

# Verbal Properties of Deverbal Nominals

## An Aspectual Analysis of French, German and English

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

Vorgelegt von  
**Simone Beatrice Heinold**  
aus Stuttgart

Hauptberichter: Prof. Dr. Achim Stein  
Mitberichter: Prof. Dr. Artemis Alexiadou

Tag der mündlichen Prüfung:

03.02.2010

Institut für Linguistik/Romanistik der Universität Stuttgart  
2010

## Acknowledgements

There are many people who supported me during these three years, which were mostly a lot of fun. I met interesting people and got to know their ideas, and I learned a lot – not only about linguistics. However, sometimes, I also got stuck and considered myself going around in circles endlessly. There were many people who accompanied me throughout the different phases and thus, I would like to thank them here.

Firstly, I would like to thank Achim Stein for giving me the chance to carry out this thesis at all and to become part of the Graduate School 609 of the *Deutsche Forschungsgemeinschaft* (DFG). He supported me throughout the whole time, especially in questions of French corpus data and neologisms. A second important person, who helped me realising this project, is Artemis Alexiadou. Thanks for her patience, open-mindedness and support in all theoretical questions. Moreover, I would like to thank her for making the research seminar on *Recent Syntactic and Morphological Developments* a place, where you could bring in and share your ideas with a variety of people. I am also grateful for her support during the organisation and preparation of workshops and help with the publication of my paper.

Further, I would like to thank Melanie Uth for the constructive discussions on aspect in nominalisations. I think that our work completes each other: we argue about the same topic, but look at it from different perspectives. Thanks to Dennis Spohr for his constant presence and help with technical and corpus problems. I wonder, how he ever got to work for his own thesis, as he was always there for others. Those two people have become really good friends of mine throughout the three years. I think that our paths will go on crossing each other.

I would also like to thank those people, who had a big share in bringing about the results in the different languages that I considered in this work: Thanks to Moïra Berger, Françoise Joly, Fabienne Martin, Véronique Massé Du Bois, Benjamin Massot, Maité Naudan, Elvire Sevestre, Judith Yacar (and their mostly anonymous friends) for their help with French data; Kelly Alonso-Palt, Tom McFadden, Chris Mullen, Cormac O'Brien, Sandhya Sundaresan and Michael Walsh for the help with English data; Susana Catalina Prat, Senad Hrnjadovic, Till Mesinovic, Matthias Ölschläger,

Dennis Spohr, Melanie Uth, Oliver Weingart and Johannes Wespel for the help with German data; all the members of the research seminar *Recent Syntactic and Morphological Developments* for their support with French, German and English data and the fruitful discussions on theoretical issues.

Thanks to Harald Baayen, who visited Stuttgart during the beginning period of my thesis and instructed me well on all issues of neologisms and hapaxes. Also, Ingo Plag gave me a lot of valuable hints on the question about how to deal with difficult corpus data during his stay at the workshop *Semantic Features in Derivational Morphology*, which was organised by Regine Brandtner, Melanie Uth and me in our second PhD year. I would also like to thank the other professors and members of the Graduate School 609 at Universität Stuttgart for their help and suggestions at the *Klausurtagungen*, which took place every six months.

Finally, I would like to thank my parents Hartwig and Inge, who, although not from an academic background themselves, always supported me in my work and were positive that I succeeded.

## Deutsche Zusammenfassung

In dieser Dissertation werden die aspektuellen Eigenschaften von deverbalen Nominalisierungen im Französischen, Englischen und Deutschen behandelt. Es wird diskutiert, inwiefern sich VP und Ereignis-NP ähneln, wenn man sie unter dem Blickpunkt der Aspektkomposition analysiert.

Ausgangspunkt für diese Studie ist die höchst komplexe und sehr reiche französische Suffixlandschaft. Traditionelle Systeme zur Analyse von deverbalen Ereignisnominalisierungen, wie Grimshaw 1990 oder Arbeiten in ihrer Tradition (z.B. Alexiadou 2001, Meinschaefer 2004, Alexiadou et al. 2009, etc.) scheitern hier weitestgehend an der Ambiguität solch produktiver, semantisch überlappender Wortbildungsprozesse wie *-age*, *-ment* und *-(t)ion* (vgl. Lüttke 1978, Dubois/Dubois-Charlier 1999, Meinschaefer 2004, Heinold 2005).

Grimshaw 1990 führt ein Dreiklassensystem zur Einteilung deverbalen Nominalisierungstypen für das Englische an, das sich auch für andere Sprachen wie deutsch, spanisch und rumänisch weitestgehend bewährt hat (Meinschaefer 2004, Scheffler 2005, Iordăchioaia/Soare 2008, Alexiadou et al. 2009, u.a.). Unterschieden werden hierbei zwei unambige und eine ambige Klasse von Derivationsprozessen. Klasse 1 beinhaltet Muster wie die Englische *-ing*-Derivation (*forming*) oder die deutschen nominalisierten Infinitive auf *-en*. Nomen dieser Klasse sind unambig in ihrer Bedeutung und bezeichnen immer sogenannte *Komplexe Ereignisse*. Sie haben Argumentstruktur und andere bestimmte syntaktische Eigenschaften, die typisch für Verben sind (z.B. dass sie keine Plurale bilden können etc.<sup>1</sup>).

Zur zweiten Klasse gehören die englischen Null-Ableitungen (*form*) bzw. Konversionen und die deutschen Stammderivate. Sie können ausschließlich *Einfache Ereignisse* beschreiben, haben keine Argumentstruktur und ihre syntaktischen Eigenschaften sind vergleichbar mit denen von nicht-abgeleiteten Nomen. Außerdem können Sie *Resultate* bezeichnen.

Die dritte Klasse umfasst die Prozesse *-ation* für das Englische (*formation*) und *-ung* für das Deutsche. Semantisch und syntaktisch ist diese Klasse nach Grimshaw

---

<sup>1</sup> Diese Eigenschaften sind zum Teil schon widerlegt worden und außerdem nicht Gegenstand dieser Untersuchung. Daher wird von ihnen hier nicht die Rede sein. Eine tabellarische Übersicht ist in Alexiadou/Grimshaw 2008 zu finden.

ambig zwischen den beiden vorherigen. Das heißt, Nominalisierungen dieser Art können *Komplexe* und *Einfache Ereignisse*, genauso wie *Resultate* beschreiben.

Das Faszinierende am französischen Suffix-System ist nun, dass seine drei produktivsten Prozesse zur Bildung von Ereignisnominalisierungen, *-age*, *-ment* und *-(t)ion*, alle zur dritten Klasse gehören und eine Vielzahl von Dubletten in der Ereignisinterpretation aufwerfen (*nettoyage/nettoisement*, *forage/forement*, *gonflage/gonflement*, *dénazifiage/dénazification*, etc<sup>2</sup>). Hierbei scheint Grimshaws Unterteilung in *Komplexe* und *Einfache Ereignisse* nicht zu funktionieren. *Nettoyage*, ebenso wie *nettoisement* beschreiben Prozesse, die aus mehreren Unterereignissen bestehen und daher als komplex angesehen werden können. Die Frage, die sich nun stellt, ist die folgende: welche Eigenschaft rechtfertigt eine Koexistenz einer derart großen Anzahl an Dubletten, wenn man vom Ökonomieprinzip der Sprache ausgeht?

Neuere Arbeiten zu deverbale Nominalisierungen, speziell auch für das Französische, wie Martin 2007, 2008, Huyghe/Marín 2007, Uth 2008, Ferret et al. 2010, aber auch Alexiadou et al. 2009 für das Englische, unterscheiden zwischen verschiedenen Aspektualitäten, die Nominalisierungen in ihrer Ereignislesart ausdrücken können. So stehen sich terminative und durative Ereignisse gegenüber. Dies wird sichtbar in der Opposition der französischen Beispiele von Martin 2007.

- (i) a. *Le dénazifiage de l'Allemagne a abouti à son dénazification.*  
'Das Entnazifizieren von Deutschland hat zu seiner Entnazifizierung beigetragen.'  
b. # *La dénazification de l'Allemagne a abouti à son dénazifiage.*  
'Die Entnazifizierung Deutschlands hat zu seinem Entnazifizieren beigetragen.'

Auch für das Englische und das Deutsche kann diese aspektuelle Opposition bescheinigt werden (Borer 2001, 2005, Alexiadou et al. 2009, Heinold 2009). In Kapitel 2 und 3 dieser Arbeit sind weitere Beispiele für diese zwei Sprachen zu finden. Folgende Typen von Suffixen stehen sich also in der aspektuellen Analyse im sprachvergleichenden Überblick gegenüber.

---

2 Vergleiche auch Lüdtkke 1978, Dubois/Dubois-Charlier 1999, Heinold 2005, Martin 2007, etc.

(ii)

|                    |            |
|--------------------|------------|
| <b>Suffix</b>      |            |
| <b>Englisch</b>    |            |
| -ing               | Durativ    |
| -ation             | Terminativ |
| <b>Deutsch</b>     |            |
| -en                | Durativ    |
| -ung               | Terminativ |
| <b>Französisch</b> |            |
| -age               | Durativ    |
| -ment              | Terminativ |
| -(t)ion            | Terminativ |

Diese aspektuelle Opposition jedoch ist viel spezifischer als das Grimshaw Modell und fokussiert ausschließlich auf die Ereignislesart von deverbalen Nominalisierungen. Sogenannte „andere“ Interpretationen (Melloni 2007, Brandtner 2008) werden hier nicht berücksichtigt.

In dieser Dissertation soll nun versucht werden, die aspektuellen Unterschiede von Nominalisierungen systematisch und sprachübergreifend darzustellen, ohne dabei sekundäre Bedeutungen (Lüdtker 1978) wie Resultate, Objektlesarten, Instrumente, etc., die auch alle im semantischen Repertoire von *-age*, *-ment* und *-(t)ion* vorkommen, gänzlich zu vernachlässigen. Zu diesem Zweck habe ich das Framework der Aspektkomposition von Verkuyl 1972 gewählt, welches ursprünglich für die Erstellung von Verbalphrasen erdacht wurde, und es für die NP angepasst.

Nach Verkuyl setzt sich der Aspekt innerhalb einer VP aus den aspektuellen Eigenschaften seiner Einzelteile zusammen. Hierzu gehören das Verb und seine (beiden) Argumente. Aspekt in Verkuyls Sinn ist ein Konstrukt aus temporaler und atemporaler Struktur. Erstere wird vom Verb beigesteuert und im Feature  $[\pm \text{ADD TO}]$  ausgedrückt, welches mit positivem Wert für Dynamik bzw. temporären Entwicklung steht, mit negativem für Stativität. Atemporale Struktur kommt durch die Determinierer der beiden Argumente ins Spiel. Diese können das Feature  $[\pm \text{SQA}]$  tragen, was ihre Quantifizierung beschreibt. Positive SQA-Werte stehen für eine begrenzte Einheit, negative SQA-Werte für eine unbegrenzte. In Kombination von Dynamik/Statik und begrenzt/uneingeschränkt können nun verschiedene Aspektualitäten generiert

werden ( $[\pm T]$ ), wobei ein positiver Wert für ein terminatives, ein negativer für ein duratives Ereignis steht.

Der Generierungsmechanismus ist das sogenannte Plus-Prinzip, das im Sinne eines logischen *und*-Gatters agiert. Sobald ein Minus-Wert in eine Kombination eintritt, wird ein negativer T-Wert, und somit durativer Aspekt generiert. Der Satz *Peter isst Brote* kann in diesem System folgendermaßen analysiert werden: (Peter [+SQA] (isst [+ADD TO] (Brote [-SQA])))  $\rightarrow$  [-T]. In diesem Fall würde eine Aktivität beschrieben, kein abgeschlossenes Ereignis (*Accomplishment*, Vendler 1968).

Ein Grund für mich, den Ansatz von Verkuyl für meine Nominalisierungsanalyse zu wählen, ist, dass dieser sich zwischen Verb und VP, lexikalischer und syntaktischer Struktur bewegt und versucht temporale und quantifikatorische Eigenschaften von Verb und Argument in einem kompositionell hergestellten, aspektuellen Feature zu vereinigen. Der Status von Aspekt als einer zusammengesetzten Eigenschaft eignet sich gut um ein weiteres morphologisches Element, welches offensichtlich im Zusammenhang mit der Interpretation von Ereignissen als durativ oder terminativ steht, in eine (nominale) Ereignisstruktur zu integrieren: das Derivationsuffix. Dieses kann mit einem zusätzlichen Kalkulationsschritt in die Struktur eingegliedert werden.

Wie ich in dieser Arbeit zeigen werde, besitzen Derivationsuffixe ebenfalls ein aspektuelles Feature,  $[\pm\text{ADD TO}]$ , welches uns Information gibt über Statik oder Dynamik der durch das Verb ausgedrückten Aktion. Im Vergleich zur Flexionsmorphologie, die nur „äußeren Aspekt“ (Verkuyl 1978), oder in der Terminologie vom Smith 1991 „viewpoint“, ausdrücken kann, ist die Derivationsmorphologie fähig, ihre temporale Information zur aspektuellen Struktur der NP und zum „inneren Aspekt“ bzw. den Situationstypen beizutragen. Diese Annahme wird bestätigt, wenn wir die verschiedenen aspektuellen Elemente, die eine Ereignis-NP ausmachen, durch den Plus-Prinzip-Generator laufen lassen. In den Kapiteln 4 und 5 dieser Arbeit werden die einzelnen Fälle mit verschiedenen Arten von Verben und unterschiedlich quantifizierten und realisierten Argumenten durchgespielt. Das Funktionieren des Plus-Prinzips ist ein Hinweis dafür, dass das Suffix und seine aspektuelle Information gleichwertig wie die anderen aspektuellen Elemente in der NP behandelt werden und nicht die Sichtweise des Ereignisses wie Flexionssuffixe beeinflussen. Die NP *Zerstörung der Stadt* würde im System der Aspektkomposition folgendermaßen analysiert: ((Zerstör [+ADD TO] (ung [+ADD TO])) der Stadt [+SQA])  $\rightarrow$  [+T]. Hier würde ein termina-

## VIII

tives Ereignis generiert, da kein negatives Element in die Struktur aufgenommen wird. Das Suffix *-ung* hat einen positiven [ADD TO]-Wert, da es resultative Ereignisse, die eine Dynamik aufweisen, bezeichnet.

