from a following sentence is only required, if there is no other point in time available which could serve as anchoring point for (R) and which has already been introduced "somewhere" in the precedent discourse. Therefore, there is not only a discourse time point (D) needed with which the following event time (E) establishes an anaphoric relation. There must also be a further point in time with which (R) establishes an anaphoric relation. In the following, this problem will however be neglected.
When a sequence of a present perfect and a present tense is considered, there are basically the same options possible as with the pluperfect/past tense sequence: In the following example, the pushing cannot precede the falling.

(53) Peter ist gefallen. Mark schubst ihn.
Peter is fallen Mark pushes him

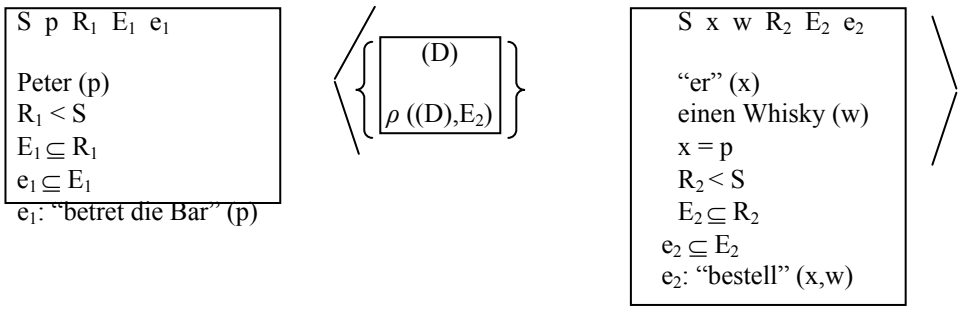
The possible options for (D) when (D) is resolved to a perfect will be explored in the next paragraphs.
The framework within which discourse relations between sentences are analysed here is DRT as elaborated by KAMP, van GENABITH & REYLE (2004). The rhetorical relations will be neglected in the following in order to obtain

generalisations about the perfect readings being as simple and as general as possible. The following example is an illustration:

(54) Peter betrat die Bar. Er bestellte einen Whisky. (German)
Peter entered the bar he ordered a whisky

The input conditions for the DRS constructions of the two sentences in (54) will not be repeated here, because this has been introduced in chapter 1 in detail. Instead, we will focus the temporal relation between the two sentences.

(55)



In (54) and in its – somewhat simplified – representation (55), we find the discourse referents for the speech time (S), the event times (E_1) at which Peter enters the bar and (E_2) at which he orders a whisky. I follow REICHENBACH (1947/1966) by assigning the following meaning to the past tense: E,R < S. Hence, the first past tense sentence has the meaning $E_1,R_1 < S$ and the second $E_2,R_2 < S$. We then find the eventualities (e_1) and (e_2). Eventuality is used as a cover term for states, processes and events. (e_1) is the event of Peter entering the bar, (e_2) of him ordering a whisky. This is represented by e_1:"betret die Bar" (p) and e_2:"bestell" (x,w). (e_1) obtains at the event time (E_1) which is represented as $e_1 \subseteq E_1$. P stands for Peter, w for whisky and x represents the pronoun "he".[5] The meaning of the two sentences is given in the two "big" boxes. The temporal relation between these two consists of a presupposition of the second sentence. The presuppositional part is in the little box. This presupposition must be resolved in order to fix the temporal relation between the eventualities (e_1) and (e_2). The resolution of the presupposition consists of finding specifications for *(D)* and ρ. ρ is the temporal relation between the event time (E_2) and (D) that has to be linked by an anaphoric presupposition resolution to the event time of an element from the context. The involved past tenses allow for three options concerning the relation between (D) and (E_2). (D) can either precede (E_2), be (partly) simultaneous to (E_2) or follow (E_2). The choice between these three options is determined by rhetorical relations, because there are no additional markers such as adverbials that determine the relation between (D) and (E_2). These will be neglected here. For the first sentence, there is no discourse context. I ignore here default rules for out of the blue sentences. The relation

[5] I bypass the question how the coreference between x and p is achieved. For the sake of simplicity, this is written in the second big box as x = p.

between (E_1) and (E_2) is the relation of succession, so (E_1) must precede (E_2). (D) must therefore be resolved to (E_1) and ρ is a "prior-to" relation. As (D) is resolved to (E_1) and ρ is specified as "<", we can now incorporate the presupposition into the representation of the second sentence. The final representation for (54) is as follows:

(56)

S p x w R_1 E_1 R_2 E_2 e_1 e_2
Peter (p)
$R_1 < S$
$E_1 \subseteq R_1$
$e_1 \subseteq E_1$
e_1: "betrat die Bar" (p)
$E_1 < E_2$
er (x)
einen Whisky (w)
x = p
$R_2 < S$
$E_2 \subseteq R_2$
$e_2 \subseteq E_2$
e_2: "bestell" (x,w)

KAMP, van GENABITH & REYLE (2004) define (D) as always referring to an event time, but it can also refer to other points in time.
Consider (57), for instance. It means that at some point in the past, the glasses were lost, but luckily found again:

(57) Ich habe meine Brille verloren (German)
I have my glasses lost
und heute Morgen erst wieder gefunden.
and today morning particle again found
'I lost my glasses and didn't find them until this morning.'

(58) means something different: at some point in the past, the glasses were lost. At the moment of speech, they are still lost, because I am looking for them.

(58) Ich habe meine Brille verloren. (German)
I have my glasses lost
Ich finde sie einfach nicht.
I find them simply not
'I have lost my glasses and simply cannot find them.'

A possible way to account for these two interpretations in terms of the just sketched discourse based approach is to state that in (57), the second tense *habe gefunden* 'have found' takes the event time of the first tense *habe verloren* 'have lost' as a (D). In (58), it is more plausible to assume that the time at which the target state of loosing the glasses obtains serves as a (D) for the localisation of (E) of the second tense.

This is where the perfect state-RB correlation from chapter 2/section 11.5 comes into play. The correlation, which has also been repeated in section 3, is as follows: only if RB is distinct from (E), the present perfect has a stative interpretation. In the case of (57), there is no perfect state, but a target state, because the underlying eventuality is a telic verb which allows for target states. As the stative perfect is only possible, if RB is distinct from (E) and as in case of (57), (D) is resolved to the time at which the target state holds, it is plausible to assume that in case of the perfect RB is the point in time which serves as a (D) for a following event time. This leads to the first principle:

(59) **First principle for a present perfect being a (D) for a following event time:**
(D) is always RB.[6]

This has an interesting consequence for the inclusion relation between PTS and (E). If (D) is later than (E), PTS and (E) are not identical and the perfect introduces the perfect state. If (D) is identical to the final subinterval of (E), PTS ends at this final subinterval and the perfect has a non-stative interpretation.
(D)/RB provides a useful tool to account for the present perfect readings. Recall that the present perfect has a preterite reading, if there is no perfect state. The necessary condition for the perfect state is that (D)/RB must be distinct from (E). Only if (D)/RB is not distinct from (E), there is no perfect state. Take, for instance, (60) as an example: The second sentence contains a past tense for which (E) of the present perfect serves as an evaluation time. As the event time (E) of the past tense is located before (S), (D)/RB must also be located before (S), because the asking for Sandrine's hand precedes the wedding. (D)/RB is therefore resolved to the event time (or more precisely to the final subinterval of the event time) at which Albin asked for Sandrine's hand.

(60) Albin hat um Sandrines Hand angehalten. (German)
Albin has for Sandrine's hand asked
Die Hochzeit fand im Juli statt.
The wedding took in July place
'Albin asked for Sandrine's hand. The wedding took place in July.'

Let us now turn to the perfect readings of the present perfect. In (61), the present perfect sentence is followed by a sentence containing a present tense.

(61) Albin hat um Sandrines Hand angehalten. (German)
Albin has for Sandrine's hand asked
Die Hochzeit findet im Juli statt.
The wedding takes in July place
'Albin asked for Sandrine's hand. The wedding will take place in July.'

---

[6] In chapter 2, RB was defined as the right boundary of PTS. As such, it is atomic. (D) on the other hand is not necessarily atomic. It may therefore be the case that RB is included in (D) and that there is no strict aquivalence between RB and (D).

Again, (D) of the second sentence must be resolved by context. This time, (E) of the following present tense is not before (S). The wedding is the result of having asked for Sandrine's hand. As the wedding has not already taken place, (D) is resolved to (S). This leads to the generalisation that, when (D) is not simultaneous to the final subinterval of (E), the present perfect has a perfect reading.
The various combinations of (D), PTS, (E) and (R) will now be used to account for the different present perfect readings. The claims for the preterite and perfect readings are summarized as follows:

(62) If (D) is resolved to the final subinterval of (E), PTS is identical to (E) and the present perfect has a preterite reading.
(63) If (D) is resolved to a point in time within PTS that is later than (E), PTS is not identical to (E) and the present perfect has a perfect reading.

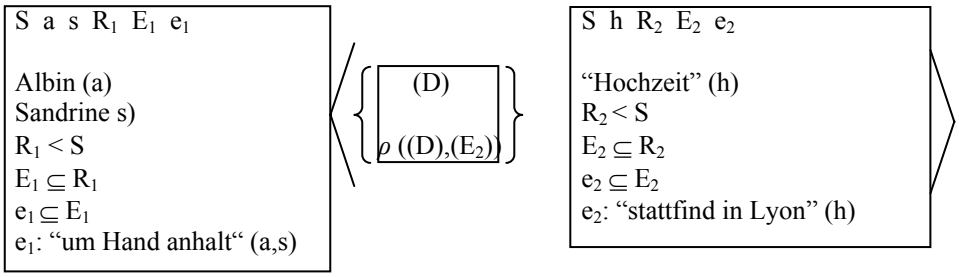
(62) and (63) reflect the intuition that there is no perfect state in the preterite use. This is obtained as RB is not distinct from (E). We now turn to the conditions for the preterite reading.

8. Present perfect that is followed by a present perfect/past tense

Let me start by looking at the temporal relation that a past tense establishes with a following past tense. (64) is such an example. Its DRS is given in (65). The meaning of (66) is given in the two big boxes; the presupposition is in the little box in brackets. This presupposition must be resolved. The temporal ordering of (64) is easy to see: Albin must first ask for Sandrine's hand before they can marry, if not there will be no wedding (under circumstances that I consider as being normal). So (E_1) clearly precedes (E_2). The presupposition is therefore resolved by saying that (E_2) takes (E_1) as (D) and that ρ is a prior relation. The final structure is (66).

(64) Albin hielt um Sandrines Hand an. Die Hochzeit fand in Lyon statt. (German)
Albin asked for Sandrine's hand. The wedding took in Lyon place.