Dieses System der nominalen aspektuellen Ereigniskomposition lässt sich für das Englische, das Deutsche und das Französische anwenden, wie in den Kapiteln 4 und 5 gezeigt wird. Demnach hätten die in dieser Arbeit betrachteten Suffixe folgende aspektuellen Features:

(iii)

| <b>Suffixe</b>     | <b>Feature</b> |
|--------------------|----------------|
| <b>Englisch</b>    |                |
| -ing               | [-ADD TO]      |
| -ation             | [+ADD TO]      |
| <b>Deutsch</b>     |                |
| -en                | [-ADD TO]      |
| -ung               | [+ADD TO]      |
| <b>Französisch</b> |                |
| -age               | [-ADD TO]      |
| -ment              | [+ADD TO]      |
| -(t)ion            | [+ADD TO]      |

Diese Tabelle allerdings berücksichtigt noch nicht die ganze Bandbreite der Interpretationen, die z.B. *-age* auszudrücken in der Lage ist. Wie können in solch einem System Lesarten wie *Objekt* oder *Instrument* erklärt werden? Im Gegensatz zum englischen *-ing* und dem deutschen *-en*, die auch diachron Ereignislesarten produzieren, ist *-age* traditionell ein Derivationssuffix zur Ableitung von deadjektivischen bzw. denominalen Nominalisierungen (Uth 2008). Es diente im Altfranzösischen zur Bildung von Gruppennomen wie *porc-age* (Schweine-herde) und hat erst in dieser Epoche begonnen, seine Funktion der Pluralisierung und Kollektivisierung auf den deverbale Ereignisbereich auszuweiten (Uth 2008). *-Ing* und *-en*, die auch in der Verbalflexion vorkommen, sind traditionelle Mittel um Aspekt im Ereignisbereich auszudrücken (Alexiadou 2001b), sei es in der VP oder in der NP. Daher sind diese Suffixe in der Ereignislesart sehr fixiert. *-Ages* häufigste Funktion im Neufanzösischen ist zwar auch die Beschreibung von Ereignissen (vergleiche Kapitel 3 und die Analy-



se von französischen Nominalisierungen), sein aspektuelles Feature kann jedoch auch auf andere nicht-Ereignis-Basen angewendet werden (z.B. nominale Basen wie *plume* ('Feder') – *plum-age* ('Federkleid')). Es ist flexibler bzw. schwächer als das Feature von *-ing* und *-en* und wird daher mit [-add to] ausgedrückt. In bestimmten Kontexten kann leichter eine andere Lesart hergestellt werden. Hierbei ist jedoch zu beachten, dass die Semantik der Uneingeschränktheit, die *-age* im Ereignisbereich ausdrückt und die durch den negativen Wert des Features repräsentiert wird, auch im Nicht-Ereignisbereich beibehalten wird.

- (iv) a. *L'attelage du cheval par le paysan*  
'Das Anschirren des Pferdes durch den Bauern'  
b. *L'attelage s'est rompu.*  
'Das Geschirr ist gerissen.'

In Beispiel (a) weist die unmittelbare Umgebung des deverbalen Nomens auf eine durative (oder unbeschränkte) Ereignislesart hin. Die Realisierung der Verbargmente als Teilnehmer an einer Handlung trägt zu dieser Interpretation bei. In Beispiel (b) ist die Nominalisierung in einen Satz eingebettet, der einen Zustandswechsel ausdrückt (*ist gerissen*). Da Ereignisse keinen Zustandswechsel erfahren können, verschiebt sich die Bedeutung von *attelage* hin zu Objekt bzw. Instrument. Das Nomen bezeichnet jetzt eine Einheit, die „alle Dinge, die man braucht um etwas anzuschirren“ beschreibt, nämlich das *Ge-schirr* (*attelage*). Die Eigenschaft, die Ereignislesart und Objektlesart gemeinsam haben ist, dass sie etwas unbeschränktes bezeichnen: im einen Fall ein unbeschränktes Ereignis (ohne Endpunkt), im anderen Fall ein Objekt, das eine unbeschränkte, unspezifische Menge von kleineren Elementen beinhaltet. So wird ein eigentlich temporales Feature in bestimmten Kontexten als eine allgemeine, nicht auf den Ereignisbereich limitierte Unbeschränktheitseigenschaft interpretiert.

Das System der aspektuellen Komposition von Verkuyl kann also auch im nominalen Bereich angewendet werden. Durch seine temporalen und atemporalen Features und seine Kontextsensibilität kann auch ambigen Derivationsmustern Rechnung getragen werden. Die Komplexität des französischen Suffixsystems, aber auch die Englischen und Deutschen Derivationen, können hiermit erfasst werden.

Die Arbeit gliedert sich wie folgt: in Kapitel 1 führe ich die Thematik, wie in dieser Zusammenfassung geschehen, ein und ordne meine Arbeit in die bisher bestehende

Literatur zu diesem Thema ein. Hierbei wird speziell die Problematik der bisher bestehenden Theorien zu Nominalisierungen diskutiert: sowohl lexikalistische als auch syntaktische Ansätze haben zwar Analysen für deverbale Nomen erstellt, können aber nicht gänzlich für das französische System angewendet werden.

Kapitel 2 stellt die bisher etablierten Systeme zur Analyse von Nominalisierungen in verschiedenen Sprachen vor, die meistens auf Grimshaw 1990 basieren, und zeigt auf, was die spezielle Schwierigkeit des Französischen ist.

In Kapitel 3, werden die drei französischen Suffigierungsprozesse *-age*, *-ment* und *-(t)ion* anhand von Neologismen in ihrer Ereignissemantik analysiert. Hierzu wird ein Katalog von typischen natürlichen Kontexten erstellt, in dem die französischen Derivate auftreten und die mit ihrer Interpretation zusammenhängen.

Kapitel 4 führt Verkuyls System der aspektuellen Komposition im Detail ein. Dieses wird anderen Ansätzen gegenübergestellt, die ebenfalls Ereignisstruktur und Aspekt bzw. die Quantifizierung von Ereignissen untersuchen, wie beispielsweise Vendler 1957, Krifka 1989 oder Tenny 1994. Hierbei soll aufgezeigt werden, was die (oft subtilen) Unterschiede in besagten Analysen sind und welche Rolle die verschiedenen Typen von aspektueller Information jeweils spielen. Außerdem soll motiviert werden, warum gerade Verkuyls System sich eignet, um die semantische Analyse der komplexen französischen Nominalisierungen darzustellen. Dabei wird nicht nur auf die semantische Zusammensetzung der VP, sondern auch auf die syntaktische Struktur komplexer Prädikate (nach Neeleman 1991 und Neeleman/Werman 1991) eingegangen, die in 4.6 für die deverbale Nominalisierungen übernommen wird. Hierbei wird das Zusammenspiel von lexikalischer und syntaktischer Ebene, temporaler und atemporaler Struktur für die Erzeugung unterschiedlicher Aspektualitäten verdeutlicht, welches in anderen semantischen Kompositionsansätzen zu deverbale Nominalisierungen, wie z.B. in Lieber 2004, nicht berücksichtigt wird. Ein weiterer theoretischer Punkt, der in diesem Kapitel diskutiert wird, ist die Unterscheidung zwischen Derivations- und Flexionsmorphologie und ihre Definition im Bezug auf Aspektsemantik.

Kapitel 5 beschreibt das französische Suffixsystem mit Hilfe der aspektuellen Komposition und stellt die historische Entwicklung, insbesondere von *-age*, vor.

Kapitel 6 schließlich gewährt einen Blick auf einen Wortbildungsprozess, der gerade im Begriff ist, sich zu definieren und seine Rolle in einem morphologischen Sys-

tem zu finden: die englischen *-ing*-Derivationen haben durch Sprachkontakt bzw. die zunehmende Internationalisierung vieler Bereiche des öffentlichen Lebens in großem Maße Einzug ins Französische und Deutsche erhalten. In diesem Kapitel soll erörtert werden, welche syntaktischen, morphologischen und vor allem semantischen Eigenschaften deutsche und französische *-ing*-Nomen haben, ob sie als transparentes und produktives Derivationsmuster in diesen Sprachen betrachtet werden können und welche Rolle sie im Konkurrenzkampf mit nativen Suffixen einnehmen.

Das abschließende Kapitel 7 dient zur Zusammenfassung und zur kurzen Aufarbeitung all der Bereiche, die in dieser Arbeit nicht berücksichtigt werden konnten.

## Content

|   |     |
|---|-----|
| CHAPTER 1 - INTRODUCTION.....   | 17  |
| CHAPTER 2 - AN OVERVIEW ON DEVERBAL NOMINALISATION THEORY.....  | 26  |
| 1 Grimshaw 1990: The Starting Point.....  | 26  |
| 2 Alexiadou/Grimshaw 2008: New Insights into Argument Structure Properties.....   | 27  |
| 3 Ehrich/Rapp 2000, Scheffler 2005, Blume 2004: Competing Suffixes in German<br>.....   | 30  |
| 4 Meinschaefer 2004, Kelling 2004: The Semantics of Deverbal Nominals in Romance<br>Languages<br>.....                        | 35  |
| 5 Some Terminology concerning Aspect and Situation Types.....   | 39  |
| 6 Martin 2007, Huyghe/Marín 2007, Uth 2008, Barque et al. 2009: Aspect in French<br>Nominals.....                             | 43  |
| 7 Heinold 2008, Alexiadou et al. 2009: Aspect in Nominals and the Complexity of Events –<br>a Cross-linguistic Overview ..... | 48  |
| CHAPTER 3 - FRENCH NEOLOGISMS.....  | 56  |
| 1 Theoretical and Methodological Discussion on Neologisms.....  | 56  |
| 1.1 Hapaxes and Neologisms.....   | 57  |
| 1.2 A Working Definition of “Neologisms”.....   | 59  |
| 1.3 The Ideal Neologism .....   | 62  |
| 1.4 Extracted French Neologisms: New and Old Insights into the Competition between<br>-(t)ion, -ment and -age .....           | 65  |
| 2 The Interpretation of Nominalisations in Natural Contexts.....  | 68  |
| 2.1 Syntactic Properties of Nominals: Different Reasons for Argument Realisation.....   | 69  |
| 2.2 Non-nominal, Aspect Indicating Material in the Context .....  | 74  |
| 2.3 Nominalisations and Sortal Contexts.....  | 75  |
| 3 Analysis of French Neologisms and their Syntactic and Semantic Surroundings.....  | 77  |
| 3.1 Interpretations of -MENT and -(T)ION-neologisms.....  | 78  |
| 3.2 Interpretations of -AGE-neologisms.....   | 81  |
| CHAPTER 4 – THE COMPOSITION OF ASPECT IN NOMINALS.....  | 88  |
| 1 Verkuyl's Plus Principle.....   | 91  |
| 1.1 Vendler's Four Event Types.....   | 95  |
| 1.2 Krifka's Quantised Predicates.....  | 97  |
| 1.3 Tenny's Aspectual Roles.....  | 101 |

|  |     |
|--|-----|
| 1.4 Summary of the Discussed Approaches: Aspekt vs. Aktionsart.....                                      | 103 |
| 2 The Asymmetry of Aspect and the Composition of the VP.....   | 105 |
| 3 Inner and Outer Aspect: What is the Role of Morphology?.....   | 108 |
| 4 The Complex Predicate Structure .....  | 111 |
| 5 Transitive Uses of Verbs and Object Omission.....  | 113 |
| 6 Composition of Aspect in Deverbal Nominalisations.....   | 116 |
| 6.1 Inner and Outer Aspect, Derivation and Inflection, Lexicon and Syntax .....                          | 117 |
| 6.2 The “Aspectual Power” of English and German Nominalisation Suffixes.....                             | 120 |
| 6.3 The Aspectual Structure of the Event-NP.....   | 132 |
| 6.4 Intransitive Verbs and their Aspectual Influence on the NP.....                                      | 141 |
| 6.5 The Meaning of an Omitted Object in the NP.....  | 145 |
| 7 The Structure of Complex Lexical Items and their Implementation in the Structures of Sentences.....    | 148 |
| 7.1 Alexiadou's 'Verbal' Nominals.....   | 149 |
| 7.2 Result Interpretations in the Aspect Compositional Approach .....                                    | 152 |
| 7.3 What is the Aspect of 'Verbal' Nominals?.....  | 155 |
| 7.4 Borer's Different Types of Aspect Projection .....   | 157 |
| CHAPTER 5 – FRENCH NOMINALS AND ASPECT COMPOSITION.....  | 160 |
| 1 -Age's Diachronic Development.....   | 161 |
| 2 Non-eventive -age-interpretations: Collectivised Plurals.....  | 165 |
| 3 Aspectual and Other Semantic Oppositions of -age, -ment & -(t)ion with High Frequency Derivatives..... | 166 |
| 4 What are the Aspectual Features of -age, -ment and -(t)ion?.....                                       | 171 |
| 4.1 Pluralisation? Collectivisation? Unboundedness? Or [-ADD TO] ?.....                                  | 172 |
| 4.2 The Feature [± add to].....  | 175 |
| 5 A Word on Zero-derivation/Conversion and Stem-derivation.....  | 182 |
| CHAPTER 6 – THE -ING-SUFFIX ACROSS LANGUAGES.....  | 185 |
| 1 English -ing-loans in French.....  | 185 |
| 1.1 What Is their Aspectuality?.....   | 185 |
| 1.2 Other Semantic Properties.....   | 187 |
| 2 English -ing-loans in German.....  | 191 |
| 2.1 Possible Interpretations.....  | 191 |
| 2.2 French vs. German -ing.....  | 193 |
| CHAPTER 7 - CONCLUSION & OUTLOOK.....  | 196 |