(65)



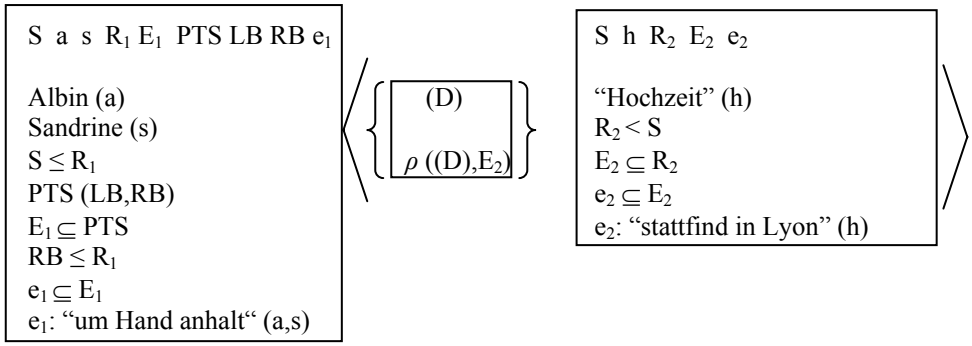
(66)

S a s h R_1 E_1 PTS LB RB R_2 E_2 e_1 e_2
Albin (a)
Sandrine (s)
PTS (LB,RB)
$R_1 < S$
$E_1 \subseteq R_1$
$e_1 \subseteq E_1$
e_1: “um Hand anhalt“ (a,s)
$E_1 < E_2$
“Hochzeit” (h)
$R_2 < S$
$E_2 \subseteq R_2$
$e_2 \subseteq E_2$
e_2: “stattfind in Lyon” (h)

Let us now have a look at a sequence with a present perfect that is followed by a past tense. (67) is the present perfect version of (64). The temporal reasoning and the presupposition resolution are the same as for (64), so I do not describe them here. As a final DRS we get (66). (D)/RB is resolved to the final subinterval of the event time expressed by the present perfect *hat angehalten* ‘has asked’.

(67) Albin hat um Sandrines Hand angehalten. Die Hochzeit fand (German)
Albin has for Sandrine’s hand asked. The wedding took
in Lyon statt.
in Lyon place.

(68)



(69) [7]

S a s h R_1 E_1 PTS LB RB R_2 E_2 e_1 e_2
Albin (a)
Sandrine (s)
PTS (LB,RB)
$S \leq R_1$
$E_1 \subseteq$ PTS
RB = RB (E)
$e_1 \subseteq E_1$
e_1: "um Hand anhalt" (a,s)
$E_1 < E_2$
"Hochzeit" (h)
$R_2 < S$
$E_2 \subseteq R_2$
$e_2 \subseteq E_2$
e_2: "stattfind in Lyon" (h)

The same analysis holds for sequences where a present perfect is followed by another present perfect. The interpretation of the second present perfect depends on the tense of the sentence that follows the second present perfect sentence. The preterite reading of the present perfect can therefore be identified by saying that the event time of the present perfect must serve as a (D) for another past event time before (S).

(70) **Second principle when a perfect serves as (D) for a following tense**
If the event time$_1$ of a present perfect$_1$ serves as (D) for an event time$_2$ that is before (S) and if $(E_1) < (E_2)$, the present perfect$_1$ has a preterite reading.

The intuition behind (70) is that there is no perfect state available in examples like (67). The perfect state is only licensed if RB is distinct from (E). RB must therefore be resolved to the final subinterval of (E).

9. Present perfect that is followed by a present tense

Let us have a look at the perfect use of the present perfect in (71). Albin is still there and a party will be given in his honour. The past tense in (72) is not possible, since it does not say anything about whether Albin is still there. As the past tense cannot substitute for the present perfect, the present perfect in (71) cannot be a preterite present perfect. It must be a perfect present perfect.

(71) Albin ist gestern zurückgekommen. Deshalb feiern wir nun. (German)
Albin is yesterday returned. That's-why celebrate we now.

(72) ??Albin kam zurück. Deshalb feiern wir nun. (German)
Albin returned yesterday verb-particle. That's-why celebrate we now.

Given that the present perfect in (71) is not a preterite present perfect (D)/RB cannot be resolved to the final subinterval of (E). If it was simultaneous to the

[7] RB = RB (E) means that RB of PTS is identical to the final subinterval (right boundary) of (E). RB (E) is indirectly introduced into the discourse universe via (E).

final subinterval of the event time at which Albin arrives, the present perfect would get a past tense like interpretation and under this reading (71) should not be possible, because (72) is not acceptable. The most intuitive interpretation of (71) is that there is a causal relation between the target state 'Albin being there' caused by the underlying eventuality 'arrive' and the 'celebration'. The target state holds at (R) and by substitution at (S) at which also the eventuality of celebrating holds. It is therefore plausible that (R) and by substitution (S) serves as a (D) for the following present tense. This seems to point towards the following generalisation:

(73) **Third principle when a perfect serves as (D) for a following tense (to be revised)**
If the event time$_1$ of a present perfect$_1$ serves as (D) for an event time$_2$ that is not before (S), the present perfect$_1$ has a perfect reading.

According to (73), a present perfect which is followed by a present tense always has a perfect interpretation. But (73) wrongly predicts a preterite reading not to be possible if a present tense follows a present perfect sentence. Consider the following example:

(74) Neulich ging es Albin richtig schlecht. Aber heute geht es ihm gut.
Recently went it Albin really badly but today goes it him good
'Today Albin feels really good, but the other day he felt terrible.'

The present perfect in (74) can be interpreted as a perfect present perfect, but it can also have a preterite reading as substitution with a past tense is possible:

(75) Neulich ist es Albin richtig schlecht gegangen. Aber heute geht es ihm gut.
Recently is it Albin really badly gone but today goes it him good
'Today Albin feels really good, but the other day he felt terrible.'

The third principle in (73) wrongly predicts that (74) cannot have a preterite reading. The preterite present perfect requires the final subinterval of (E) to serve as a (D) for the following event time. Therefore, there is no perfect state. The third principle in (73), however, requires (D)/RB to be after (E), which leads to a perfect state and which makes substitution by a past tense impossible.
The third principle must therefore be modified. Let us therefore reconsider (74). The present perfect allows both for a preterite and a perfect interpretation. (D)/RB can therefore either be resolved to the final subinterval of (E) or to (R). The sequence present perfect / present tense therefore allows for two options for (D).
The choice between the two options is not a matter of compositional semantics or temporal relations; it also depends on rhetorical relations between eventualities. The choice between these two options cannot be explained by looking at temporal relations between tenses. It has to be motivated by a rhetorical cause-effect relation between the involved eventualities. An example

is (71). As already mentioned, the arriving of Albin (E_1) is the reason for the celebration (E_2). The version in the past tense is marked if not impossible (see (72)). It is therefore plausible to assume that RB of PTS allows for a rhetorical relation with (E_2) that does not automatically follow from (E_1). It follows that (D) must be located at the final subinterval of PTS which in case of (71) is the moment of speech. (71) has therefore a perfect reading.
Contrary to the second principle in (70), the third principle leaves the question open where (D)/RB is located. (D)/RB can either be (E) or (R) of the present perfect. The resolution of (D)/RB depends on the choice the rhetorical relations make between the options the involved tenses offer for (D)/RB.

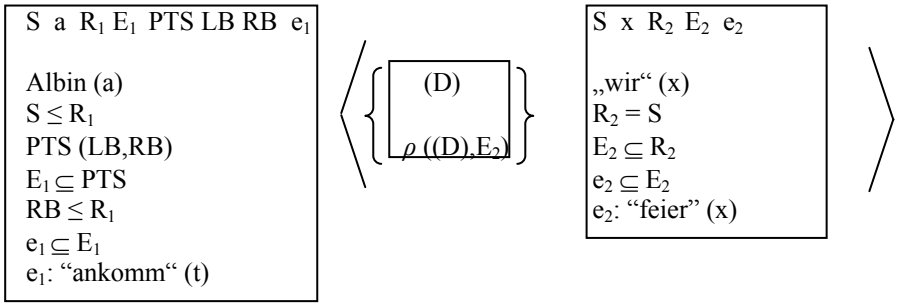
(76) **Third principle when a perfect serves as (D) for a following tense**
If a present perfect$_1$ serves as (D) for an event time$_2$ that is not before (S), (D)/RB may either be resolved to (E) or to (R) of the present perfect. Depending on the position of (D)/RB, the present perfect may then either have a preterite or a perfect reading.

An analysis is now given for (71) which I repeat for the reader's convenience:

(77) Albin ist gestern zurückgekommen. Deshalb feiern wir nun. (German)
Albin is yesterday returned. That's-why celebrate we now.

A present perfect/present tense sequence does not allow (D) to be after the event time of the present tense (cf. (53)). As there is no (E) before (S) that takes the present perfect as (D), there are two options for the resolution of (D)/RB. It can either be (E) or (R). Given that the reason for the celebration is the ongoing presence of Albin, (R) allows for a cause effect relation with the following present tense. (D)/RB is therefore resolved to (R).

(78)



(79)

S a x R_1 E_1 PTS LB RBcR_2 E_2 e_1 e_2
Albin (a)
$S \leq R_1$
PTS (LB,RB)
$E_1 \subseteq$ PTS
RB = R_1
$e_1 \subseteq E$
e_1: "ankomm" (t)
$E_1 < E_2$
"wir" (x)
$R_2 = S$
$E_2 \subseteq R_2$
$e_2 \subseteq E_2$
e_2: "feier" (x)

What did we achieve so far? I argued for an *ExtendedNow* approach to the German present perfect. To account systematically for its preterite and perfect readings, a discourse based approach was proposed. More specifically, I argued for a dynamic *perfect time span* that the German present perfect introduces. Due to context, its length varies. I further argued for a "split-Reference time-hypothesis" much in the spirit of KAMP & ROHRER (1985) by saying that REICHENBACH's reference time (R) must be split into a semantic part and a part that operates on the discourse level. (R) is a time point relative to which (E) is located. (D) is used to describe temporal ordering of events in narration. (D) is a point in time set by an antecedent discourse in relation with which the following tense form establishes an anaphoric relation. (D) is used to identify RB of PTS. (D) is always identical to RB. If (D) is resolved to the final subinterval of (E), the PTS is identical to (E) and the present perfect has a preterite reading. If (D) is resolved to a point in time within PTS that is later than (E), PTS is not identical to (E) and the present perfect has a perfect reading:

(80) **First principle for a present perfect being a (D) for a following event time:**
(D) is always RB.

(81) **Second principle when a perfect serves as (D) for a following tense**
If the event $time_1$ for a present $perfect_1$ serves as (D) for an event $time_2$ that is before (S) and if (E_1) before (E_2), the present $perfect_1$ has a preterite reading.

(82) **Third principle when a perfect serves as (D) for a following tense**
If a present $perfect_1$ serves as (D) for an event $time_2$ that is not before (S), (D)/RB may either be resolved to (E) or to (R) of the present perfect. Depending on the position of (D)/RB, the present perfect may then either have a preterite or a perfect reading.