## 14 VERBAL PROPERTIES OF DEVERBAL NOMINALS

|   |     |
|---|-----|
| LITERATURE.....   | 203 |
| Appendix.....   | 211 |
| 1 Dictionaries and Other Reference Works for French.....  | 211 |
| 2 Dictionaries and Other Reference Works for English..... | 211 |
| 3 Text Corpora and Databases.....                         | 211 |
| 4 English and German Native Speaker Data .....            | 212 |
| 4.1 German NPs.....                                       | 212 |
| 4.2 English NPs.....                                      | 213 |
| 4.3 French Verbs and Nominals.....                        | 214 |
| 4.4 Extracted AGE-neologisms.....                         | 215 |
| 4.5 Extracted MENT-neologisms.....                        | 217 |
| 4.6 Extracted (T)ION-neologisms.....                      | 217 |

## Tables

|   |     |
|---|-----|
| Table 1: Syntactic Properties of Nominalisations according to Alexiadou/Grimshaw 2008. . .                                | 28  |
| Table 2: Semantic Properties of Nominalisations in German, French & English according to Grimshaw's System.....           | 37  |
| Table 3: Aspectual Properties of Nominalisation Suffixes in French, German, English & Romanian.....                       | 54  |
| Table 4: Criteria for Neologisms.....   | 63  |
| Table 5: Context Indicators for Event Interpretations according to Spranger/Heid 2007.....                                | 76  |
| Table 6: Context Indicators for Object Interpretations according to Spranger/Heid 2007.....                               | 76  |
| Table 7: Results of the Neologism Analysis: Interpretations of -ment-nominals.....  | 78  |
| Table 8: Results of the Neologism Analysis: Interpretations of -(t)ion-nominals.....                                      | 78  |
| Table 9: Results of the Neologism Analysis: Interpretations of -age-nominals.....   | 81  |
| Table 10: Context Indicators for Activity Readings Found with -age-nominals.....  | 82  |
| Table 11: Different Approaches to Aspect/Aktionsart: A Comparison of Terminology.....                                     | 104 |
| Table 12: Aspect: Lexicon vs. Syntax.....   | 120 |
| Table 13: Aspect Composition in English Nominals.....   | 125 |
| Table 14: Predicted Aspectual Interpretation of English Event NPs.....  | 129 |
| Table 15: Predicted Aspectual Interpretation of German Event NPs.....   | 130 |
| Table 16: English Verb Types under -ing-derivation.....   | 134 |
| Table 17: English Verb Types under -ation-derivation.....   | 134 |
| Table 18: German Verb Types as Nominalised Infinitives.....   | 135 |
| Table 19: German Verb Types under -ung-derivation.....  | 136 |
| Table 20: Event-NPs and the Aspectual Role of Omitted Objects.....  | 145 |
| Table 21: Aspectual Features of English, German & French Suffixes - Part I.....   | 161 |
| Table 22: Aspect Compositional Analysis of Competing French Nominalisations.....  | 171 |
| Table 23: French Verb Types under -age-derivation.....  | 175 |
| Table 24: French Verb Types under -(t)ion-derivation.....   | 176 |
| Table 25: French Verb Types under -ment-derivation.....   | 177 |
| Table 26: Aspectual Features of English, German & French Suffixes - Part II.....  | 181 |
| Table 27: Ing-derived Neologisms Extracted from the CRITER Data Base and their Replacement by Native French Suffixes..... | 188 |
| Table 28: Interpretations of German -ing-nominalisations Extracted from the FAZ Corpus.....                               | 192 |

16 VERBAL PROPERTIES OF DEVERBAL NOMINALS

Table 29: Interpretations of -ing-derivatives across Languages.....194



## CHAPTER 1 - INTRODUCTION

The aim of this dissertation is to present theoretical and empirical findings on the morphological form and the resulting interpretations of deverbal nominalisations. On the basis of French, German and English data I will not only show how the semantic structure of nominalisations can be constructed via the combination of different aspectual features, but also what role the context in which the nominalisation is embedded plays for their semantic analysis.

The interesting issue about nouns derived from verbs is that they seem to be placed somewhere between the two traditional universal categories of verb and noun (Alexiadou 2001a). Concerning their form and syntactic behaviour they can be considered as nouns: they take determiners, are modified by adjectives and can attach PPs that contain agents or patients ((1a) and (b)). Semantically they can be interpreted in many cases as events – a meaning that is traditionally reserved for the lexical category of verbs ((1e) to (g)). However other interpretations are possible with deverbal nominals, too, such as results or objects ((1c) and (d)).

(1)

- a. *The singing of the bird*
- b. *The frequent examination of the student by the professor*
- c. *The form of the nominal can be changed.*
- d. *The exam was on the table.*
- e. *The bird sang.*
- f. *The bird was singing.*
- g. *The bird sang a song.*
- h. *The destruction of the city was taking place, when suddenly...*

Verbs have the possibility to mark many details about the type or the perspective of the event they represent via inflectional morphology (such as tense and aspect) or their syntactic structure (argument realisation, quantification of the internal argument) (Verkuyl 1972, 1999, 2005 a,b, Comrie 1985, Abraham/Janssen 1989, Krifka 1989, MacDonald 2006). But what can nouns tell us about their event interpretation? What is the aspectual role of derivational morphology? Are nominal events composed in the same way as verbal events? And what is the semantic impact of the sentence

that a deverbal nominalisation is embedded in ((1d) and (h))? These are the main questions which are addressed in this dissertation.

For this purpose I have analysed mostly French (but also English and German) corpus data and examples from the literature and tried to find out how the nominals themselves interact with their closest surrounding context and which elements can be made responsible for the different aspectual layers of the entire sentence (Verkuyl 2005b). In the second step of my analysis I have focused on the NP as an aspectual unit out of context. Along the lines of much recent research on nominalisation theory I provide a compositional approach for the aspectual interpretation of French, German and English event nominals that is based on relevant examples from the literature. In what follows in this chapter I would like to give a short overview on the different theoretical angles under which nominalisations were analysed so far and which role aspect has played for them. These approaches will serve as a starting point for the introduction of my own position on this subject in between syntax, morphology and the lexicon. Moreover the important role that the French suffix system plays for the choice of an aspectual approach to nominalisation will be explained.

The very rich and diverse literature on nominalisation theory especially in the last 20 years has analysed their properties mostly from three different viewpoints. On the one hand we find approaches from the generative frameworks which are interested in the trans-categorical properties on the syntax-semantics interface of mostly English nominalisations such as Grimshaw 1990, Alexiadou 2001a, 2001b, Iordăchioaia/Soare 2008, Alexiadou/Grimshaw 2008, Alexiadou et al. 2009, Borer 2001, 2003, 2005, etc. This research has mainly dealt with the questions how we are able to differentiate between predominantly context free examples of the kind displayed in ((1a) to (d)) and how the presence or absence of argument structure interferes with their interpretation as different types of events or results. A further point in these analyses is the link of syntactic properties, such as plurals, determiners and modification to the different derivational processes that exist for the formation of action nominals, such as *-ing*, *-ation* and the zero-derivation (or conversion) for English. In their representations many of the more recent cited theories try to focus on the syntactic role that suffixes play and deny a lexical level, where word formation takes place: suffixes are considered to be aspectual heads and represent the nominal

event from a certain (terminative or durative) perspective in the same way inflectional morphology does with verbal events. In such a view the aspectual tasks in a nominal event construction would be built up in analogy to the sentence. Here aspect mostly means grammatical or "outer" aspect (Verkuyl 1972).

On the other hand we find the perspective of lexical semantic approaches to nominalisation such as Plag 1999, Lieber 2004, von Heusinger 2009 or Uth 2010 which focus on the semantic composition of complex words in the lexicon. Also in these theories it seems that aspectual phenomena make the difference between the often competing types of derivation processes. Even though the suffixes play a similarly significant role than in the syntax-oriented approaches, it is more their influence on the semantic base that is in the centre of interest: by combination of the internal event structure properties of the verb meaning and the (un)boundedness-interpretation that suffixes induce, an inner aspectuality of the nominal itself is created. In contrast to the syntactic approaches the aspectual analysis ends on word level and does not take into consideration the influence that argument structure properties can have on the interpretation of events. It seems that derivational morphology is rather attributed the role of "inner" or compositional aspect (Verkuyl 1972).

A third perspective on nominalisation is represented by theories that mostly consider the contexts in which such nominalisations are embedded such as Ehrich/Rapp 2000, Spranger/Heid 2007, Huyghe/Marín 2007 or Barque et al. 2009. Whereas Ehrich/Rapp and Spranger/Heid were still concerned with the analysis of sortal contexts which should disambiguate between different types of events, objects or results, Huyghe/Marín and Barque et al. have also tried to figure out contexts that can serve as indicators for differences in the aspectual interpretation of nominals. Here the realisation of arguments, aspectual modifiers and especially the use of certain types of verbs in the sentence (*to take place, to take some time, to witness, to film, etc.*) hint to the aspectual interpretation of the nominal or the entire sentence.

Although some of the cited works also deal with nominal suffixation, it seems to me that they do not consider it to be linked to aspect in the way the lexical semantic or the syntactic frameworks do. Even though they attribute aspectual properties to event nominalisations, it is not entirely clear to which lexical or morphological units this phenomenon is attached in detail. It rather seems that aspectual configurations on sentence level are used to conclude on the aspect of the embedded event-NPs.

The type of aspect that is considered in these approaches is not that easy to determine, because events in the nominal domain somehow melt with events expressed on sentence level.

All in all it has become obvious that although so much literature on nominalisation has emerged in the last decades, the role that derivational morphology plays - especially from an aspectual point of view - is not clear at all, even if we focus only on data from English (as most of the cited work does). When we now take a look at German and especially French nominalisations, which are also a major subject of this dissertation, the picture becomes even more blurred.

The first problem is that whereas for English (and also for German), we find mainly three competing productive suffixation patterns that can be distinguished according to their ambiguity and their aspectual properties (*-ing*, *-ation* and zero-suffixation/conversion), we find large lists of ambiguous deverbal nominalisation patterns of higher or lower productivity with many doublets and semantic overlaps for French (Dubois 1962, Lüdtkke 1978, Dubois/Dubois-Charlier 1999, Kelling 2004, Meinschaefer 2004, Heinold 2005). Here suffixes like *-age*, *-ment*, *-(t)ion*, *-ade*, *-ure*, *-ée* and many others can be found that are all able to derive event interpretations. It seems, however, that especially the first three of the mentioned suffixes are very productive and in the centre of a special competition situation that does not exist in the same way in the other mentioned languages: according to Lüdtkke 1978 they not only share several semantic tasks (deverbal derivation of actions, objects, instruments, places), but also attach in many cases to the same base verbs<sup>3</sup>.

The second problem is that much of the cited work on French derivation takes a mostly descriptive perspective and does not implement its findings into a theoretical framework that covers a semantic, morphological and syntactic analysis of the nominals (for exceptions see Meinschaefer). The reason for this can probably be found in the mentioned complexity of the suffix system. Very recent work on this subject, however, has shifted the discussion on French nominals away from the broad descriptive semantic classification towards an aspectual event focused analysis. Works like Martin 2007, 2008a,b, Uth 2008, Heinold 2009 and Ferret et al. 2010 have focused on an aspectual differentiation of French nominalisations in which not only the behaviour of the derivatives in context was under consideration,

---

3 For large lists of doublets see Lüdtkke 1978 or Heinold 2005.

as it is the case with, for instance Huyghe/Marín 2007 or Barque et al. 2009, but also the lexical semantic and syntactic properties were shed light on. This dissertation is supposed to develop further what the already mentioned approaches have sowed the seeds for, especially for French. In the chapters 3 and 5 I will discuss French neologisms as well as high frequency nominal derivatives in *-age*, *-ment* and *-(t)ion* from the aspectual perspective, as this seems to be the main distinction that can be made between these processes.

The problem is, however, to find a framework that can not only cover all the different types and layers of aspect that I have mentioned in the first part of this introduction, but that is able to illustrate all the lexical, morphological and syntactic units that have a share in the interpretation of the event-NP and the sentence. In my opinion, a special problem of deverbal nominalisations which also causes their important status in very diverging frameworks is that they are lexical items on the one hand. Thus there are frameworks which would like to analyse them inside the lexicon and discuss their semantic compositional properties. On the other hand, they express events - complex semantic units which contain temporal and structural information, that usually goes beyond word level and might even be encoded in functional layers on top of the lexical information. This is the reason, why others would like to analyse them syntactically. This dissertation tries to unite these seemingly contradicting views: although I see events (no matter if nominal or verbal ones) as complex syntactic units, which must be expressed via syntactic structure to some extent, I do not deny a lexical level on which – for instance in case of nominalisations – word formation by derivation takes place.