It now also becomes clear why there is no preterite reading of the Swedish and English present perfect. Given that (RB) of PTS is fixed at (R) set by the tense of the auxiliary, PTS cannot be dynamic and as such (D) cannot be resolved to

(E) as is required by the correlation between (D) and (RB). As (D) cannot be distinct from (R), the preterite use is impossible.
The discourse based approach developed in this chapter has the further advantage that it copes with the pluperfect and the infinitival perfect as well. It is a well-known fact that the pluperfect in English, Swedish and German can have both preterite and perfect uses (cf. KAMP & ROHRER (1985) and many others). In the preterite use, it has an eventive past to past reading (see (84)), in the perfect use it has – informally speaking – a resultative reading which holds at a certain point in the past (cf. (83)).

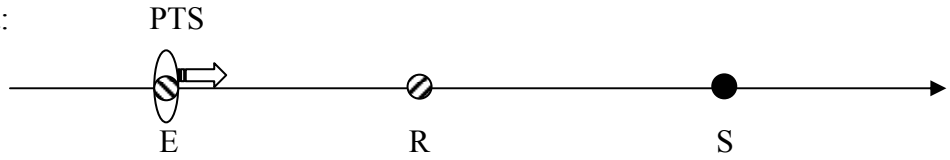
(83) a. Wie lange hatte Hans die Formel (zu diesem Zeitpunkt) (German)
How long had Hans the formula (at this moment)
bereits entdeckt?
already discovered
b. ?How long had Hans at this moment already discovered the formula?
c. ?Hur länge hade Hans då redan upptäckt formeln? (Swedish)
How long had Hans then already discovered formula-the

(84) a. In dem Moment, als ich nach Hause gekommen war, (German)
In the moment when I to home come was
hatte sie den Fernseher angemacht.
has she the television on-turned
'When I had got home, she had been turning on the television.'
b. The very moment I had come home, she had turned on the television.
c. Precis när jag hade kommit hem, hade hon satt på teven. (Swedish)
In-the-moment when I had come to home had she turned-on television-the
'When I had got home, she had been turning on the television.'

For reading convenience, the pluperfect meaning is repeated from chapter 2.

(85) German, Swedish, English pluperfect

a:



b:

S R E PTS LB RB e
R < S
PTS (LB, RB)
RB ≤ R
E ⊆ PTS
e ⊆ E

As one can easily see, (RB) of PTS is dynamic. Hence, both the preterite and the perfect readings are possible due to the same mechanisms I proposed for the present perfect. I leave this as an exercise to the reader.
In the next section we will see what happens to our discourse based approach when there is no context available.

10. The present perfect in a context without context

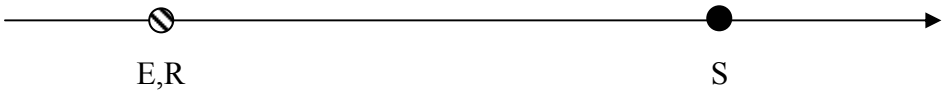
When we talk about states, processes or events, we locate them in time. This temporal location is normally introduced by temporal relations with other states, processes or events. It can also be introduced by temporal adverbs in the sentence itself. But often, sentences are uttered without any preceding context, suitable temporal adverbial or cotext. The utterances in question are called *out-of-blue-sentences*. In these cases, there is neither a preceding discourse available to anchor the time at which the eventuality talked about obtains nor is there a suitable temporal adverbial nor is the time at which the eventuality in question took place known to both the speaker and the hearer. But somehow, the event time must be common ground.

A possibility to establish a common ground in *out-of-the-blue* sentences is to point at things, e.g. in an *out of the blue sentence* such as *this is a nice house* one would point at the house in question. As we cannot point at times, the only point in time being common ground in out of the blue utterances is the moment of speech, because it is the only point in time that the hearer and speaker share with each other. The moment of speech is always common ground.

It follows from the meaning of the past tense and the present perfect that the present perfect is the more suitable tense for *out-of-the-blue-situations* than the past tense: the present perfect introduces the perfect time span PTS which can end at the moment of speech. The past tense does not say anything about the moment of speech as it localises the event time before the moment of speech.

The past tense locates (R) before (S). (E) holds at (R):

(86) German past tense: E,R < S



S R E

R < S
E ⊆ R

The meaning of the German present perfect is repeated below:

(87) The German present perfect:

b:

S R E PTS LB RB
$S \leq R$
PTS (LB, RB)
$E \subseteq PTS$
$RB \leq R$

Why are past tense sentences when uttered *out-of-the-blue* less acceptable, while present perfect sentences are fine? The answer is subtle. In *out-of-the-blue* uses there is no preceding discourse to which (D) can be resolved. We cannot point at times and the only available point in time speaker and hearer have as common ground in *out-of-the-blue* situations is the moment of speech. Therefore, (D) is preferably resolved to (S). As we mentioned in the preceding sections, (D) can either refer to (E) or to a point in time not after (R) of a present perfect. In the past tense, both (E) and (R) are distinct from (S) and (D) can therefore not be at (S).
This does however not mean that past tense sentences cannot be used as opening sentences to new discourses. The beginning of novels or fairy tales are prototypical examples from literary texts that establish a (fictive) universe by past tense sentences. I give two examples.

(88) Vor einem Jahr kam mein Vater auf die denkbar schwerste Weise (German)
Before one year came my father on the conceivable worst way
zu Schaden, er starb. Das Ereignis fand am vierten August 73 statt oder sagen wir
to injury he died The incident happened on fourth August 73 or say we
ruhig das Unglück, an einem Sonnabend. Ich habe es kommen sehen.
rather the accident, on a Saturday I have it come seen
Jurek Becker: *Bronsteins Kinder*. Frankfurt: Suhrkamp (1986[1]), 7.
'One year ago my father was injured in the worst conceivable way; he died. The incident, or, let's rather say the accident, happened on August 4th, 73, on a Saturday. I saw it coming.'

The novel *Bronsteins Kinder* begins with a past tense sentence which is temporally anchored by the adverbial expression *vor einem Jahr* 'one year ago'. Hence, the temporal adverbial serves as an anchoring point for (D).
A highly conventionalised opening sentence of fairy tales is the following formula. Again, it contains an adverbial expression referring to some time in the past which seems to be necessary to construct some kind of common ground. I give some examples without further comment.

(89) Es war einmal eine alte Geiß, die hatte sieben junge Geißlein und (German)
It was once an old goat which had seven young kids and
hatte sie lieb wie eine Mutter ihre Kinder lieb hat. Eines Tages wollte sie in
had she love as a mother her children love has One day wanted she in
den Wald gehen und Futter holen, da rief sie alle sieben herbei und sprach: […].
the forrest go and food get there called she all seven particle and said

Brüder Grimm: *Kinder und Hausmärchen*. Stuttgart: Reclam Junior. 1984, Bd. 1, Der Wolf und die sieben Geißlein, 51.
'Once upon a time there was an old goat which had seven young kids, and she loved them as a mother loves her children. One day she wanted to go into the forest and get some food. So she called all seven of them to her and said:[…]'

(90) Det var en gång en soldat som drömde en natt, att han skulle (Swedish)
It was one time a soldier that dreamed one night that he would
komma att äga en silverskog och en goldskog.
come to own a silver-forrest and a gold-forrest
'Once upon a time there was a soldier who dreamed one night that he would own a silver forrest and a gold forrest.'
Arnold, Hans: *Slottet vid silverskogen*. *Nordiska sagor.* Stockholm: Raben & Sjögren. 1980, Slottet vid silverskogen, 26.

(91) Once upon a time, a mouse, a bird, and a sausage, entered into partnership and set up house together. For a long time all went well; they lived in great confort and prospered so far as to be able to add considerably to their stores.
The Brothers Grimm: *Fairy tales*
http://www.gutenberg.org/dirs/etext01/grimm10.txt

In the examples, (D) is set with the help of an temporal adverbial, a strategy which seems to me to be necessary for past tense sentences used as *out-of-the-blue* sentences.
Let us now turn to the present perfect in *out-of-the-blue-sentences*.
Often, present perfect sentences are used to introduce new discourse universes narrated in the past. In these contexts, the present perfect is used as a summary of the series of events to be reported (MARSCHALL (1995:112), VATER (1996:252)). The summary is viewed from the point of speech, not from the event time itself. A classical example for this comes from LATZEL (1977a:103):

(92) Neulich habe ich etwas Interessantes erlebt: Ich ging ... etc (German)
Recently have I something interesting experienced. I went ... etc
'The other day I had an interesting experience: I went… etc.'

The (D) of the present perfect in (92) is simultaneous with the time of utterance. The event time expressed by the present perfect can then serve as an anchoring point for the chain of past events.
VATER (1996) also points out that events that follow the first sentence in the present perfect are normally reported in the past tense. LATZEL (1977a) further shows that the present perfect is often used as the final sentence of a sequence of past events. Again its function is to summarize the reported events, see (93).

(93) Ja, so ist das gelaufen. / Ja, so hat das angefangen. etc. (German)
Yes so is that happened / Yes so has that begun etc
'Yes, that is how it happened/ Yes, that is how it started etc.'

To sum up, there is a clear preference for the present perfect in *out-of-the-blue* sentences not containing adverbial specifications. This is due to the fact that (D) of present perfect sentences can be resolved to (S). This is a strategy which is not possible in past tense sentences due to the restriction that (D) can either be at (E) or at (R) which are both distinct from (S).
In the next section, we will turn back to the perfect readings of the present perfect.

11. Universal and experiential readings of the present perfect

11.1 Introduction

The perfect interpretations of the present perfect can be split up into the universal, the existential, the resultative and the *hot news* present perfect. The last three are sometimes summarized as experiential readings. I call the experiential readings and the universal use perfect readings. 'Perfect reading' is used in opposition to 'preterite reading'.
The relevant examples are repeated below:

(94)	Ich habe Dich schon immer geliebt. *I have you particle always loved* 'I have always loved you.'	(German)	(universal)
(95)	Ich habe *Forrest Gump* dreimal gesehen. *I have Forrest Gump three-times seen* 'I have seen *Forrest Gump* three times.'	(German)	(existential)
(96)	Ich habe gerade meine Prüfung bestanden. *I have just my exam passed* 'I have just passed my exam.'	(German)	(hot news)
(97)	Ich habe meine Brille verloren. *I have my glasses lost* 'I have lost my glasses.'	(German)	(resultative)

The universal present perfect denotes an event time that holds throughout the entire PTS, see (94). The existential perfect asserts that the subject has a certain experience (see (95)). Nothing is said about a past up to the present reading. The *hot news* perfect reports an event time that is close to the moment of speech like in (96) and the perfect of result or resultative present perfect expresses the target state of the underlying eventuality (see (97)).
The exact definitions of the perfect readings in terms of (E) and PTS are repeated from section 3 as follows:

(98)
(i) Universal perfect: (E) holds at all points in time within PTS. RB may be identical to (R)
(ii) Experiential perfect: (E) holds at some point in time within PTS. Nothing is said about whether it holds at all points in time within PTS. RB is identical to (R).
(iii) *hot news* perfect: (E) holds at some point in time within PTS. Nothing is

		said about whether it holds at all points in time within PTS. RB is identical to (R). (E) is shortly before (R).
(iv)	resultative perfect:	(E) holds at some point in time within PTS. RB is identical to (R). The target state of the underlying eventuality holds at (R).
(v)	preterite perfect:	RB is identical to the final subinterval of (E). RB is not identical with (R).