The system that is able to provide the means for this complex task is, in my opinion, the aspectual composition introduced in Verkuyl 1972, 1993, 2005a, b. These works deal with verbs and VPs, not nominalisations. However, the important point is that Verkuyl's analysis refers to the way in which events can be constructed. Moreover, he differentiates between different levels of aspect (inner vs. outer) which seems to be a big issue for event nominalisations as we can see from the discussion in the literature mentioned up to here.

I am going to show in the following that the aspectual composition of a deverbally derived event-NP can be conducted in exactly the same way as the one of a VP, because in both cases an event is made up. Both ways of event composition (the

verbal as well as the nominal) follow the rules of Verkuyl's so-called Plus Principle. The only difference is the role that morphology plays in the nominal and in the verbal domain.

The Plus Principle, which was first introduced by Verkuyl in his 1972 dissertation *On the compositional nature of the aspects*, and has been constantly developed in its details up to now, stipulates that the aspect that a VP expresses can be composed from the properties of its elements, the verb and its (two) arguments. The verb carries a temporal feature, which determines the dynamic properties of an event and its development in time; the arguments carry a quantificational feature, which can distinguish between bounded and unbounded entities. All these features, which are carried by the elements inside the VP, can be positively or negatively set. Only together, they constitute the aspectual algebra of the whole phrase. The interesting point using such a system is that situation types, such as activities or accomplishments (Vendler 1957), are really considered as constructed VP elements, in which the internal argument and its quantification have an equally important status than the verb itself for the overall aspectuality of a verbal expression.

The important role of the quantification of the internal argument has, in my opinion, not been paid enough attention to in the analysis of deverbal nominalisations, yet. A lot has been said on the syntactic realisation or submission of such an argument (Grimshaw 1990, Alexiadou 2001a, Kaufmann 2005, Alexiadou/Grimshaw 2008, and many more), but its quantificational status as a part of the aspect of the VP has not been entirely acknowledged yet in the syntactic approaches (for an exception see Borer 2005 and other works by her mentioned in this thesis). In the literature which *does* discuss semantic compositional issues (which are an important subject in the VP-literature), such as the lexical semantics frameworks, the aspectual analysis stops on word level, where base verb and suffix are joined and does not take into account the semantic consequences that realised arguments can have on the interpretation of the noun. In this thesis, I will adopt Verkuyl's Plus Principle for the analysis of deverbal nominalisations, or – in order to be precise – *NPs* containing deverbal nominalisations, which is a difference. The aspect of the event situation is not expressed by the verbal element alone, but also by its participants, and – this is a difference to the verbal domain – by (derivational) morphology. In the original Plus Principle theory, which refers to events expressed by verbs, or rather VPs, morpho-

logy is not included into, what is called “inner aspect”, the aspect of the event itself, but related to “outer aspect”, which describes the way in which a situation is presented. This role of morphology for aspect and the different levels of aspect will be discussed on several occasions throughout this dissertation.

Another phenomenon that can be analysed by help of Verkuyl's approach is the aspectual role that the surrounding sentence of an event nominal plays.

In the **following chapter**, I will discuss the current theories on deverbal nominals of all kinds of languages in more detail. Most of these theories take Grimshaw 1990 as a basis and acknowledge three classes of suffixes with certain syntactic and semantic properties. I would furthermore like to show, why the Grimshaw classification cannot be applied to French with its various ambiguous nominalisation processes. In **chapter 3**, I will analyse the interpretations that neologisms of the three most productive French derivation patterns (*-age*, *-ment* and *-(t)ion*) display and give further evidence for the theory of aspectual opposition developed by, for instance, Martin 2007 or Uth 2008. This chapter is also supposed to show what happens when we come across event nominalisations in natural context: as soon as the nominal event is embedded into a sentence that contains an other event in a VP and additional aspectual material, we have to take into consideration more than one layer of aspect for the semantic analysis of an event. **Chapter 4** introduces Verkuyl's theory of the composition of the aspects and describes the Plus Principle for the verbal domain. This theory will be compared to other approaches from the literature on event composition, such as Vendler 1957, Krifka 1989 or Tenny 1994. In a contrastive analysis I would like to show in which points Verkuyl differs from them and why his system is the best for the application in the nominal event domain. I will use the less complex English and German data in order to illustrate this. Furthermore I will compare my findings to nominalisation analyses from the framework of Distributed Morphology, which does not provide a really lexical level in opposition to a structural one, and try to point out advantages and disadvantages of both viewpoints. In this context, derivation in contrast to inflection will be discussed and event nominals integrated into a larger syntactic system that allows for structural modifications. A last, but important issue to be discussed, are English gerunds and their special syntactic properties, which differ from the deverbal nominalisations we have seen up to there. In **chapter 5**, the French nominalisation processes *-age*,

*-ment* and *-(t)ion* will be analysed from an aspectual point of view, and the Plus Principle adjusted to the different needs of the overlapping and highly ambiguous processes. I will mostly deal with high frequency nominals from the literature and show the difficulties for the semantic analysis of this very complex suffixation system in more detail. **Chapter 6** is an interesting by-product of the cross-linguistic study on nominalisations conducted up to there. During the corpus analyses in German and French, I came across a large number of *-ing*-nominalisations in these languages that were borrowed from English. Many of them have kept their meaning in the new language, but from an aspectual point of view these *-ing*-loans often seem to change their semantic properties. With these observations in mind, I tried to find out in how far aspectual composition does still hold for borrowed derived nominals in their new language and if the situation of the *-ing*-nominals in German and French can be considered as lexical or structural borrowing. In **chapter 7**, I am going to offer a short account on all the morphological, syntactic and semantic issues, that I left out in this dissertation, but which are certainly worth to reflect on in future work.





## CHAPTER 2 - AN OVERVIEW ON DEVERBAL NOMINALISATION THEORY

### 1 Grimshaw 1990: The Starting Point

Deverbal nominalisations have been an intensely discussed topic in the last decades. Among the many works that have recognised them as cross-categorical forms, which show characteristics of verbs and nouns at the same time, Grimshaw's 1990 *Argument Structure* has been the generative work serving as the starting point for much of the following research along that tradition (Alexiadou 2001a, Borer 1993, 2001, Scheffler 2005, Meinschaefer 2004, Heinold 2005, etc.). As the title of the book suggests, the main focus is on argument structure in general, especially on the argument structure properties that deverbal nominalisations display, according to Grimshaw. She suggests that nominalisations can inherit the argument structure that their base verbs possess, and thus must realise their arguments obligatorily. The presence or absence of argument structure in nominalisations is, however, not that evident in all derivation processes. Some derivations, like *-ation* for English, are ambiguous in that respect and can produce nominalisations that have argument structure in one interpretation and do not in another one (*formation*). Other processes, like English *-ing*, are unambiguous in their syntactic properties: they always derive nominals with argument structure (*forming*). A third group of nominalisations contains those interpretations that unambiguously have no argument structure properties. For English, these are the zero-derivations or conversions (*form*) (see Borer 2001). The presence of argument structure is linked, according to Grimshaw, to the complexity of the event that a nominalisation expresses. This means that the process in question must be internally structured. As a consequence, such nominals are called *Complex Event nominalisations*. The events that are denoted by nouns without argument structure do not show that inner complexity and are therefore called *Simple Events*. They behave syntactically exactly like *Result* nominals and show no obligation in the realisation of their arguments. In Grimshaw's theory, the presence and absence of

argument structure (and other grammatical properties) are linked to this so-called event structure.

In this chapter, I will give an overview on the literature on nominalisations of which I will use Grimshaw 1990 and Alexiadou/Grimshaw 2008, a paper in which the findings of Grimshaw's older work have been elaborated, as a starting point. Moreover, I will take into account literature along this tradition that deals with other languages like, for instance, German and French, and questions various details of Grimshaw's approach. In the end, I would like to show why her system does, in my opinion, not work for French and which problem occurs with the linking of argument structure to Grimshaw's complexity of events.

## **2 Alexiadou/Grimshaw 2008: New Insights into Argument Structure Properties**

Alexiadou/Grimshaw 2008 pursue the tradition of Grimshaw's earlier work. Each of them presents in her own framework a classification system for English derived nominals based on their semantic and syntactic properties. In table 1 (Alexiadou/Grimshaw 2008: 4), the syntactic qualities of *Complex Event* and *Result* nominals are listed. As *Simple Event* nominals are said to behave exactly like *Results* in their syntax, they can be grouped together.

The property that is in the centre of the entire theory, is, property (a), the presence of syntactic argument structure, which exists only with *Complex Event* nominals. This property is linked to (b), the so-called “*Complex Event* reading”. This means that with the realisation of the verbal arguments we obtain an interpretation, in which the entire event can be divided into sub-units. This is for instance the case with *examination* in (3) but not in (4)<sup>4</sup>.

---

4 Examples from Alexiadou/Grimshaw 2008: 2.

|    | Result/Simple Event-nominals                       | Complex Event-nominals                                 |
|----|--|--|
| a. | Non- $\theta$ -assigner. No obligatory arguments   | $\theta$ -assigners. Obligatory arguments              |
| b. | No (complex) event reading                         | Complex Event reading                                  |
| c. | No agent-oriented modifiers                        | Agent-oriented modifiers                               |
| d. | Subjects are possessives                           | Subjects are arguments                                 |
| e. | by-phrases are non-arguments                       | by-phrases are arguments                               |
| f. | No implicit argument control                       | Implicit argument control                              |
| g. | No aspectual modifiers                             | Aspectual modifiers                                    |
| h. | Modifiers like frequent, constant only with plural | Modifiers like frequent, constant appear with singular |
| i. | May be plural                                      | Must be singular                                       |

Table 1: Syntactic Properties of Nominalisations according to Alexiadou/Grimshaw 2008

Although *Simple Events* “denote events with temporal extent”, they are not “internally organised” (Beckmann 1994: 115).

- (2) *The examination of the patients took a long time.* - Complex Event  
 (3) *The examination took a long time.* - Simple Event  
 (4) *The examination was on the table.* - Result

However, when attached to the examples above, it does not seem to be entirely clear, what the difference between the denoted events is. In (2), there seem to be several sub-events, because we mention that several patients were examined. Therefore, we have several sub-examinations in a longer-lasting examination process. It becomes more difficult to see the difference, when we use a singular object instead, like for instance *the patient* (which should as well get a *Complex Event* interpretation, as the argument could be obligatory in some contexts<sup>5</sup>). Grimshaw 1990 defines in chapter 2 of her book that a *Complex Event* is composed of a first sub-event that includes an activity, caused or undertaken by an agent. The second sub-event is the resultant state that, in most cases, includes the change of state of a second participant. So, it seems that the term *Complex Event* can be seen as equivalent to an accomplishment situation (Vendler 1957).

However, if we compare (2) to (3), which is only considered to express a *Simple Event*, it seems that the only difference is, that we know a bit more about the entity

5 \*The frequent examination by the doctor, for instance, would not be considered grammatical because *frequent* indicates the *Complex Event* reading, the object argument, however, is not realised.

that undergoes the change of state in (2), because we name one concrete participant who is involved in the action. Semantically, it seems impossible not to include a patient into the interpretation of (3), because in the meaning of *examine*, there is always one participant who examines and another one who is examined. The dropped argument might not surface, but is still semantically understood. One could, however, argue that by realising the object of *the examination*, we give clear boundaries to the examination process. So the possible sub-events which constitute a complex examining event together could start when the doctor, for instance, puts his stethoscope on the patient's chest, have intermediate stages when the doctor listens and the patient breathes and stop when the doctor retrieves the stethoscope. This would then be considered as the examination of *one* patient. Such boundaries, however, only come into play, when the realised object is accordingly quantified. *The examination of patients took a long time*, for instance, does not give us an exact hint to where the ending point of the examination process will be<sup>6</sup>. In (3), it is difficult to understand why the event should be less complex or less internally organised than *the examination of the patients* in (2). It might be less concrete, as we do not know the participants involved, but in terms of complexity, the difference does not seem very obvious. In (4), however, where *examination* denotes a *Result*, there is clearly no event structure and no internal organisation visible. The point of the complexity of events will come up again and again throughout my entire work, as well as its linking to argument structure. The other properties in table 1 are not of central interest for this work. There has already been quite a discussion in the literature about their validity. Especially the plural formation criteria (h, i) have been questioned (for instance by Roodenburg 2005 or Alexiadou et al. 2009), mostly in reference to Romance nominals.

The new feature in Alexiadou/Grimshaw 2008 is that Grimshaw's assumptions are simultaneously revisited under the Distributed Morphology perspective and terminology. Alexiadou (already in former works, like Alexiadou 2001a, b) does not so much distinguish the *Complex Event* class as opposed to *Simple Events* and *Results*. For her, nominalisations can be 'nominal' or 'verbal' or both. This terminology has its origin in the theory of Distributed Morphology, where verbal roots are assumed for argument structure nominals, and nominal roots for nominalisations without argument

<sup>6</sup> Quantification of the object in connection with boundaries will be discussed in detail in chapter 4 in terms of Verkuyl 1993 and the composition of aspect.

structure (Alexiadou 2001a, Alexiadou 2009, Alexiadou et al. 2009). The verbal root that underlies, for example, *-ing*-nominalisations, is the reason behind the argument structure that these nominals have inherited. The V-head, which is integrated into the structure, is a theta-role assigner; the N-head is not. In general, I prefer Alexiadou's terminology, because she does not connect her terms to a certain semantic structure of the event<sup>7</sup>. The attribute 'verbal' just designates the kind of underlying root and the matching syntactic properties (see table 1). The same is true for the term 'nominal' in the other direction.