In section 3, it was claimed that the German preterite and perfect interpretations of the present perfect are variants of the one single uniform meaning of the present perfect which has been elaborated in chapter 2. In the following, it will be shown that it is also possible to subsume the perfect readings under this meaning. The position defended here differs from the standard assumptions about the disambiguation of the present perfect readings (cf. IATRIDOU, ANAGNOSTOPOULOU & IZVORSKI (2001), MUSAN (2002), PANCHEVA (2003) ...). According to the standard view, there is either semantic or pragmatic disambiguation. But as the following example suggests, the different present perfect readings is context dependent. In the context of (100), (99) has a resultative reading as the looking for the glasses is interpreted as the result of having lost them. When followed by (101), (99) has a preterite reading as the glasses were found again.

(99) Ich habe meine Brille verloren … (German)
I have my glasses lost
(100) Ich finde sie einfach nicht. (German)
I find them simply not
'I have lost my glasses and simply cannot find them.'
(101) … und heute Morgen erst wieder gefunden. (German)
and today morning particle again found
'I lost my glasses and didn't find them until this morning.'

This section is organised as follows. In section 10.2, I argue that the perfect readings have to be distinguished by a discourse based approach. Section 10.3 shows the interplay of situation type aspect, adverbial modification and the perfect readings and in section 10.4 disambiguation by context is explained. Section 10.5 concludes.

11.2 Semantic vs. pragmatic accounts of the perfect perfect readings

There is an ongoing discussion whether the perfect readings should be distinguished semantically or pragmatically (for the former see DOWTY (1979), MITTWOCH (1988), IATRIDOU, ANAGNOSTOPOULOU & IZVORSKI (2001), PANCHEVA (2003), for the latter McCOARD (1978), KLEIN (1994)). Topicalisation of English *for*-adverbials seems to favour a semantic distinction between the present perfect readings. A topicalised *for*-adverbial only allows for a universal reading while an inner sentential *for*-adverbial allows for both an existential and a universal reading (see DOWTY (1979)).

(102) a. Véronique has been in Lyon for four weeks. (universal / existential)
b. For four weeks, Véronique has been in Lyon. (universal / ??existential)

However, this view has been challenged. ABUSCH & ROOTH (1990) and RATHERT (2004) argue that an existential reading is also possible with a topicalised *for*-adverbial. But RATHERT (2004) mainly uses data from *google*. Therefore, she cannot claim that the data is from native speakers. Hence, more empirical research is needed in order to correctly analyse the readings of the present perfect with topicalised *for*-adverbials. Moreover, we cannot exclude that, if there are any meaning differences to be found between the English (102)a and b, it may be the case that these differences are due to other factors (such as topicalisation) than the meaning of the present perfect.
There is no reason to assume two distinct perfect meanings in German as topicalised and innersential *for*-adverbials allow for both the universal and the existential perfect.

(103) a. Véronique ist schon vier Wochen (German) (universal / existential)
Véronique is particle four weeks
lang in Lyon gewesen.
long in Lyon been
'Véronique has been in Lyon for four weeks.'
b. Schon vier Wochen lang ist Véronique (German) (universal / existential)
Particle four weeks long is Véronique
in Lyon gewesen.
in Lyon been
'Véronique has been in Lyon for four weeks.'

(104) a. Véronique har varit i fyra veckor (Swedish) (universal / existential)
Véronique has been in four weeks
i Lyon.
in Lyon
'Véronique has been in Lyon for four weeks.'
b. I fyra veckor har Véronique varit (Swedish) (universal / existential)
In four weeks has Véronique been
i Lyon.
in Lyon
'Véronique has been in Lyon for four weeks.'

There is a strong argument against the semantic distinction. The universal present perfect is only possible, when modified by certain adverbials such as *schon immer* 'always'.[8] One would expect from a semantic distinction between the different present perfect readings that the different uses should also be possible without special adverbial modification.[9]

[8] Compare IATRIDOU, ANAGNOSTOPOULOU & IZVORSKI (2001:196f) for English.
[9] I will not analyse the interplay of the relevant group of adverbials with the perfect here (cf. RATHERT (2004) for a recent proposal). I also bypass the question how the obligatorily presence of these adverbials in the u-perfect has to be treated in DRT (cf. chapter 1).

Further, the availability of the different readings of the present perfect is context dependent. Consider the following example. It can have a universal reading and as such the speaker still loves his addressee at the moment of speech. But it can also have a second reading, an existential one, under which the speaker does not love the addressee any longer. When preceded or followed by (106), (105) has a universal reading. In the context of (107), (105) is an existential present perfect.

(105) Ich habe Dich immer geliebt. (German)
I have you always loved
'I have always loved you.'
(106) Du bist die Beste. (German)
You are the best
'You are the best.'
(107) Aber nun tue ich es nicht länger. (German)
But now do I it no longer

My approach differs from the approaches mentioned above in exploring this context dependence.

11.3 Situation type aspect, adverbials and the perfect readings

Aktionsart has a strong influence on the readings of the present perfect (cf. especially IATRIDOU, ANAGNOSTOPOULOU & IZVORSKI (2001)). The universal present perfect is only possible from verbs having the subinterval property: from *states*, *activities* and maybe *accomplishments*.[10] Consider the following example. The main verb of the matrix sentence is a state and denotes as such duration.

(108) Ich habe schon immer gewusst, (German) (universal)
I have particle always known
dass der Mond aus Käse ist.
that the moon of cheese is
'I have always known that the moon is made of cheese.'

If we commit ourselves to the assumption that one can run for years without interruption, a universal perfect of activities becomes possible.
Achievements are incompatible with the universal interpretation. They do not express duration, which is, however, required by the universal interpretation.

---

[10] It is not quite clear to me to which extent accomplishments can also be used for universal perfects. Consider the following:

(1) Er hat von 1980 bis jetzt sein Traumhaus gebaut. (German) (universal)
He has from 1980 until now his dream-house built
'He was building his dream house from 1980 until now.'

If we think of finishing the house at the moment of speech, (1) may be interpreted as a universal perfect. But the interpretation is very hard to get. Moreover, if he really finishes the house at the moment of speech, (E) does probably not really hold troughout the entire PTS. The underlying predicate is telic. Universal perfects from accomplishments are therefore probably not possible.

The resultative present perfect is only possible from verbs whose lexical meaning introduces a (lexical) target state. These are achievements and accomplishments, because only these introduce what PARSONS (1990) calls *target states*[11]:

(109) Der Zug ist angekommen. (German) (resultative)
The train is arrived
'The train has arrived.'

(110) Ich habe meine Brille verloren (German) (resultative)
I have my glasses lost
'I have lost my glasses.'

In other *Aktionsarten*, the target state meaning of the verb is not lexically encoded. For instance, in the following example, there is no lexical target state implied. The fact that I am breathless is not derived from the meaning of "to run", but (at least what concerns myself) from what we know about running.

(111) Ich bin ziemlich schnell gerannt. Deshalb bin ich jetzt außer Atem. (German)
I am quite fast run. That's-why am I now without breath
'I have run quite fast. That's why I'm breathless now.'

(111) is therefore not a resultative perfect. There are no such restrictions for the preterite, the existential and the *hot news* present perfect. They are possible with all types of *Aktionsart*. In the following, I treat the *hot news* reading as a special variant of the existential reading as the only difference between the two is that the former requires the eventuality of the main verb to occur in a recent past.
The relation between *Aktionsart* and the present perfect readings is summarized in table 1 where '+' indicates that the reading is available and '-' that it is not.

	Aktionsart			
	state	activity	achiev	accomp
Universal	+	+	-	-
existential	+	+	+	+
resultative	-	-	+	+
preterite	+	+	+	+

Table 1: *Aktionsart* and present perfect readings

Adverbial modification further restricts the present perfect readings. The universal present perfect is only possible under certain adverbial modification (see IATRIDOU, ANAGNOSTOPOULOU & IZVORSKI 2001:196f for English). In English, the adverbs requiring the universal reading are *at least since, ever since, always, for five days now*. SCHIPPOREIT (1971) states that

[11] PARSONS (1990:235) defines target states as follows:
"It is important not to identify the Resultant-state of an event with its "target" state. If I throw a ball onto the roof, the target state of this event is the ball's being on the roof, a state that may or may not last for a long time. What I am calling the Resultant-state is different; it is the state of my having thrown the ball onto the roof, and it is a state that cannot cease holding at some later time."

adverbials such as *schon immer* 'particle + always' and *noch nie* 'particle never' yield a universal reading of the present perfect. In (112), for instance, the speaker still loves his or her addressee at the moment of speech. The universal reading is not obligatory with *immer* 'always'. (113) can either have a universal or an existential reading.

(112) Ich habe Dich schon immer geliebt. (German) (universal)
I have you particle always loved
'I have always loved you.'
(113) Ich habe Dich immer geliebt. (German) (universal/existential)
I have you always loved

The interplay of *Aktionsart*, adverbial modification and the perfect readings is summarized in the following table. Again, '+' means that the reading is available. The '+' in obligatory adverbial modification means that the universal perfect is only available when modified by adverbials such as *schon immer* 'always' etc. The other readings do not require adverbial modification.

	Adverbial modification				
	VP: *Aktionsart*				Necessary
	State	Act.	Ach.	Acc.	
Universal	+	+	-	-	+
Existential	+	+	+	+	-
Resultative	-	-	+	+	-
Preterite	+	+	+	+	-

Table 2: *Aktionsart*, adverbial modification and present perfect readings

A more detailed discussion of the interplay between the perfect readings and adverbial modification in German is found for example in SCHIPPOREIT (1971) and MUSAN (2002), so I do not develop this point any further.

11.4 The readings are context sensitive

But this is not the full story. One can, for instance, not tell which reading the context less (99) that I repeat as (114) has. As (115) and (116) show, (114) allows for two interpretations: depending on context the present perfect can either have a resultative or a preterite reading. In (115), the result of having lost the glasses is the reason why I am looking for them. In (116), the glasses were lost at some point in the past, but luckily found again.

(114) Ich habe meine Brille verloren. (German)
I have my glasses lost
'I have lost my glasses.'
(115) Ich habe meine Brille verloren. Ich finde sie (German) (resultative)
I have my glasses lost. I find them

einfach nicht.
simply not
'I have lost my glasses and simply cannot find them.'

(116) Ich habe meine Brille verloren (German) (preterite)
I have my glasses lost
und heute morgen erst wieder gefunden.
and today morning particle again found
'I lost my glasses and didn't find them until this morning.'

Context also decides whether the present perfect has an existential or a universal reading in certain cases where there are no adverbs which obligatorily trigger one of the two readings. An example is (117) that can be used as in (118) or (119). *Immer* 'always' does not obligatorily require a universal perfect (cf. SCHIPPOREIT (1971)). (118) is an existential and (119) a universal present perfect. Again, a discourse based approach becomes necessary.

(117) Ich habe Dich immer geliebt. (German)
I have you always loved
'I have always loved you.'

(118) Ich habe Dich immer unterstützt und geliebt, (German) (existential)
I have you always supported and loved,
aber nun tue ich es nicht länger.
but now goes it not longer with us
'I have always supported and loved you, but I will not do this any longer.'

(119) Ich habe Dich immer geliebt. Du bist die Beste. (German) (universal)
I have you always loved. You are the best
'I have always loved you. You are the best.'

This is the point where (D) comes into play. Recall that due to the first principle in (59), (D) is always RB. IT is therefore possible to integrate (D) into the definitions of the readings of the present perfect in (24). This gives rise to the following:

(120)
(i) Universal perfect: (E) holds at all points in time within PTS. (D)/RB may be identical to (R)
(ii) Experiential perfect: (E) holds at some point in time within PTS. Nothing is said about whether it holds at all points in time within PTS. (D)/RB is identical to (R).
(iii) *hot news* perfect: (E) holds at some point in time within PTS. Nothing is said about whether it holds at all points in time within PTS. (D)/RB is identical to (R). (E) is shortly before (R).
(iv) resultative perfect: (E) holds at some point in time within PTS. (D)/RB is identical to (R). The target state of the underlying eventuality holds at (R).
(v) preterite perfect: (D)/RB is identical to the final subinterval of (E). (D)/RB is not identical with (R).

This gives three options for (D)/RB in present perfects. (D)/RB can either be identical to the final subinterval of the event time (= RB(E)), simultaneous to (R) or identical to both (R) and the time of the target state of the verb in the past participle. In case of the German universal perfect, (D)/RB is not obligatorily identical to (R), it may be before (R) and touch it. This can be summarized in the following table, where '+ (D)/RB = RB (E)' indicates that (D)/RB is identical with RB(E) and '-' indicates that this is not the case.

	(D)/RB = RB (E)	(D)/RB = (R)	(D)/RB = (R) = TARG (E)
Universal[12]	+	+	-
Existential	-	+	-
Resultative	-	+	+
Preterite	+	-	-

Table 3: *readings of the present perfect* and (D)/RB

The results in table 3 interact with table 2 in the following way:

	(D): Discourse							
	Adverbial modification							
	VP: *Aktionsart*				Necessary			
	State	Act.	Ach.	Acc.		(D)/RB = RB (E)	(D)/RB = (R)	(D)/RB = (R) = TARG (E)
universal	+	+	-	-	+	+	+	-
existential	+	+	+	+	-	-	+	-
resultative	-	-	+	+	-	-	+	+
preterite	+	+	+	+	-	+	-	-

Table 4: Interplay of *Aktionsart*, adverbial modification and discourse

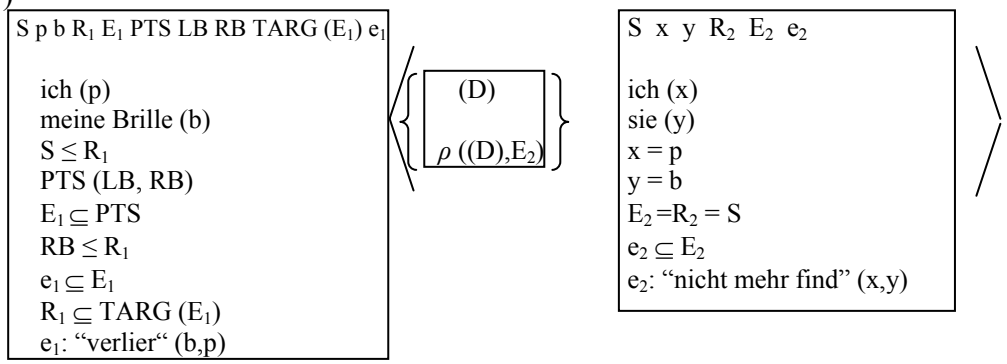
According to table 4, the English present perfect has a universal reading, if the aktionsart of the lower VP is either a state or an activity, if a suitable adverbial modifies the event time and if (D)/RB is identical with both the final subinterval of (E) and (R). A resultative present perfect is only possible for telic verbs (accomplishments or achievements), if (D)/RB is (R) and if the target state holds at (R): Targ (E) = (R). [13] Consider, for instance, the example (115). The DRS for (115) are given in (121) and (122). First, the *Aktionsart* is an achievement. Thus, *Aktionsart* does not allow for a universal reading. Second, there is no adverbial modification obligatorily triggering a u-perfect. The existential, resultative or preterite readings are therefore possible, but not the universal. Third, the following eventuality from the present tense sentence establishes a rhetorical relation with the present perfect. "*I simply cannot find my glasses"* is interpreted as the result of *having lost them*. If he or she had not lost his glasses, he or she

[12] For the German universal perfect, (D)/RB may precede (R) or be identical with it.

[13] This does of course not mean that it is resolved to the target state of the event time, but to the time at which the target state obtains.

would not be looking for them. (D) is therefore resolved to TARG (E_1), the target state of having lost the glasses.

(121)



(122)

S p b x y R_1 E_1 PTS LB RB TARG (E_1) R_2 E_2 e_1 e_2

ich (p)
meine Brille (b)
$S \leq R_1$
PTS (LB, RB)
$E_1 \subseteq$ PTS
$RB = R_1$
$e_1 \subseteq E_1$
$R_1 \subseteq$ TARG (E_1)
e_1: "verlier" (b,p)
$E_2 \subseteq$ TARG (E_1)
ich (x)
sie (y)
x = p
y = b
$E_2 = R_2 = S$
$e_2 \subseteq E_2$
e_2: "nicht mehr find" (x,y)

12. Conclusion

To sum up, in this chapter a discourse based account to the present perfect readings has been defended. It has been argued that the interplay of situation type aspect on the VP level, adverbial modification and the discourse level accounts for the different readings. Since often only context determines the present perfect readings unambiguously, a discourse based approach became necessary to capture the different uses.

More specifically, I proposed a dynamic *perfect time span* that the German present perfect introduces. Due to context, its length varies. I further argued for a "split-Reference time-hypothesis" much in the spirit of KAMP & ROHRER (1985) by saying that REICHENBACH's reference time (R) must be split into a semantic part and a part that operates on the discourse level. (R) is a time point relative to which (E) is located. (D) is used to describe temporal ordering of events in narration. (D) is a point in time set by an antecedent discourse in

relation with which the following tense form establishes an anaphoric relation. When a sentence is in the (present) perfect, then the (D) it makes available for the next sentence is always identical with RB.
In the preterite reading, the present perfect can substitute for the past tense without any change in meaning. It follows from what we said in chapter 2 about the cross linguistic meaning variation in the perfect, that RB is not fixed in German. In Swedish and English, however, RB is simultaneous to the reference time set by the auxiliary.
It was argued that if (D) is resolved to the final subinterval of (E), the present perfect has a preterite reading. If (D) is resolved to a point in time later than (E), the present perfect has a perfect reading. As (D) and (RB) are always identical, (D) can only be resolved to (R) in Swedish and English. Thus, there is no preterite reading available in those languages.
We arrived at the following generalisations:

(123) **First principle for a present perfect being a (D) for a following event time:**
(D) is always RB.

(124) **Second principle when a perfect serves as (D) for a following tense**
If the event $time_1$ of a present $perfect_1$ serves as (D) for an event $time_2$ that is before (S) and if $(E_1) < (E_2)$, the present $perfect_1$ has a preterite reading.

(125) **Third principle when a perfect serves as (D) for a following tense**
If a present $perfect_1$ serves as (D) for an event $time_2$ that is not before (S), (D)/RB may either be resolved to (E) or to (R) of the present perfect. Depending on the position of (D)/RB, the present perfect may then either have a preterite or a perfect reading.

The perfect readings were split up into the universal, existential, resultative and hot-news-perfect. I argued that a semantic account to the different perfect readings leads to the wrong results and that the readings of the present perfect are best analysed within a discourse based approach. The analysis of the interplay of situation type aspect, adverbial modification and discourse fully accounts for the readings. The results are repeated in the following table:

	(D): Discourse							
	Adverbial modification							
	VP: *Aktionsart*				Necessary			
	State	Act.	Ach.	Acc.		(D)/RB = RB (E)	(D)/RB = (R)	(D)/RB = (R) = TARG (E)
universal	+	+	-	-	+	+	+	-
existential	+	+	+	+	-	-	+	-
resultative	-	-	+	+	-	-	+	+
preterite	+	+	+	+	-	+	-	-

Table 5: Interplay of *Aktionsart*, adverbial modification and discourse

Chapter 6: *Conclusion*

The present study aimed at analysing the meaning of the present perfect in German, Swedish and English. The main findings are as follows:

- **Monosemy:** The present perfect has a single uniform meaning.
- ***ExtendedNow*:** Only an *ExtendedNow*-analysis correctly captures the present perfect.
- The *present perfect puzzle* (PPP) cannot be explained by looking at the meaning contribution of the present tense. The explanation of the PPP can not only be a semantic or a pragmatic one. I show that only a **combined syntactic and semantic approach** correctly accounts for the *perfect puzzles*.
- The inferential present perfect behaves like **an infinitival perfect** that is embedded under a modal verb in the present tense. It was therefore assumed that the inferential present perfect is an infinitival perfect that is embedded under **a phonological null modal verb**.
- It is only possible to account for the readings within an approach that considers **situation type aspect, adverbial modification and context**.
- The readings of the present perfect are **context sensitive**. I therefore assumed the discourse based approach to tense as first developed by KAMP & ROHRER (1985).