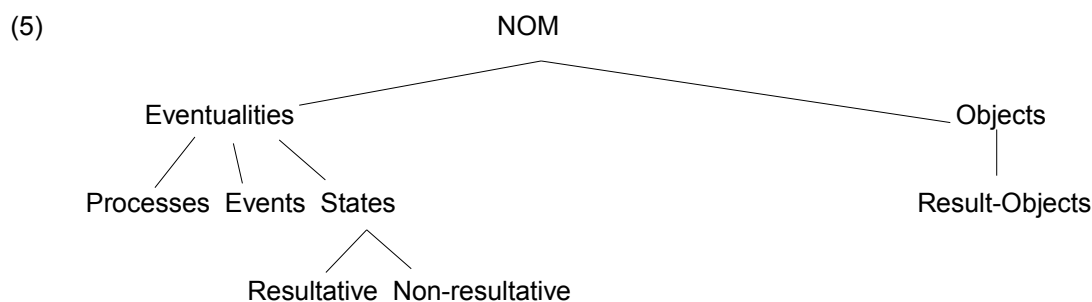
Although the criteria in table 1, evoked by Grimshaw 1990 and Alexiadou/Grimshaw 2008 for the classification of nominalisation suffixes, seem questionable to some extent, the idea that there are three classes (two of them unambiguous and one ambiguous in their readings) has also been discussed for other languages. In the next sections I will introduce works on German and French which also shed light on (mostly three) competing (types of) suffixes and the differences in their interpretations.

### **3 Ehrich/Rapp 2000, Scheffler 2005, Blume 2004: Competing Suffixes in German**

One of the works which is basic for the differentiation between German types of nominalisations is Ehrich/Rapp 2000. Like Grimshaw for English they consider event interpretation of deverbal German nominals in contrast to other readings. Their categorisation, however, does provide more than three classes and a finer grained analysis of the various event types. In a first step Ehrich/Rapp oppose Result-Objects to so-called Eventualities, which cover Processes, Events and States as can be seen in the diagramme below.

---

<sup>7</sup> However, if she discusses the interpretation of events, she adopts Grimshaw's terms.



Other than Grimshaw, they explicitly acknowledge three types of events and differentiate between Processes (atelic), Events (telic) and States (derived from resultative and non-resultative verbs). The terminology of *Complex* and *Simple Event* is not used. The three types of eventualities that Ehrich/Rapp assume also come up in other works, such as Verkuyl 1972 or Tenny 1994 where they are related to the aspectual properties of the predicate. When we take a look at the examples that Ehrich/Rapp offer<sup>8</sup> in order to illustrate processes, events and states, it seems that their aspectual interpretation is not caused by the predicates themselves, but by other semantic material in the sentence.

- (6)
- a. *Er ist bei der Beklebung der Wand vom Stuhl gefallen.*  
'He fell from the chair during the bonding (with something) of the wall.'  
- Process
  - b. *Nach der Beklebung der Wand sind die Kinder davon gelaufen.*  
'After having bonded the wall (with something), the children ran away'  
- Event
  - c. *Die Beklebung der Wand besteht unverändert fort.*  
'The bonding at the wall remains unchanged.'  
- Resultant State
  - d. *Der Hausmeister hat die Beklebung der Wand entfernt.*  
'The caretaker took off the bonded items of the wall.'  
- Resultant Object

In the examples above the nominal, or rather the NP, *Beklebung der Wand* is embedded in different contexts. However the different interpretations that Ehrich/Rapp attest are not caused by the nominal itself, but by the elements that surround it: in (a) the DP containing the deverbial nominal is introduced by *bei* ('during'), which induces duration into the aspectual structure of the sentence; in (b) *nach* ('after') indicates that the event is over and thus brings about a terminative interpretation; in (c) and (d) the embedding verbs, *fortbestehen* ('to persist') and *entfernen* ('remove') indicate that

8 Ehrich/Rapp 2000, 252.

we are dealing with a state and an object and that *der Wand* ('of the wall') is not interpreted as argument but as possessive. So the different interpretations that Ehrich/Rapp attest for nominalisations in the examples above are brought about by the context and not by the nominal itself. From such an analysis we do not know, if the nominal itself has certain properties or not. What would happen, for instance, if we replaced *Beklebung* by *Bekleben* in all of the examples above? In (7) we can observe that the nominals cannot be substituted in every context. But what is the reason for this? As only the suffix has been exchanged in the examples in (6) and (7) the conclusion imposes itself that the suffix has a certain semantics of its own that makes it compatible with certain contexts and incompatible with others.

(7)

- a. *Er ist beim Bekleben der Wand vom Stuhl gefallen.*  
'He fell from the chair during the bonding (with something) of the wall.'  
- Process
- b. *Nach dem Bekleben der Wand sind die Kinder davon gelaufen.*  
'After having bonded the wall (with something), the children ran away'  
- Event
- c. *\*Das Bekleben der Wand besteht unverändert fort.*  
'The bonding at the wall remains unchanged.'  
- Resultant State
- d. *\*Der Hausmeister hat das Bekleben der Wand entfernt.*  
'The caretaker took off the bonded items of the wall.'  
- Resultant Object

In this work I would like to investigate the link between the semantics of the derivation suffix and the compatibility of the resulting nominal with different contexts. Before this can happen, however, we have to find a way to analyse and categorise the different units in a sentence separately. For this purpose a look at a work which compares the properties of German suffixes as such could be helpful.

Scheffler 2005 contrastingly discusses German deverbal nominalisations in the Distributed Morphology framework. According to her, similar classes as in English can be observed. The first class she picks out for German contains the nominalised infinitives (*das Laufen* – 'the running'). This process normally derives event readings (note that Scheffler does not mention the term '*Complex Event*'<sup>9</sup>) and only a few result interpretations are available, like *das Verstehen* ('the understanding'), *das Ansehen* ('the prestige') and *das Schreiben* ('the letter'). The nominalised infinitive form, or *-en* nominalisation, is available for all German verbs. It seems that these nominals

9 It seems that she uses the terminology of Ehrich/Rapp 2000. She also distinguishes eventualities in contrast to objects. As eventualities are sub-divided into processes (atelic) and events (telic), I assume that when Scheffler discusses event readings, she means telic eventualities.



correspond in their high productivity and their unambiguous event semantics to the English *-ing*-nominalisations, or in Grimshaw's terms to the *Complex Event* class.

The second class Scheffler names for German are the stem-derivations. They are rather idiosyncratic in their meaning. They derive instruments (*die Feile* – 'the file'), results (*der Verlust* – 'the loss'), etc., but they cannot produce what Grimshaw would call *Complex Events*. Scheffler mentions the examples *die Fahrt* ('trip') and *die Reise* ('voyage'), which are classical *Simple Events* in the Grimshaw terminology. This class is, according to Scheffler, no longer productive in modern German. The German stem-derivation class seems to come close to the English conversions or zero-derivations in its interpretation.

The third category for German that Scheffler distinguishes are the *-ung*-derivations, which appear regularly in the literature (Demske 1999, Ehrich/Rapp 2000, Kaufmann 2005, Rosseideutscher 2007). This derivation process mostly produces event nominalisations; in different contexts, however, they can also be interpreted as results or objects (as it is the case with English *-ation*). *-Ung*-nominalisations are very productive, although there are verbs that cannot be derived by this suffix. Scheffler mentions modals (*\*Seiung* - 'being', *\*Wollung* - 'wanting', *\*Habung* - 'having', *\*Könnung* - 'can-ing', *\*Müssung* – 'must-ing')<sup>10</sup> and intransitive prefixed verbs (*\*Erbblühung* – 'blossoming'). In chapter 6 of this work, we will also see that English (loan) roots are not possible with this process in contrast to *-en* (*\*Stylung vs. Stylen*, *\*Dopung vs. Dopen*, *\*Recyclung vs. Recyclen*, etc.). All in all, it seems that also for German there are three classes of deverbal nominalisations to be taken into account: the first class derives (almost) unambiguously event readings. This is the class that contains the nominalised infinitives and can be compared to the English *-ing*-nominals. The second class contains the stem-derivations. They can derive all sorts of idiosyncratic readings, but what they have in common is that they do not derive Grimshaw's *Complex Events*. In this property they resemble the English zero-derivation. The third class would be German *-ung*, in analogy to English *-ation*, which both can derive all possible meanings from (Complex) events to results and objects.

A work which deals in detail with the properties of the German nominalised infinitives is Blume 2004. As well as Scheffler she attests syntactic and semantic properties to this class of nominals that can be compared to what we know about the Eng-

---

<sup>10</sup> Cf. also Demske 1999 for a diachronic perspective.

lish *-ing*-derivatives. Blume, however, also takes into account how (especially syntactic) context can change the interpretation of the nominal. She observes that contrastivity, genericity and habituality are interpretations that are considered favourable for the omission of obligatory arguments (even in English). In terms of Grimshaw this would mean that originally Complex Events show qualities of Simple Events.

(8)

- a. *Häufiges Shamponieren schadet feinem Haar.*  
'Frequent shampooing damages thin hair.'
- b. *Das in diesen Kreisen verbreitete unreflektierte Konsumieren*  
'The wide-spread unreflected consumption in these circles'
- c. *Only frequent examination by the doctors kept John healthy.*  
(Grimshaw 1990: 178)

When we look at the examples above, however, we have to ask again the question, which element is really responsible for the habitual interpretation? Is it the nominal itself, the suffix, the left out internal argument, the choice of tense for the verb or the modifiers in context, such as *häufig* and *frequent*? Up to here it does not seem that in either of the works discussed in this section this distinction has been made explicit.

Concerning the semantic properties of the nominalised infinitives Blume comes to the following conclusion: their interpretation is per default the one of Grimshaw's Complex Event nominals. In certain contexts (generic, habitual, contrastive reading) they can be used as Simple Events. German nominalised infinitives inherit the argument realisation properties of their base verbs. This property, however, seems to vary for different types of derivatives: with *-ung*-nominals, for instance, the arguments can be left out systematically.

If we put together what we obtained from Ehrich/Rapp, Scheffler and Blume, we can come to the following conclusions: in German as well as in English the nominalisation suffixes seem to be responsible for certain semantic (and syntactic?) properties of the derived noun. When it comes to argument realisation and the aspectual interpretation of an event, there are differences between *-ung*-suffixed derivatives, nominalised infinitives and zero- or stem-derivations. All three authors, however, note that there are certain (mostly syntactic) contexts or configurations which favour one or the other interpretation. Elements that surface on sentence level, such as (modal) verbs, tense or aspectual modifiers seem to have a lot of influence on the interpreta-

tion of the event that is expressed via the noun. In the next paragraph I will introduce some works that have dealt with competing suffixation processes and the ambiguity of nominalisations in the Romance languages. Here my special focus is on works on French, because this is the language, where we observe the most semantic overlaps for competing nominalisation suffixes.

#### 4 Meinschaefer 2004, Kelling 2004: The Semantics of Deverbal Nominals in Romance Languages

Meinschaefer 2004 analyses Spanish and French deverbal nominalisations from an LFG perspective. Although in her approach the diverse verb classes of the nominalised base verbs are under special consideration, she also attests three types of derived nominals for Spanish. Just like German, Spanish has the extremely productive class of the nominalised infinitives. Interestingly they are capable of realising their objects directly (as do English *-ing*-nominals, cf. Alexiadou 2001a) or with a prepositional phrase.

(9)

- a. *Oyò el ladrar de los perros...*  
'He heard the barking **of** the dogs...'
- b. *El destruir Ø ciudades siempre es una crueldad.*  
The destroy cities always is a cruelty.  
'Destroying cities is always cruel.'

Unlike in English, the Spanish infinitive, which attaches a direct object, needs a determiner (7b) in order to be marked as a nominal form<sup>11</sup>. As soon as we introduce a determiner into an English *-ing*-construction (8b), we must realise the object in a PP.

(10)

- a. *Destroying cities is always cruel.*
- b. *\*The destroying cities is always cruel.*
- c. *The destroying of cities is always cruel.*

Spanish nominalised infinitives behave like verbs concerning their syntactic properties, like adverb modification or negation. Meinschaefer calls them "syntactic

<sup>11</sup> *Destruir ciudades es una crueldad* (without determiner) would be translated as *It is a cruelty to destroy cities*.

nominalisations” following the terminology of Chomsky 1970. When the nominalised infinitive attaches the complement in a PP, it becomes, however, more “nominal”<sup>12</sup> as far as it can only be modified by an adjective and loses its other “verbal” properties. This resembles Alexiadou’s 2001a distinction of a verbal and a nominal *-ing*-form (*Destroying cities is cruel* vs. *The destroying of cities is cruel*). The second process that Meinschaefer considers for Spanish is the *-ción*-derivation.

- (11) *La destrucción de la ciudad tuvo lugar ayer.*  
 ‘The destruction of the city took place yesterday.’