In **CHAPTER ONE**, *preliminaries*, I argued for a REICHENBACHian approach to tense. REICHENBACH (1947/1966) distinguishes between an event time (E), a speech time (S) and a reference time (R). (E) is the point in time at which the event takes place, an utterance is made at (S) and (R) is the point in time relative to which (E) is located. I argued against an approach in the spirit of KLEIN (1994), because his notion of *topic time*, the time about which an assertion is made, turned out to be problematic.
To account for the use of tenses in discourse, I followed KAMP & ROHRER (1985) / KAMP & REYLE (1993) by introducing a further point in time. The reference time point Rtp is used to account for the temporal ordering of events in texts: the preceding discourse yields an Rtp with which the following tense form establishes an antecedent-anaphora relationship. To avoid confusion with REICHENBACH's (R) I did not use the term Rtp. I therefore introduced the term (D)*iscourse time point*.
I argued that the distinction between (R) and (D) becomes especially urgent with sequences in the pluperfect (see (1)). The sequence starts with a past tense. The events (e_2) to (e_6) are temporally ordered. Fred first gets up, then takes a shower and so on. The right temporal order of the events (e_2) to (e_6) cannot be given by referring to REICHENBACH's reference time (R), since for the five pluperfects

in (1) (R) is always the same: it is e_1, the event of Fred's arrival. (D) resolves that problem: (D_2) precedes (D_3), which in turn precedes (D_4) and so on.

(1) Fred arrived at 10. He had got up at 5 (e_2), he had taken a long shower (e_3), had got dressed (e_4) and had eaten a leisurely breakfast (e_5). He had left the house at 6:30 (e_6). (KAMP & REYLE (1993:594))

It was argued that the distinction between (D) and (R) is especially important for the findings of chapter 5. There it was argued that the present perfect has different interpretations according to the antecedent-anaphora relationship into which the present perfect enters with other tenses.
The semantic framework I used in this dissertation was *Discourse Representation Theory* (DRT) in the version by KAMP, van GENABITH & REYLE (2004). The reasons why I chose DRT (and especially this version of DRT) to represent natural language semantics became clear in chapter 5. There I argued that only a discourse based approach to the perfect can fully account for the various interpretations the perfect has. Temporal and rhetorical relations between tenses in a given text were used to account for the different readings of the present perfect.
In **CHAPTER TWO**, *the meaning components of the perfect*, I analysed the meaning of the Swedish, English and German present perfect in terms of an ExtendedNow-analysis (XN). Roughly speaking, the perfect in each language introduces a time interval which contains the event time expressed by the perfect. The possible positions of the boundaries of this interval (more specifically its right boundary RB) were said to differ cross linguistically.
It was shown that the Swedish perfect behaves in several respects like the English perfect: it always links the present to the Past and it cannot be combined with adverbials like *yesterday* (dubbed the "present perfect Puzzle" by KLEIN (1992)).
But contrary to the English present perfect, the Swedish perfect can be used as a future perfect, see (2):

(2) Imorgon har konferensen slutat. (Swedish)
Tomorrow has conference-the ended
'The conference has ended tomorrow.'

The similarities between English and Swedish suggest a similar analysis, but an ordinary *XN* will fail due to the futurate use of the Swedish perfect in (2), since the XN is not located with respect to the point of speech, but relative to the reference point. I therefore proposed to modify the XN-Theory.
The present perfect introduces an ExtendedNow-interval (XN). "Traditionally", XN is an interval whose right boundary (RB) ends at the reference time set by the tense of the auxiliary. As the time span the perfect introduces does not always end at the moment of speech, the term *ExtendedNow* was considered to be somewhat misleading. Following a proposal by IATRIDOU et al (2001), I

therefore used the term *perfect time span* as a more neutral term for *ExtendedNow.* The *perfect time span* (PTS) is a time interval introduced by the perfect whose right boundary is the reference time set by the tense of the auxiliary. The position of its left boundary (LB) is not specified or can be given by adverbials like *since.* PTS includes the event time expressed by the perfect.
The use of the present perfect in (3) is called u(-niversal) perfect. This is a use of the present perfect where (E) holds throughout the entire PTS. A present perfect normally has a universal interpretation, if it is modified by adverbials such as *always*. An example is the following where the speaker still loves his addressee at the moment of speech.

(3) I have always loved you.

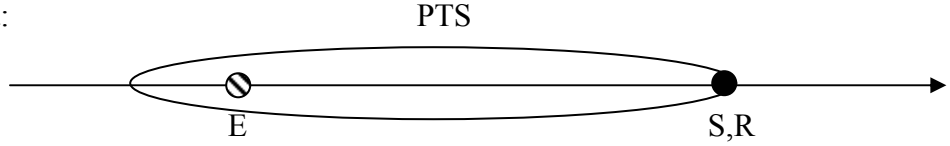
This shows that PTS ends at (R) and by substitution at (S), because (E) holds through the entire PTS. Consider now the German universal perfect in (4). Here, the eventuality *in Berlin wohnen* 'to live in Berlin' does not hold at (S), or more generally at (R). PTS has therefore to be modified.

(4) Ich habe immer in Berlin gewohnt, (German)
I have always in Berlin lived
aber vor kurzem bin ich nach Tübingen gezogen.
but before recently am I to Tübingen moved
'I always lived in Berlin but recently, I moved to Tübingen.'

Uses such as in (4) are not possible in English and Swedish. To account for German, I proposed a dynamic PTS with flexible boundaries. The position of RB varies due to the different uses of the present perfect.
English, Swedish and German differ in how the *perfect time span* and the reference time set by the auxiliary are computed. In English, the right boundary (RB) of PTS is always identical with the moment of speech (S). In Swedish, RB is (R) of the auxiliary. The German PTS is dynamic. In the default, it is simultaneous with (E). RB is only distinct from (E) if context requires it. The meanings I assumed were as follows:

(5) English present perfect:

a:

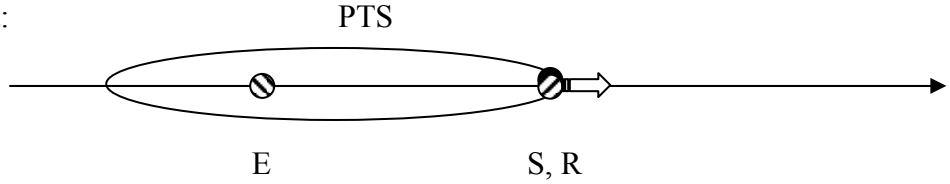


b: English Present perfect:

S^1 R E PTS LB RB
S = R PTS (LB, RB) RB = R E ⊆ PTS

(6) Swedish present perfect:

a:



b:

S R E PTS LB RB
S ≤ R PTS (LB, RB) RB = R E ⊆ PTS

(7) German present perfect:

a:

b:

S R E PTS LB RB
S ≤ R PTS (LB, RB) RB ≤ R E ⊆ PTS

In **CHAPTER THREE**, *perfect puzzles: Adverbials and the perfect*, I argued against the by now standard explanation that cross linguistic meaning differences of the present perfect arise due to language specific meaning composition of the perfect. The traditional account claims that the present tenses in the languages differ it is for this reason that the present perfect tenses differ as well. A problem for those accounts is Swedish. When we look closer at the present tense in German and Swedish, it can be shown that they pattern in exactly the same way: They can be used to denote pastness with *since*-adverbials, present and future:

(8) a. Han sover. (Swedish) b. Er schläft. (German)

[1] "S" was analysed as an indexical discourse referent.

		He sleeps			*He sleeps*	
(9)	a.	I morgon reser jag *Tomorrow travel I* till Washington. *to Washington*	(Swedish)	b.	Morgen reise ich *Tomorrow travel I* nach Washington. *to Washington*	(German)
(10)	a.	Jag är lärare sedan 1990. *I am teacher since 1990*	(Swedish)	b.	Ich bin seit 1990 *I am since 1990* Lehrer. *teacher*	(German)

Analyses motivating the cross linguistic differences of the present perfect by the present tense predict that languages with "similar" present tense meanings should have a "similar" present perfect. Swedish shows that this is not borne out. The present tense(s) in both languages have an identical meaning, but Swedish displays the *present perfect puzzle* (PPP), while German does not:

(11)	a.	Sigurd har kommit igår. *Sigurd has come yesterday*	(Swedish)	b.	Sigurd ist gestern *Sigurd has come* gekommen *yesterday*	(German)

The PPP can therefore not be explained on the basis of the present tense. Instead, I proposed to account for the PPP in the following way: PTS comes with the semantic requirement that (E) can potentially hold at any point in time within PTS. *Igår* 'yesterday', on the other hand, requires (E) to be located somewhere within the day before the day that contains the moment of speech. This means that (E) can hold neither before *yesterday* nor after *yesterday*. This is a clear contradiction: while PTS requires that (E) can obtain at other points in time as denoted by *igår* 'yesterday', *yesterday* excludes this.
By assuming a specifier-based approach to adverbials, I further argued for a syntactic restriction on the available number of positional adverbials in perfect sentences. It has often been observed that the event time and the reference time of perfect sentences cannot both be modified by positional temporal adverbials:

(12) *At seven, he had left at six. (KLEIN (1992))

In the specifier-based approach, positional temporal adverbials are in Spec TP. This explains their restricted occurrence with perfect tenses. First, there is only one specifier per maximal projection and second, positional adverbials must be hosted in Spec TP. Given that any phrase can only have one specifier, it follows that there can be only one positional adverbial per sentence (ALEXIADOU (1997:111)).
The goal of **CHAPTER FOUR**, *The inferential present perfect in Swedish*, was to analyse differences in inferential uses of the Swedish and English present perfect. When used in non-inferential contexts, both display the *present perfect puzzle* (cf. (13)). They cannot be combined with certain past adverbials (KLEIN (1992)). In inferential contexts, however, when used to indicate the author's

degree of confidence in a present inference about past events, the *present perfect puzzle* only disappears in Swedish (cf. (14)). I called this the *lost present perfect puzzle*.

(13) a. *Sigurd har kommit igår. (Swedish) b. *Sigurd has come yesterday.
Sigurd has come yesterday

(14) a. Sigurd har tydligen kommit igår. (Swedish) b. *Sigurd has probably come yesterday.
Sigurd has probably come yesterday

Infinitival perfects that are embedded under modals in the present tense do not display the *present perfect puzzle* in both English and Swedish (cf. (15)).

(15) a. Sigurd lär ha kommit igår. (Swedish) b. Sigurd might have come yesterday.
Sigurd might have come yesterday

I assumed that the inferential present perfect is an infinitival perfect being embedded under a phonologically null modal verb. To account for (14), a link between the *lost present perfect puzzle* and *parasitic morphology* was assumed. A parasitic complement is a complement where an expected infinitival inflection is replaced by the copy of the inflection of a superordinate verb and where the semantics remains the one of an infinitive despite the copied inflection. In (16), for instance, *kommit* 'come-past-participle' has the meaning of an infinitive, but inflects like the c-commanding verb *kunnat* 'can-past-participle'.

(16) Sigurd hade kunnat kommit. (Swedish)
Sigurd had could-past participle come-past participle
'Sigurd had been able to come:'

To account for parasitism, I assumed an approach based on distributed morphology (DM) (cf. HALLE & MARANTZ (1993)). Using DM allowed me to derive the inferential present perfect from the infinitival perfect. My major claim was that what looks like a present perfect at PF is an infinitival perfect at LF. As there is no parasitic morphology in English, the cross linguistic variation between Swedish and English concerning the *lost present perfect puzzle* could be explained.

In **CHAPTER FIVE**, *perfect readings*, I gave a monosemous analysis of the meaning of the present perfect in terms of an Extended Now theory (McCOARD (1978). I proposed an account for the different present perfect readings in terms of KAMP & REYLE's (1993) discourse-based approach to tense. Temporal and rhetorical relations between tenses in a given text were used to account for the different readings of the present perfect.

To account for the context dependence of the perfect readings, I assumed the discourse based approach to tense sketched in chapter 1.

The discourse time point (D) was used to account for the temporal ordering of eventualities in texts: the preceding discourse yields a (D) with which the tense of the following sentence establishes an antecedent-anaphora relationship.

(17) Albin hat um Sandrines Hand angehalten. (German)
Albin has for Sandrine's hand asked.
Die Hochzeit fand im Juni statt.
The wedding took in June place

(18) Albin hat um Sandrines Hand angehalten. (German)
Albin has for Sandrine's hand asked.
Die Hochzeit findet im Juni statt.
The wedding takes in july place.

(D) provides a useful tool for explaining the readings of the present perfect. The present perfect has a preterite reading when (D) is simultaneous to the final subinterval of the event time denoted by the present perfect, and a perfect reading when (D) is located after the event time. The preterite reading arises when (D) serves as an evaluation time for another event time located before the time of utterance. This is illustrated in (17). In other cases, the present perfect has a perfect reading (see (18)). Furthermore, (D) serves to identify the right boundary RB of the PTS-interval: (D) is RB. The same approach was also used for the other interpretations of the perfect.

To conclude, I hope to have shown that the *ExtendedNow*-approach is the only adequate analysis of the perfect in Swedish, English and German. The type of approach developed here provides us once and for all with empirical arguments against the longstanding myth that the *present perfect puzzle* can be explained relative to the meaning contribution of the present tense. The approach and the resulting generalizations are very simple and, I think, quite elegant.

There is at least one major point in the present study which has not been given a satisfying analysis. I cannot account for the fact that the position of RB differs cross linguistically. In section 11 of chapter two, I suggested a syntax-semantics-interface approach by claiming that the German present perfect is a verb cluster, while in English and Swedish, the auxiliary heads its own phrase. But the assumption that the German perfect is a verbal cluster with no own phrases for the auxiliary and the past participle awaits further research. The syntax of verbal clusters is a general problem which independently from the present study remains unsolved in many respects. I therefore believe that it is legitimate to have left this part of the analysis for research and to have limited myself here to some suggestions. However, the insight that the cross linguistic variation of the perfect cannot be accounted for by semantics, but only by a combined syntax-semantics approach is new and surely right. It further occurs to me that the general idea of the discourse-based approach to the perfect is right and that this type of analysis awaits further impulses.

But I am also aware of some theoretical problems or even shortcomings of my approach. First, it is not clear how the *distributed morphology* (DM) analysis in chapter four fits the *discourse representation theory* (DRT) used in the rest of the thesis. Second, the specifier based analysis of adverbials also turns out to be

problematic for standard assumptions of DRT. Both problems have been discussed in the chapters one, three and four.
DM is needed for the analysis in chapter 4, chapter 3 argues for the specifier based approach to adverbials and DRT is necessary for the discourse based approach in chapter 5. The combination of these approaches raises a long list of questions I cannot answer here. If, however, some new questions can be articulated in the light of the following pages or if some question can be formulated in a more explicit way, it is as much as I can hope to achieve concerning the technical part of the analysis.

References

ABNEY, S. P. (1987): *The English noun phrase in its sentential aspect*. MIT. Dissertation.

ABRAHAM, W. (2000): Das Perfektpartizip: seine angebliche Passivbedeutung im Deutschen. *ZGL* 28, 141-166.

ABRAHAM, W. & CONRADIE, J.C. (2001): *Präteritumschwund und Diskursgrammatik*. Amsterdam.

ABRAHAM, W. & JANSSEN, T. (eds.) (1989): *Tempus – Aspekt – Modus: die Lexikalischen und Grammatischen Formen in den germanischen Sprachen*. Tübingen.

ABUSCH, D. & ROOTH, M. (1990): Temporal adverbs and the English Perfect. In: CARTER, J. et al (eds.) (1990): *Proceedings of NELS* 20, 1-15.

AIJMER, K. (1999): Epistemic modality in an English-Swedish Contrastive perspective. In: HASSELGÅRD, H. (1999): *Out of corpora. Studies in honor of Stig Johansson*. Amsterdam, 303-323.

AIJMER, K. (2002): Modal adverbs of certainty and uncertainty in an English-Swedish perspective. In: HASSELGÅRD, H. et al (eds.) (2002): *Information structure in a cross-linguistic perspective*. Amsterdam, 97-112.

ALEXIADOU, A., RATHERT, M. & STECHOW, A. von (eds.) (2003): *Perfect explorations*. Berlin.

ANDERSSON, E. (1991): Om svenskans tempus. *Språkbruk* 1, 7-13.

ANDERSSON, S.-G. (1989): Zur Interaktion von Temporalität, Modalität, Aspektualität und Aktionsart bei den nichtfuturischen Tempora im Deutschen, Englischen und Schwedischen. In: ABRAHAM, W. & JANSSEN, T. (eds.) (1989): *Tempus – Aspekt – Modus: die Lexikalischen und Grammatischen Formen in den germanischen Sprachen*. Tübingen, 28-47.

BÄUERLE, R. (1979): *Temporale Deixis, temporale Frage. Zum temporalen Gehalt deklarativer und interrogativer Sätze.* Tübingen.

BEHAGHEL, O. (1924): *Deutsche Syntax II*. Heidelberg.

BRESSON, D. & DALMAS, M. (eds.) (1994): *Partizip und Partizipialgruppen im Deutschen*. Tübingen.

COMRIE, B. (1976): *Aspect: An introduction to the Study of Verbal Aspect and Related Problems.* Cambridge.

COMRIE, B. (1981): On Reichenbach's approach to tense. *CLS* 17, 24-30.

COMRIE, B. (1985): *Tense.* Cambridge.

DAL, I. (1966[3]): *Kurze deutsche Syntax*. Tübingen.

DESCLÉS, J.-P. & GUENTCHEVA, Z. (2003): Comment déterminer les significations du passé composé par une exploration contextuelle? *Langue française* 138, 48-60.

DOWTY, D. (1979): *Word meaning and montague grammar*. Dordrecht.

DOWTY, D. (1986): The effects of aspectual class on the temporal structure of discourse: semantics or pragmatics? *Linguistics and Philosophy* 9, 37-61.

DRY, H. (1983): The movement of narrative time. *Journal of literary semantics* 12, 19-53.

EHRICH, V. (1992): *Hier und jetzt. Studien zur lokalen und temporalen Deixis des Deutschen*. Tübingen.

EHRICH, V.& VATER, H. (1989): Das Perfekt im Dänischen und Deutschen. In: ABRAHAM, W. & JANSSEN, T. (eds.) (1989), 103-132.

EK, B.-M. (1996): *Das deutsche Präsens: Tempus der Nichtvergangenheit*. Stockholm.

EKEROT, L.-J.(1995): *Ordföljd, tempus, bestämdhet. Föreläsningar om svenska som andra språk.* Malmö.

EMBICK, D. & NOYER, R. (2001): Movement operations after syntax. *Linguistic Inquiry* 32, 555 – 595.

EROMS, H.-W. (1984): Die doppelten Perfekt- und Plusquamperfektformen im Deutschen. In: EROMS, H.-W., MATZEL, K. (eds.) (1984): *Studia linguistica et philologica. Festschrift für Klaus Matzel zum 60. Geburtstag*. Heidelberg, 343-351.

FABRICIUS-HANSEN, C. (1986): *Tempus fugit. Über die Interpretation temporaler Strukturen im Deutschen.* Düsseldorf.

GLASBEY, S. (1998): Progressives, states and backgrounding. In: ROTHSTEIN, S. (ed.) (1998): *Events and grammar*. Dordrecht, 105-124.

GLINZ, H. (1970): *Deutsche Grammatik I. Satz – Verb –Modus.* Frankfurt.

HALLE, M. & MARANTZ, A. (1993): Distributed morphology and the pieces of inflection. In: HALE, K. & KEYSER, S. (1993): *The view from building 20. Essays in Linguistics in Honour of Sylvain Bromberger.* Cambridge, 111-176.

HAMANN, C. (1987): The awesome seeds of reference time. In: SCHOPF, A. (ed.) (1987): *Essays on tensing in English. Vol. 1 Reference time, tense and adverbs*. Tübingen, 27-69.

HAMBURGER, K. (1957): *Die Logik der Dichtung*. Stuttgart.

HAUGEN, E. (1972): The inferential perfect in Scandinavian: a problem of contrastive linguistics. *The Canadian Journal of Linguistics* 17:2, 132-139.

HEIDOLPH, K. E., FLÄMIG, W. & MOTSCH, W. (1981): *Grundzüge einer deutschen Grammatik*. Berlin.

HENNIG, M. (2000): *Tempus und Temporalität in geschriebenen und gesprochenen Texten*. Tübingen.

HINRICHS, E. (1986): Temporal anaphora in discourses of English. *Linguistics and Philosophy* 9, 63-81.

HORNSTEIN, N. (1990): *As time goes by: tense and universal grammar*. Cambridge.

IATRIDOU, S., ANAGNOSTOPOULOU, E. & IZVORSKI, R. (2001): Observations about the form and meaning of the perfect. In: KENSTOWICZ, M. (ed.) (2001): *Ken Hale: A life in language*. Cambridge, 189-238. Reprinted in: ALEXIADOU, A. et al (eds.) (2003), 153-204.

IZVORSKI, R. (1997). The present perfect as an epistemic modal. In: LAWSON, A. & CHO, E. (eds.) (1999): *SALT* VII. Cornell University.

KAMP, H. & REYLE, U. (1993): *From discourse to logic*. Dordrecht.

KAMP, H. & ROHRER, C. (1985): *Temporal reference in French*. Ms. Stuttgart.

KAMP, H. & van GENABITH, J. & REYLE, U. (2004): *Discourse Representation Theory.* Draft for the new edition of the Handbook of Philosophical Logic.

KATZ, G. (2003): On the stativity of the English Perfect. In: ALEXIADOU, A. et al (eds.) (2003), 205-234.

KINNANDER, B. (1974): Perfektum i sekundär användning. *Nysvenska studier* 53, 127-172.

KLEIN, W. (1992): The present perfect puzzle. *Language* 68, 525-552.

KLEIN, W. (1994): *Time in language*. London.

KLEIN, W. (2000): Analysis of the German Perfekt, in: *Language* 76/2, 358-382.

KLEIN, W. & VATER, H. (1998): The Perfect in English and German. In: KULIKOV, L. et al (eds.) (1998): *Typology of verbal categories: papers presented to Vladimir Nedjalkov on the occasion of his 70th birthday*, Tübingen, 215-235.