As Meinschaefer’s work is mostly concerned with the underlying base verb classes of nominalisations, she questions Grimshaw’s classification according to the different suffixes and does not give a semantic overview for each of the suffixes she mentions. For her, “most derivatives have an event reading, whereas not all of them have an object interpretation” (Meinschaefer 2004: 33). Whereas I agree with Meinschaefer that the base verb can have an impact on the interpretations that a nominalisation can produce I do not think that the existence of event readings for most nominals and the non-existence of object readings contradicts Grimshaw’s classification. When we take a closer look at the Spanish derivation processes that Meinschaefer offers us, the nominalised infinitives and *-ción*, we get the following picture: the nominalised infinitives seem to be very close to English *-ing* in their grammatical behaviour and in their interpretation. They express mostly events that Grimshaw would call complex. *Ción*, on the other hand, seems to have similar properties as we have seen with English *-ation* and German *-ung*: a suffix that derives events in the first place, but also results (depending on its base verb class) or objects and instruments (Meinschaefer 2004). What we lack for Spanish so far is a process that derives the third class of nominals mentioned in Grimshaw 1990 and Alexiadou/Grimshaw 2008, namely those, which do not produce (Complex) events at all, such as the German stem-derivations or the zero derivations in English. These processes also exist in Spanish, but they do not seem to show homogeneous behaviour, concerning the complexity of events they denote.

Up to now, we have seen at least two languages in which the classification into three types of nominalisation processes, in the fashion that Alexiadou/Grimshaw

---

12 Speaking in Alexiadou’s terms

2008 evoke, is working out well. For Spanish, at least two classes seem to be covered. Let us turn to French now, as it is the second language that Meinschaefer discusses. Moreover, French is of a central interest for this work. In the literature the most productive processes for the formation of event nominals in French are considered to be *-(t)ion*, *-ment* and *-age* (Lüdtke 1978, Dubois/Dubois-Charlier 1999, Heinold 2005). Although there might have been a more or less productive derivation of nominalised infinitives in Old French (Meinschaefer 2004), there are only some lexicalised forms left today as in (12)<sup>13</sup>.

(12)

- a. *le manger et le boire*  
the eating and the drinking  
'food and drinks'
- b. *le coucher du soleil*  
the going-to-sleep of the sun  
'sun set'

The problem with the three very productive nominalisation patterns mentioned above, *-(t)ion*, *-ment* and *-age*, is that all of them are ambiguous in the Grimshaw/Alexiadou sense, as they can denote *Complex* and *Simple Events*, results, objects, instruments and places (Lüdtke 1978, Dubois/Dubois-Charlier 1999, Meinschaefer 2004, Heinold 2005, Heinold 2007, Heinold 2008). In the tripartite classification, they would all belong into the English *-ation*-class as indicated in table 2.

|                     | E <i>-ing</i> | G <i>-en</i> | E <i>-ation</i> | G <i>-ung</i> | F <i>-(t)ion</i> | F <i>-ment</i> | F <i>-age</i> | E zero | G stem |
|---------------------|---------------|--------------|-----------------|---------------|------------------|----------------|---------------|--------|--------|
| Complex Event       | +             | +            | +               | +             | +                | +              | +             | -      | -      |
| Simple Event        | -             | -            | +               | +             | +                | +              | +             | +      | +      |
| Result              | -             | -            | +               | +             | +                | +              | +             | +      | +      |
| Other <sup>14</sup> | -             | -            | +               | +             | +                | +              | +             | +      | +      |

Table 2: *Semantic Properties of Nominalisations in German, French & English according to Grimshaw's System*

For French it seems that the Grimshaw/Alexiadou system would not be applicable, as we do not have one class that exclusively produces events and neither a class that does not produce events at all. The classification ambiguous/non-ambiguous

<sup>13</sup> Examples from Heinold 2008

<sup>14</sup> On other interpretations than the eventive ones considered here, such as instrument, place, object, container, etc., cf. for instance Brandtner 2008, Melloni 2007.

does not hold in French. We could then follow Meinschaefer's proposal, analyse the derivations with respect to their base verb class (in all of the three languages that are considered in this work) and leave the classification of the different suffixes a bit behind. It is, however, my strong belief that the derivation of nominalisations is very complex in so far as base verb, suffix and even a realised argument add to its meaning (and determine the grammatical properties that result from it). Moreover, we have seen in the section on German nominalisations that the context that surrounds the nominal on sentence level has to be considered to some extent, too. I will try to offer the detailed theoretical background for an analysis of deverbal nominalisations which tries to capture the semantic impact of all of these elements in chapter 4. For the moment, I would just like to maintain the idea that suffixes are indeed elementary in their meaning for the derivation of nominalisations (and the grammatical properties that go along with it), which can be subsumed in three different classes. I disagree, however, with Grimshaw's idea that the complexity of the event is connected to this classification. This is the reason why the tripartite system can, on the first view, not be applied to French.

Another approach which deals with doublets from the *-age* and *-ment* derivation is Kelling 2004. According to her, *-age*-nominals differ from *-ment*-nominals in the prototypical agentivity of their arguments in the sense of Dowty 1991.

- (13)
- |                |             |                |             |
|----------------|-------------|----------------|-------------|
| a. battre      | <arg1 arg2> | Agent, Patient | > battage   |
| b. battre intr | <arg1>      | Theme          | > battement |

In (13) *battage* is derived, because its first argument has the prototypical agentive properties of volition, causation of a change of state and exists apart from the event which is taking place. The argument of *battement*, on the other hand, has only the last property and is rather the undergoer of the action. Kelling's distinction according to agentivity does take into account the different interpretations that competing patterns might have, but as soon as we want to apply her system for the disambiguation of interpretations of one nominal, the analysis fails. When we oppose such doublets as *gonflage* and *gonflement* ('to inflate'), we can obtain agentive and non-agentive interpretations for each of them. According to the *Petit Robert* 1998 *gonflement* can designate the state of being inflated (*le gonflement du pneu \*par Max* 'the inflation of

the tire by Max') as well as the action of being inflated (*Le gonflement des chiffres par certaines sociétés* – 'The inflating of the numbers by certain enterprises'). The same is true for *gonflage* which can be interpreted as an action or simply as 'air pressure'. It seems that Kelling's proto-agent criterion for the arguments of nominalisations does not determine suffix selection in French. It might be true that *-age*-nominals often seem to show events from an agentive point of view (as do *-ing*-nominals in English and the nominalised infinitives in German), but as they also exhibit other interpretations than the eventive one, this property is not helpful as the only criterion for suffix selection.

In the discussion on Kelling's and Meinschaefer's approaches it became obvious how difficult it is to point out one dominant criterion for suffix selection in French. Whereas in English, German and Spanish we find nominalisation processes which are unambiguous in their event interpretation (*-ing*, nominalised infinitives) and processes which are underspecified in their semantics (*-ation*, *-ción*, *-ung*) the French nominal suffixes all overlap to a certain extent. In the more recent literature on French nominalisations and especially on the distinction between *-age* and *-ment*<sup>15</sup>, there is, however, one criterion that has turned out to be more decisive for suffix selection than agentivity or ambiguity (in contrast to non-ambiguity). Works like Martin 2007, 2008a, Huyghe/Marín 2007 or Uth 2008 all seem to come to the conclusion that although *-ment*, *-(t)ion* and *-age* are ambiguous, they are very fixed in the aspectual interpretation of their event readings. It is observed that *-age* seems to be responsible in some way for durative, ongoing or unbounded event interpretations, whereas *-ment* and *-(t)ion* are more associated with termination, boundedness or telicity. Before I start discussing these rather new findings for French, however, I would like to give a very short introduction on the terminology on aspect that I am going to use from here on, as they are central for this work.

## 5 Some Terminology concerning Aspect and Situation Types

In this part, I will introduce Smith 1991 and Verkuyl 1972, 1993, 2005, as notions and definitions from these works will come up again and again in my analysis of

<sup>15</sup> This distinction is often made because with *-age* and *-ment*, there exist many doublets in French. Lütke 1978 even calls it the derivational processes with the "biggest overlaps".

nominalisations. For the beginning, a superficial introduction of the main terminology will suffice. I will come back to the distinction of different ideas of aspect in chapter 4. Smith 1991 discusses several situation types. She distinguishes between states, activities, accomplishments, semelfactives and achievements. Similar situation types were first mentioned in Vendler 1957. He, however, does not take into account the class of semelfactives, which will become important later on for the explanation of some of the French examples. Smith's situation types are composed of a [ $\pm$  STATIC], a [ $\pm$  DURATIVE] and a [ $\pm$  TELIC] feature.

*States*, the first situation type, are [+STATIC], [+DURATIVE], but [-TELIC]. They can hold for an interval with an arbitrary endpoint. Smith represents them as in (14), where (I) is the initial and (F) the final point. The regular, uninterrupted line suggests that there is no dynamics or change going on and that the state cannot be divided into sub-stages. Prototypical verbs expressing states are *believe, hope, fear, love, understand, need, etc.*

(14) (I) \_\_\_\_\_ (F)

The second situation type are *activities*. They are [-STATIC], [+DURATIVE] and [-TELIC]. They do not involve a goal or a natural end point and just describe a process. In (15), an arbitrary endpoint ( $F_{\text{Arb}}$ ) is indicated. This means that the activity does not stop, because it has reached an inherent culmination point, but because the actor simply chooses not to go on with what he is doing. The interrupted line suggests that there are several regular sub-stages of the event. Typical activity predicates are for instance *laugh, sleep, think about, stroll in the park* and generally verbs that involve an unbounded object-argument like *eat cherries*.

(15) I..... $F_{\text{Arb}}$

The third situation type that Smith mentions are *accomplishments*. They consist of the features [-STATIC], [+DURATIVE] and [+TELIC]. In contrast to activities, they have an inherent end point ( $F_{\text{Nat}}$ ). This natural end point is expressed by the realisation of an object-argument, as in *build a bridge*. *The bridge*, in this example, would be the outcome of the *building*-process that has taken place, a result (R). The difference between the arbitrary end point that is typical for activities and the natural end



point of accomplishments is, that when the latter one is reached, the process cannot continue. Accomplishment situations must include countable object arguments that indicate the finiteness of the process, as in *repair a radio*, *walk to school*, *drink a glass of wine*, *destroy the garden*, *cook a turkey*, and so on.

(16) I.....F<sub>Nat(R)</sub>

The fourth situation type in Smith's classification are *achievements*. They share the features [-STATIC] and [+TELIC] with accomplishments, but can be distinguished from them by their [-DURATIVE] property. As can be seen in (17), they are instantaneous events that cause a change of state. The event consists of only one single stage, which *is* the change of state itself. For instance the event *to reach the top* expresses that one short moment, when one arrives at the top of a mountain, for instance. The *climbing*-process that proceeds this moment and is illustrated by the interrupted line in (15) is not included here and would be described by a separate verb as a separate event. Other verbs in which achievements can be expressed are *break*, *recognize*, *leave*, *find*, *lose*, *arrive*, etc.

(17) .....I(R).....  
F

The last situation type, a type that is special for Smith's classification, are *semelfactives*. They are similar to achievements insofar as they are also [-STATIC] and [-DURATIVE], but differ in their [-TELIC] feature. They denote instantaneous, atelic events without preliminaries and no resultant states. Moreover, there is no process that could be associated with the event. This property is illustrated by the lack of a (time)line in (18).

(18) I  
F

Verb examples for this situation type are *knock*, *cough*, *flap a wing*, *hit*, *blink*, *tap on*, *kick*, etc. I will use these five situation types, described by Smith 1991, in order to distinguish between the different kinds of events that can be expressed by nominal constructions. Smith's system, although largely overlapping with the most often used

and classical account in this direction, Vendler 1957, takes into account one more situation type that will be of use in my analysis of the aspectual properties of nominals, the semelfactive event types. The situations in her account are related to the features [STATIVE], [DURATIVE] and [TELIC]. Verkuyl 1993, 2005 uses similar notions for the analysis of events although he rejects the term “telic” and rather argues for “boundaries” that a process can obtain.

In his work from 1993, Verkuyl discusses the composition of aspect in events. His theory and the terminology that goes along with it are also central for the later analysis of (French) nominalisations and will appear throughout this work. Verkuyl distinguishes in general between terminative [+T] and durative events [-T]. Terminative events involve an endpoint that gives a clear hint to when a process or an action ends. In (19a) the eating of the sandwich starts with the first bite and ends with the last one. The first and the last bite set the boundaries for the eating action. In (19b), the sentence is ambiguous in a sense that either three people ate each three sandwiches or that three sandwiches were distributed in order to be eaten by three people. What the two meanings have in common, is that there are the same boundaries in both sentences: the eating action starts with the first bite and ends with the last, no matter how many sub-actions there are and by which participant the last bite is executed. The important factor is, that both, subject and object-argument, are specified quantities (*they, a/three sandwiches*). Via the specification of the participants, the boundaries of the action or process are evoked.

(19)

- a. *They ate a sandwich.*<sup>16</sup>
- b. *They ate three sandwiches.*

Durative events, on the other hand, do not have such boundaries. They give us an unterminated perspective of an action. In (20), the only information we obtain is that there were people who ate an undetermined quantity of cheese. Without concrete information on the quantity of cheese that was eaten (*one piece of, one slice of, an entire loaf of, etc.*), we are not able to determine the endpoint of the process.

---

<sup>16</sup> All examples from Verkuyl 1993: 15.