KRATZER, A. (1998): More structural analogies between pronouns and tenses. Strolovitch, D. (ed.) (1998): *Proceedings of SALT* VIII.

KRATZER, A. (2000): Building statives. In: CONATHAN, L. et al (2000): *Proceedings of the twenty-sixth annual meeting of the Berkeley Linguistic Society*. Berkeley, 385-399.

LANDTMANSON, S. (1908): Till bruket av perfektum och imperfektum i svenskan (Liten kvasivetenskapligt avfall vid kriarättning.). *Språk och stil* 8, 252-254.

LASCARIDES, A. & ASHER, N. (1993): Temporal interpretation, discourse relations and common sense entailment. *Linguistics and philosophy* 16, 437-493.

LATZEL, S. (1977): *Die deutschen Tempora Perfekt und Präteritum*. München.

LINDSTRÖM, J. & WIDE, C. (2001): Perfekt med explicit dåtidsbestämning. *Svenskans beskrivning* 24, 153-166.
LITVINOV, V. & RADCENKO, V. (1998): *Doppelte Perfektbildungen in der deutschen Literatursprache*. Tübingen.
LJUNGGREN, R. (1934): *Supinum och duppelsupinum*. Uppsala.
LÖBNER, S. (2002): *Is the German Perfekt a perfect Perfect?*. In: Kaufmann, I. (ed.) (2002): *More than words. A festschrift for Dieter Wunderlich*. Berlin, 369-391.
MARANTZ, A. (1988): Clitics, Morphological Merger, and the mapping to phonological structure. In: HAMMOND, M. & NOONAN, M. (eds.) (1988): *Theoretical morphology*. San Diego, 253-270.
MARSCHALL, M. (1995): *Textfunktionen der deutschen Tempora*. Genf.
MARUŠIČ & ŽAUCER (2005): On phonologically null verbs. Go and beyond. In. BLAHO, S., SCHOORLEMME, E. & VICENTE, L. (eds.) (2005): *Proceedings of ConSOLE* XIII. http://www.sole.leidenuniv.nl, 231-247.
McCOARD, R. W. (1978): *The English Perfect: Tense choice and Pragmatic Inferences*. Amsterdam.
MITTWOCH, A. (1988): Aspects of English Aspect: On the interaction of perfect, progressive, and durational phrases. *Linguistics and Philosophy* 11, 203-254.
MUSAN, R. (1999): Die Lesarten des Perfekts. *Lili* 113, 6-51.
MUSAN, R. (2002): *The German Perfect. Its semantic composition and its interactions with temporal adverbials*. Dordrecht.
NYLUND-BRODDA, E. & HOLM, B. (1973): *Deskriptiv svensk grammatik*, Stockholm.
OLSEN, S. (1986): *Wortbildung im Deutschen. Eine Einführung in die Theorie der Wortstruktur*. Stuttgart.
PALMER, F. R. (1979): Why auxiliaries are not main verbs. *Lingua* 47, 1-25.
PANCHEVA, R. (2003): The aspectual makeup of Perfect participles and the interpretations of the Perfect. In: ALEXIADOU, A. et al (eds.) (2003), 277-306.
PANCHEVA, R. & STECHOW, A. von (2004): On the present perfect puzzle. In: MOULTON, K. & WOLF, M. (eds.): *Proceedings of NELS* 34, 469-483.
PARSONS, T. (1990): *Events and the semantics in English*. Cambridge.
PARTEE, B. (1973): Some structural analogies between tenses and pronouns in English. *The Journal of Philosophy*, vol. LXX, 601-609. Reprinted in: PARTEE, B. (2004): *Compositionality in formal semantics. Selected papers by Barbara H. Partee*. Oxford, 50-58.
PARTEE, B. (1984): Nominal and temporal anaphora. *Linguistics and Philosophy* 7, 243-286.
PAUL, H. (1886): *Prinzipien der Sprachgeschichte*. Jena.
PICKBOURN, J (1789): *A dissertation on the English verb. Principally intended to ascertain the meaning of its tenses*. (1968) Reprint. Menston.
PIPPING, R. (1936): Om innebörden av perfektum i nusvenskan. In: *Bidrag till nordisk filologi tillägnade Emil Olson den 9 juni 1936*. Lund-Köpenhamn, 143-154.
PLATZACK, C. (1998): *Svenskans inre grammatik – det minimalistiska programmet. Introduktion till modern generativ grammatik*. Lund.
POLLOCK, J.-Y. (1989): Verb movement, Universal Grammar and the structure of IP. *Linguistic Inquiry* 20, 365-424.
PORTNER, P. (2003): The (temporal) semantics and the (modal) pragmatics of the English Perfect. *Linguistics and Philosophy* 26, 459-510.
QUIRK, R., GREENBAUM, S., LEECH, G. & SVARTVIK, J. (1972): *A contemporary grammar of English.* London.
RATHERT, M. (2004): *Textures of time*. Berlin.
REICHENBACH, H. (1947): *Elements of Symbolic Logic.* London. Reprinted as: REICHENBACH, H. (1966): *Elements of Symbolic Logic*. New York.

REYLE, U., ROSSDEUTSCHER, A. & KAMP, H. (2004): Ups and downs in the theory of temporal reference. Paper submitted to *Linguistics and Philosophy*.

RIEMSDIJK, H. van (2002): The unbearable lightness of GOing. *Journal of comparative Germanic linguistics* 5, 143-196.

ROSS, J. R. (1969): Auxiliaries as main verbs. *Studies in philosophical linguistics* 1, 77-102.

ROSS, J. R. (1976): To have have and not to have have. In: JAZAYERY M. A. et al. (eds.) *Linguistic and literary studies in honor of Archibald A. Hill*. Lisse, 265-270.

ROTHSTEIN, B. (2005a): Readings of the German present perfect. In: MAIER, E., BARY, C. & HUITINK, J. (eds.) (2005): *Proceedings of Sinn und Bedeutung* 9. Nijmegen, 340-354. http://www.ru.nl/ncs/sub9

ROTHSTEIN, B. (2005b): Le passé composé comme construction stative. In: BÉRUBÉ, J., GAUVIN, K. & REMYSEN, W. (eds.) (2005): *Les journées de linguistique. Actes du 18e colloque*. Québec, 195-207.

ROTHSTEIN, B. (2005c): Svenskt perfekt och moderna perfektteorier. Svenskans bidrag till internationell forsking. In: BYRMAN, G. et al (eds.) (2005): *Sammankomster vid Svenskans beskrivning* 27. Växjö, 307-317.

ROTHSTEIN, B. (2005d): (Zusatz-)Bemerkungen zu Fügungen des Typs *kam gefahren*. Talk/handout presented at ILG V – workshop, University of Stuttgart, July 20, 2005.

ROTHSTEIN, B. (2005e): (More) readings of the German present perfect. In: BLAHO, S., SCHOORLEMMER, E. & VICENTE, L. (eds.): *Proceedings of Console* XIII. Tromsø.

ROTHSTEIN, B. (2005f): *Nicht von gestern?* Über die Kombination von gestern und Präsensperfekt im Schwedischen und Deutschen. *Tijdschrift voor Skandinavistiek* 26 (2), 145-162.

ROTHSTEIN, B. (2005g): Perfect parasitism in inferential contexts. On the inferential present perfect in Swedish. *Working papers in Scandinavian Syntax* 76, 1-30.

ROTHSTEIN, B. (2006): *Die Syntax von Fügungen des Typs kam gefahren*. To appear in *Deutsche Sprache*.

ROTHSTEIN, B. (to appear a): Remarks on the inferential present perfect in Mainland Scandinavian. *Proceedings of the First Scandinavian PhD Conference in Linguistics and Philology in Bergen*. Bergen.

ROTHSTEIN, B. (to appear b): Einige Bemerkungen zur Syntax von *Er hat den Arm verbunden*. In: GEIST, L. & ROTHSTEIN, B. (eds.): *Kopulaverben und Kopulasätze: Intersprachliche und Intrasprachliche Aspekte*. Tübingen.

SAG, see TELEMAN.

SANDSTRÖM, G. (1993): *When-Clauses and the Temporal Interpretation of Narrative Discourse*. Umeå.

SCHIPPOREIT, L. (1971): *Tense and time phrases in Modern German*. München.

SMITH, C. (1978): The syntax and interpretation of temporal expressions in English. *Linguistics and Philosophy* 2, 43-99.

SMITH, C. (1997^2): *The parameter of aspect*. Dordrecht.

STECHOW, A. von (1999): Eine erweiterte Extended-Now Theorie für Perfekt und Futur. *Lili* 113, 86-118.

STECHOW, A. von (2002): German *seit* „since" and the ambiguity of the German Perfect. In: KAUFMANN, I. (ed.) (2002): *More than words. A festschrift for Dieter Wunderlich*. Berlin, 393-432.

STEINITZ, R. (1969): *Adverbial-Syntax*. Berlin.

STEINITZ, R. (1977): Zur Semantik und Syntax durativer, inchoativer und kausativer Verben. *Linguistische Studien* 35, 85-129.

TELEMAN, U., HELLBERG, S. & ANDERSSON, E. (1999): *Svenska Akademiens grammatik*. Stockholm.

THIEROFF, R. (1992): Das finite Verb im Deutschen. Modus – Tempus – Distanz. Tübingen.

THORELL, O. (1973): Svensk grammatik. Stockholm.
THULSTRUP, Å. (1948): Preterialt perfekt. Till belysning av gränsområdet mellan perfekt och imperfekt i svenska. *Nysvenska studier* 28, 70-101.
VATER, H. (1996): Textuelle Funktionen von Tempora. In: HARRAS, G. & BIERWISCH, M. (eds.) (1996): *Wenn die Semantik arbeitet*. Klaus Baumgärtner zum 65. Geburtstag. Tübingen, 237-255.
VENDLER, Z. (1967): *Linguistics in Philosophy*. Ithaca.
WASOW, T. (1977): Transformations and the lexicon. In: CULICOVER, P., WASOW, T. & AKMAJIAN, A. (eds.) (1977): *Formal syntax*, New York, 327-360.
WATERMANN, J. T. (1956):The preterite and perfect tense in German. *Germanic review* 31, 104-114.
WESTERN, A. (1921): *Norsk riksmål-grammatikk for studerende og lærere*. Kristiania.
WIKLUND, A.-L. (2001): Dressing up for vocabulary insertion: the parasitic supine. *Natural language and linguistic theory* 19, 199-228.
WILLIAMS, B. (1980): On the development of the construction *kommen + perf. Part* in German. *Lacus forum* 7, 374-387.
WUNDERLICH, D. (1970): *Tempus und Zeitreferenz im Deutschen*. München.
ZELLER, J. (1994): *Die Syntax des Tempus: zur strukturellen Repräsentation temporaler Ausdrücke*. Opladen.