(20) *They ate cheese.*

This means, as also suggested by Smith 1991, that the (un)boundedness of the subject- or object-argument can have an impact on the situation type. Also in her approach, accomplishments need to realise a bounded object-argument, in order to give us information about their (natural) endpoint. Verkuyl's composition of aspect will be introduced in detail in chapter 4. For the following discussion, this short introduction on terminology will suffice. The important point is, however, that for Verkuyl the aspect of event situations is composed from the meaning of the verb and from the meaning of its arguments. Verkuyl 2005a explicitly underlines that verb meanings are “stable” in his account (see for instance p. 30ff) and that a verb on its own is not able to express different aspectualities. The different aspectual interpretations happen at VP-level and are strongly influenced by the quantification of the verbal arguments. In the next part, I will turn to what has been said about *-age*, *-ment* and *-(t)ion* and their aspectual impact in the literature so far. Especially the first two suffixes are of interest, because there are said to be big overlaps among them in the bases they select, as well as in the meanings they can express (Dubois 1962, Lüdtke 1978, Corbin 1987, Dubois/Dubois-Charlier 1999).

## **6 Martin 2007, Huyghe/Marín 2007, Uth 2008, Barque et al. 2009: Aspect in French Nominals**

In the following, I will discuss especially the event readings that *-age* and *-ment* can denote. Are they Complex or Simple as in Grimshaw's approach or can they be distinguished according to some other property? In the literature on French nominalisations, Grimshaw's approach has been mostly avoided so far, for the reasons illustrated in table 2. Meinschaefer 2004 uses the terminology and takes over the idea that there is argument structure in a certain sort of deverbal nominalisations, but avoids a classification according to the French suffixes and rather analyses the base verbs. A question that should be answered though is, why would we need several suffixes (*-age*, *-(t)ion*, *-ment*) that are all ambiguous and

attach in many cases to the same bases? Is it not possible that there are regularities in meaning differences in the (numerous) cases of doublets? In this section, I would like to find out if such differences exist and of what nature they are. It seems to me that if there is such a difference, it might probably lie in the nature of events that the two kinds of nominalisations can express. As we have seen above (Grimshaw 1990, Smith 1991, Verkuyl 1993), events are complex constructs and there is more than one sort of them in many approaches. So, if *-age*, *-ment* and *-(t)ion* can all be ambiguous between result, object and other readings, it seems reasonable that they might justify their existence by deriving different types of events.

The concrete opposition of events expressed by *-age* and *-ment* nominalisations came up in Martin 2007, 2008a. She distinguishes two derivatives of the same base verb, according to their duration and inner structure.

(21)

- a. *Plusieurs miaulements font ensemble un miaulage.*  
'Several meows make a meowing'
- b. *?Plusieurs miaulages font ensemble un miaulement.*  
'Several meowings make a meow.'
- c. *Le chat a poussé un miaulement/#miaulage.*  
'The cat uttered a meow/#meowing.'
- d. *Une séance de miaulage*  
'A meowing session'
- e. *\*/OK Une séance de miaulement/s.*  
'\*A meow-session'/OK 'A meow-PL-session'

In (21), the verb of sound emission *miauler* is derived by two different processes. The tests in (21a) and (b) suggest that one *miaulage* event contains several *miaulements*. This means that the last one is only one single and short cry that a cat can produce, whereas the first one rather denotes a “chain” (Martin 2007) or series of these cries. In (21c), the verb *pousser* ('eject') is supposed to indicate the shortness of the sound that is emitted and thus works better with *miaulement* than with *miaulage*. In this opposition, the difference of the two events can be found in their property of duration. (21d) and (e) again suggest an inner plurality of *-age* derivatives combined with the idea of duration. A “session” of a certain activity implies that there are several successive sub-units of that activity that take a longer time to be executed. *Séance* can be combined with *miaulage* in the singular, which shows that the *-age* nominal itself already contains the idea of duration and inner plurality. The *-ment* nominal, on the other hand, is not capable of expressing this concept. It needs

an exterior plural to mark the several sub-events that the session is composed of. With these examples, Martin introduces the idea that there is an aspectual difference in the event types that *-ment* and *-age* can express. It seems that duration (mostly caused by repetition of an event) matters in their distinction. Another example from Martin 2007 opposes a *-(t)ion* and an *-age* nominal.

(22)

- a. *Le dénazifiage de l'Allemagne (par x) a abouti à sa dénazification.*  
'The denazifying of Germany resulted in its denazification.'
- b. *#La dénazification de l'Allemagne (par x) a abouti à son dénazifiage.*  
'The denazification of Germany resulted in its denazifying.'

The tests in (22) are supposed to shed light on the terminative nature of the events in question. *Dénazifiage* in the (a) example seems to be a mere activity one can undertake. Note that, although it has a realised argument that expresses a bounded quantity (*de l'Allemagne*), the event seems to be of durative nature. This point will become important in chapter 4, where I will discuss the influence of the realised object arguments on the aspect of the nominal expression. *Dénazification* denotes a terminative event, which includes the result that no more Nazis are present. This is the reason why the action expressed by the *-age* nominal can lead to the event denoted by the *-(t)ion* nominal (22a), but not vice versa (22b). The examples by Martin show two properties that distinguish *-age* nominals from the derivatives of their rival suffixes: they describe durative, unbounded actions or events. Moreover, they can bundle smaller sub-events (as in semelfactive situation types) into an event with activity interpretation (as in *miaulage*, where several single cries make out the entire event of meowing). Martin's examples are often criticised by native speakers, because they seem constructed and are not very frequent.<sup>17</sup> In chapter 3 and 5, however, I will discuss more (neologism) data from corpora that underline the aspectual differences that the *miaulage* and *dénazifiage* examples suggest. All in all, the tests proposed by Martin are quite useful to distinguish among the different event readings that French rival nominals can express.

Another work that considers aspectual properties of *-ment* and *-age*, though from a diachronic perspective, is Uth 2008. She analyses derivatives from Old and New French corpora. Whereas *-ment* was responsible for the derivation of deverbal event

<sup>17</sup> Actually when looking at Google, for both examples, (19) and (20), there are mostly linguistic texts on aspect that use these words.

nominals in Old French already, *-age* was first much more productive in the denominal domain. Here, it mostly derived various sorts of group nouns, as in the example below.

- (23) *toutes mes bestes et le meilleur porc du porcage*  
'all my beasts and the best pig of the herd of pigs'

In (23), the *-age* suffix, attached to the nominal *porc* ('pig'), is responsible for a group interpretation ('herd of pigs') that is derived from an individual. It serves as a kind of collectivisation suffix (Corbin 1987, Uth 2008) for a beforehand pluralised entity, as is illustrated in (24). Or in the words of Uth: it seems that *-age* creates nominals with a kind of inner plurality, which is brought about by a pluralisation operator  $P^*$  (in the sense of Link 1983) that *-age* is able to introduce.

- (24) *porc* + *age* → *porcage*  
 $x$  +  $P^*$  → 

|     |     |     |     |     |     |     |     |     |          |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$      |
| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ .... |

Nowadays, *-age* has shifted its derivational activities mostly to the deverbal domain (Uth 2008), where it derives mainly event nominals (Lüdtke 1978, Dubois/Dubois-Charlier 1999, Heinold 2005, 2007, Uth 2008). Uth, however, suggests that the basic function of *-age* has stayed the same. It is still responsible for pluralisation and collectivisation, but has shifted its activities from individuals to events. This sounds similar to what Martin proposes for her *miaulage* example, where she attests a "longer eventive chain". In Uth's terms, *miaulage* would be a series of singular cries that form a group in so far, as they are uttered by one and the same animal in an uninterrupted chain. There is one larger event that is composed of several sub-events. This inner plurality of deverbal *-age* nominals could be responsible for the durative nature that they evoke. A more detailed discussion of *-age*'s historical background will take place in chapter 5.

As we can see, Uth as well as Martin, assume that there is something more going on in French deverbal nominals, than the mere differentiation of the complexity of an event or the distinction into the event itself and its result. Both of them distinguish

events that come close to the situation types of Smith 1991 or the aspectual distinction of events made by Verkuyl. One of the latest papers that follows the same path is “Two types of deverbal activity nouns in French” by Barque et al. 2009. Although this paper does not deal with morphology as a main topic, the authors attest different types of deverbal nominalisations in French and propose a series of linguistic tests in order to deal with aspectual differences. In the chapter on data and methodology (3), we will take a closer look at these diagnostics. Barque et al. introduce several aspectual distinctions for which they find examples in French deverbal nominals. The first opposition is stative/dynamic in agreement with the Vendlerian classification of verbs. For the class of stative nominals, the authors mention derivatives like *signification* ('meaning') and *connaissance* ('knowledge'), opposed to dynamic nominals like *présentation* ('presentation') and *jardinage* ('gardening'). This opposition will not play a big role in my work, because the nominals I am looking at are all dynamic. The purpose of my work is to find out what the difference in their dynamics is. The other aspectual oppositions in Barque et al. are bounded/unbounded and culminating/non-culminating, which is exactly what the Martin examples above were about, too. Nominals that express bounded events focus on the "individuation" of an event (Barque et al. 2009: 1), which means that it must be located in space and time. Nominals with boundedness interpretation are *manifestation* ('demonstration'), *réparation* ('mending'), *découverte* ('discovery'). Nouns describing an unbounded event are *natation* ('swimming'), *braconnage* ('poaching') or *jardinage* ('gardening'). Culminating nominals are those that involve a natural endpoint, which "corresponds to the completion of the action" (Barque et al. 2009: 2). Such nouns are *réparation* ('mending'), *construction* ('construction'), *découverte* ('discovery'), whereas *manifestation* ('demonstration'), *promenade* ('walk') and *discussion* ('discussion') do not have such a culmination point. The difference between the two property pairs bounded/unbounded and culminating/non-culminating, however, is not entirely clear. (Non-)culminating seems to be an inherent lexical property of an event, as it is the case with incremental-theme verbs for instance (see examples above). But what causes the (un)boundedness interpretation of nominals like *manifestation* or *jardinage*? How exactly is the “individuation of an event” brought about?

Barque et al. 2009 do not link these differences in aspect to the suffixation of the

nominals in question (*manifestation* vs. *jardinage*). They analyse the event expressed by the nominalisation in the sense of Pustejovski 1995 and his *Generative Lexicon*, but their analysis stops at word level and does not take into consideration the different suffixation as well as the surroundings of the nominalisation that can add to a change in aspect (for instance *réparation de la voiture* ('mending of the car') vs. *réparation de voiture(s)* ('car mending')). In chapter 4, I will carry out this task and argue that not only the aspect of the events expressed by deverbal nominalisations is composed, but also the different morphological and syntactic elements forming a nominal event together, can be made responsible for its aspectual interpretation. I will adopt the suggestion made by Martin 2008a and Uth 2008 that the suffixes (here: *-age*, *-(t)ion* and *-ment*) are at least partly responsible for these differences of aspect. In both approaches, *-age*-nominals are connoted with duration, inner plural and unboundedness, whereas *-(t)ion* and *-ment*-derivatives are linked to properties like terminativity and boundedness. A work that deals exactly with these notions in the context of deverbal nominalisations for Romance and Germanic languages is *Plural marking in Argument Supporting Nominalisations* by Alexiadou et al. 2009. In the next section, I will discuss this paper and compare how far the findings of these authors correspond to my examples from French, German and English.

## 7 Heinold 2008, Alexiadou et al. 2009: Aspect in Nominals and the Complexity of Events – a Cross-linguistic Overview

Although Alexiadou et al. 2009 mostly deal with syntactic properties of nominalisations, such as pluralisation and argument structure, they also distinguish among derivation patterns that are aspectually atelic, imperfective and unbounded, whereas the other class of event nominals cover telicity, perfectiveness and boundedness. Note, that although this paper relies a lot on Grimshaw's proposals, it does not use the distinction into Complex and Simple Event nouns, but admits that several of Grimshaw's syntactic properties of nominals (plural, choice of determiner, etc.) seem to be linked to aspect more than to the complexity of the event. Alexiadou et al. analyse Romanian, English and German ("argument supporting"<sup>18</sup>) nominals.

---

18 Terminology by Alexiadou et al. 2009, p. 10.



Romanian has two processes that create such argument supporting nominals (formerly known as *Complex Event* nouns in the Grimshaw terminology), the nominalised infinitives and the supine. The authors show that pluralisation is not possible with the supine, whereas the infinitive allows plural markers (25). It is suggested that this is due to the differences in aspect expressed by the two types of nominals.

- (25) *demolările/\*demolaturile frecvente ale cartierelor vechi de către comuniști*  
 demolish-Inf-PL/demolish-Sup-PL frequent-PL of quarters-GEN old communists  
 'the frequent demolitions of old quarters by the communists'

The semantics that Alexiadou et al. attribute to the two kinds of patterns comes close to what we have seen for French *-age* in contrast to *-ment* and *-(t)ion* derivations in the examples by Martin and Uth. French *-age* seems to be similar in its semantics to the Romanian supine in so far as both force an unbounded, durative interpretation, whereas *-ment*/*-(t)ion* come close to the Romanian infinitive. Aspect in Alexiadou et al.'s theory (that is based on the Distributed Morphology framework) is integrated by means of a pluractional operator into the structure of the supine, which is responsible for the unboundedness that these derivatives express. Pluractional operators are also observed in poly-synthetic languages (Lasersohn 1995, Van Geenhoven 2004), where they are mostly linked to habitual and iterative concepts (Alexiadou et al. 2009). This will become important for the analysis of French *-age* nominals later on in the data chapter. They often appear in constructions that express hobby-like actions or habits (Farge 2004, Barque et al. 2009, Heinold 2009).

Before I will go into a detailed analysis of the French suffixes, however, I would like to return to the question of aspectual distinctions in deverbal event nominals and find other languages, where this distribution of interpretations can be observed. In previous works (Heinold 2008, 2009), I have already applied the tests that Martin uses in the examples in (21) for English and German, and it seems that similar oppositions emerge. In (26), the zero-derived *meow* denotes the single cry of a cat (a). After the pluralisation it is semantically equivalent to *meowing*, which indicates that the *-ing* nominal already includes several sub-events or several single cries. In contrast to French, the data in (b) is accepted as well, although speakers did not decide that easily on its acceptance as in the (a) example. Moreover, English native

speakers note, when judging the examples, that the zero-derivative *meow* expresses the one-time event executed in one breath, whereas the *-ing*-noun describes a chain of several smaller events. This is underlined by the sentences in (d) and (e). In *The cat uttered a meowing*, the sentence becomes much better, when the temporal modifier *for an hour* is added.

(26)

- a. *Several meows make a meowing.*
- b. *Several meowings make a meow.*
- c. *The cat uttered a meow/#meowing (OK for an hour).*
- d. *A meowing session/Meow sessions*
- e. *\*A meow session*

Considering the examples above, we could come to the conclusion that in English there is the same aspectual difference between *-ing* and the zero derived nominals, as in French between *-age* and *-ment*: *-ing*-nominals seem to have an inner 'plurality' (Uth 2008) or the 'longer eventive chain' evoked by Martin 2008a.

In (27), we can see the Martin test for German, although with *brüllen* ('roar')<sup>19</sup>. The problem we face here is that the actual rival *-ung*, which we want to compare to *-en*, is not compatible with all the verbs of sound-emission, which seem necessary at least for the last test (*\*Schreiung*, *\*Rufung*, *\*Flüsterung*, *\*Hustung*, etc.). Forms that do co-exist are the suffixed *Brüller* and the prefixed *Gebrüll*<sup>20</sup>. In the duration/terminativity opposition, it becomes obvious that the nominalised infinitives and the prefixed *Ge-* forms neutralise each other semantically ((a) and (b)). Both of them denote durative events (*das Gelaufe* 'the running', *das Getanze* 'the dancing', *das Gekraxel* 'the clambering') or events with internal plural (*das Gehuste* 'the coughing', *das Gehämmere* 'the hammering', *das Geklopfe* 'the knocking'). A derivation process that is well-known for the derivation of singular events is the *-er*-suffixation (Schäfer 2008). When we include the *-er*-nominal *Brüller* into the tests, we see that this form seems to describe the singular (bounded) event, whereas *Brüllen* and *Gebrüll* both denote unbounded chains, as do *-ing* for English and *-age* for

19 The German verb *miauen* does only have the nominalised infinitive form, and no derivation with the rival affixes in this case (*Ge-* and *-er*): *\*Gemiau(e)*, *\*Miauer*. This is maybe due to phonological factors: 1. the forms sound strange, 2. with all other (animal) sounds, at least the *Ge-* derivation is possible (*Gebrüll/Brüller*, *Geschrei*, *Gemuhe*, *Gejammer/Jammerer*, *Gekrähe*, *Gequake*, *Gegrunze/Grunzer*, *Gelepse/Piepser*, *Gewiehre/Wieherer*, etc.). It seems that *miauen* is an exception (together with *iahen*, which is phonologically also difficult because of the many vowels).

20 On the differentiation between the so-called prefix *Ge-* and a supposed circumfix *Ge-e* see Eisenberg 1998, Neef 1996, Olsen 1990. I am summarising all these types under the prefix *Ge-*, although some of the examples also have the *-e*-suffix. The important point is that both types have the collectivising semantics.

French.

(27)

- a. *Mehrere \*Brüllen ergeben ein Gebrüll.*  
'Several roar-en make a Ge-roar.'
- b. *Mehrere \*Gebrülle ergeben ein Brüllen.*  
'Several Ge-roar make a roar-en.'
- c. *Mehrere Brüller ergeben ein Brüllen/Gebrüll.*  
'Several roar-er make a roar-en/Ge-roar.'
- d. *Der Affe hat ein Brüllen/ein Gebrüll/einen Brüller ausgestoßen.*  
'The monkey uttered a roar-en/Ge-roar/roar-er.'<sup>21</sup>

The (d) example is judged grammatical for all nominals, although they denote different kinds of events: for *Gebrüll* native speakers definitely observe a chain of repeated events, also in this test. *Brüller* is judged as a one-time event (Schäfer 2008<sup>22</sup>), whereas *Brüllen* is ambiguous between a singular cry and a plural event that contains several cries. By adding the adjective *stundenlange/s/r* (as in the English example) we can avoid this ambiguity. *Stundenlanger Brüller*, for instance, would mean that the monkey took a deep breath and then uttered one single cry that lasted for several hours (which does not make sense). To sum up, we can say that in German as well as in English, we can distinguish the same two kinds of events that were observed for French. The difference seems to lie in a DURATION-interpretation that takes place with *-ing* and *-en* nominals, but not with zero-derivatives or other nominalisation processes.

In the next step I would like to find out, if the other distinction of event situations, which was observed for French (bounded vs. unbounded) is also valid for English and German. In (28), we find the other Martin-tests applied to English and German examples.

(28)

- a. *The destroying of the city (by the enemy) resulted in its destruction.*
- b. *??The destruction of the city (by the enemy) resulted in its destroying.*
- c. *Das Zerstören der Stadt (durch den Feind) endete in ihrer Zerstörung.*
- d. *??Die Zerstörung der Stadt (durch den Feind) endete in ihrem Zerstören.*

In (a) and (c), *destroying/Zerstören* are interpreted as unbounded events that are only terminated by the introduction of the result on sentence level, *destruction/Zerstörung*. The inverse analysis, where the *-ation-* and the *-ung-*nominal

21 Examples from Heinold 2009.

22 All the German and English examples from the Martin-tests were vividly discussed by a large group of German and English native speakers in the research seminar "Recent morphological and syntactic developments" by A. Alexiadou. The result were the judgments that I present here.

are supposed to express unboundedness do not make much sense. It seems that the aspectual distinction, attested for French, can be observed for English and German, too.

The examples in (28) are also of interest in the discussion about the term *Complex Event* and its linking to a realised argument. When we take the original meaning of *Complex Event*, introduced by Grimshaw 1990, we could come to the conclusion that this is nothing more than an accomplishment situation (cf. for instance, Smith 1991: 26), as it is composed by a first sub-event, in which an action takes place, and a second sub-event, in which this event finds its endpoint and a participant of the situation undergoes a change of state (Grimshaw 1990: 26).

(29) Complex Event/accomplishment: (Event<sub>1</sub><sup>CAUSER</sup> (Event<sub>2</sub><sup>CHANGE OF STATE</sup>))

Grimshaw relates the obligatorily realised object-argument to the presence of this *Complex Event* structure. The nominals in (28a) and (b), however, both have an obligatorily realised patient (*the city*), both are derived from the same verb, but *destroying* expresses an activity (which would be Grimshaw's first sub-event) and *destruction* the resultant state, Grimshaw's second sub-event. It seems that the properties that Grimshaw describes by the term *Complex Event* are mostly linked to the situation type, that *destroy* typically describes ("accomplishment verb"). In (28) we can see two realisations of this "accomplishment verb": in the first one (*destroying*), the focus is on the action or first sub-event, in the second one (*destruction*) it is on the result of the action, or the second sub-event. I am going to argue in chapter 4 that this difference in the aspectual interpretation of the two nominals is not (alone) due to the presence or absence of the realised object-argument (as can be seen in (28)), but to the suffixes that are able to import their aspectual properties into the event situation.

Another problem with Grimshaw's terminology is that *Complex Event* is rather vague and can also imply more than just the accomplishment situations. Take for instance *miaulage*. This is as well an event that consists of several sub-events, although they are of a completely different nature than the sub-events in *destruction*. If we would like to apply the mode of illustration from (27) on *miaulage*, it could look like this:

(30) Complex Event/activity: ((Event1<sub>CAUSER</sub>)(Event2<sub>CAUSER</sub>)(Event3<sub>CAUSER</sub>)(.....)))

There are several smaller events (meow-cries), associated with a causer (the cat), that follow one after another and together make up the event with the longer eventive chain, *miaulage*. Such an event could as well be regarded as complex, but expresses more the idea of duration than terminativity. For the rest of this work, I will avoid the term *Complex Event* best as possible and refer instead to the concretely defined situation types by Smith 1991 and the aspectual distinction by Verkuyl 1993, terminative/durative.

To sum up, we can say that aspectual differences of deverbal event nominals can be observed for different languages, among which we have seen examples from French, English, German and Romanian so far. It seems that these aspectual differences are not only of importance for the classification into semantic types of nominals or for the determination of the syntactic properties that go along with them. From the examples above from French, English, German and Romanian, it can also be deduced that aspect is closely linked to the derivation by different suffixes. Table 3 below is supposed to give an overview on the derivation patterns from different languages that have been considered up to here. The terminology for the aspectual classes is taken from Verkuyl's 1993 analysis of events and can be either DURATIVE or TERMINATIVE for the suffixes. Durative are those affixes that produce nouns without culmination point or focus on the action-part of an event; terminative are those that produce nouns with a culmination point or the focus on the result of the event. In chapter 4, I will give a detailed semantic analysis of the composition of nominal aspect.

| <b>Language</b> | <b>Suffixes/Morphology</b> | <b>Aspectual property</b> |
|-----------------|----------------------------|---------------------------|
| French          | -AGE                       | durative                  |
|                 | -MENT                      | terminative               |
|                 | -(T)ION                    | terminative               |
| German          | -EN                        | durative                  |
|                 | -UNG                       | terminative               |
| English         | -ING                       | durative                  |
|                 | -(AT)ION                   | terminative               |
| Romanian        | Supine                     | durative                  |
|                 | Nominalised Infinitive     | terminative               |

*Table 3: Aspectual Properties of Nominalisation Suffixes in French, German, English & Romanian*

As we can see, every language considered here has nominalisation suffixes or morphological processes that are associated with either a durative or either a terminative event. Again, French is special, because it has *-ment* as well as *-(t)ion* for the derivation of terminatives. There are multiple reasons for this, but none of them can be retraced to the aspect of events (Martin 2008b). A more detailed comparison between the French suffixes will take place in the chapters 3, 5 and 7. For another language that has been mentioned before, Spanish, there is no data and no literature I know of that deals with the aspectual distribution of its suffixes. This is the reason why I left it out in table 3. I have taken it up into the discussion in the first place, because it seems to me from the data discussed by Meinschaefer 2004 that the derivation processes listed here could possibly be another example for aspectual opposition in nominal events. This is a mere suggestion and open to be explored in detail in future work and undermine it with the appropriate data. The languages that will matter in this thesis are English, German and, above all, French.

After having considered some traditional and some new approaches to the analysis of deverbal event nominals in different languages, I come to the following conclusions: 1. it seems that when we talk about events expressed by (especially French) deverbal nominals, it is not enough to distinguish between events and their results, or events that are more and some that are less complex in Grimshaw's sense of the word. We need an aspectual analysis that covers different situation types that involve such features as DURATION, BOUNDEDNESS or DYNAMICS of an event. 2. There are analyses that cover the features mentioned above or at least similar ones (for instance Alexiadou et al. 2009, Barque et al. 2009, Meinschaefer 2004), but in my

opinion, they do not take into account all the different sub-components that make up the entire nominal expression. Some stress the class of the base verb, others attribute a lot of significance to the syntactic structure that contributes to the aspectual analysis of event nouns, and again others consider the final lexical product, the derived nominal without mentioning how this meaning is constructed. The approach that I will introduce in this work will consider all the different sub-parts that constitute together the aspect of a nominal expression derived by a verb in the semantic as well as in the morphological and syntactic dimension. In order to introduce such a theory, however, we need at first the data that helps us to underline the theoretical proposals.

The next chapter will mainly deal with French (as well as English and German) examples. I will take a look at French neologisms from journalistic corpora and see how they behave in context. Before all of this data can be analysed correctly, I have to deal with several theoretical and methodological questions that include such problems as the extraction and analysis of neologisms, the identification of aspect of nominals in context and the different opposed layers of meaning that the complicated French deverbale nominalisation system has to offer.

## CHAPTER 3 - FRENCH NEOLOGISMS

### 1 Theoretical and Methodological Discussion on Neologisms

In the previous chapter, I have discussed several approaches (mostly based on Grimshaw 1990) that offer analyses for the classification of ambiguous and unambiguous deverbal nominalisations. In this part of my work, I will look at data from French text corpora that are supposed to show, if the aspectual analysis proposed in the previous chapter works out for French. In an earlier study (Heinold 2005), I have already given an overview on the supposedly most productive deverbal nominalisation processes in French (cf. also Lüdtkke 1978, Dubois/Dubois-Charlier 1999). In that study, which was based on dictionary material (extracted from the *Nouveau Petit Robert* 1998), it became obvious that high-frequency, listed<sup>23</sup> deverbal nominalisations in *-(t)ion*, *-ment* and *-age* are highly ambiguous and develop the most diverse readings, which can reach from events and results to objects, places or instruments (cf. also Lüdtkke 1978 on secondary interpretations of French nominalisations or Dubois/Dubois-Charlier 1999). As this does not help us further with the question, according to which system French deverbal nominalisations could be classified best, I have decided to take a particular look at neologisms in the present study. Neologisms are of interest in this case, because - as Aronoff 1976<sup>24</sup> puts it - „they have not existed long, these words have not yet had any opportunity to become fixed in some idiosyncrasy. We will assume, then, that there are regular and interesting rules for making up new words...“. This means that in analysing only newly coined words of the derivation processes in question, we might find out more about an original or general interpretation of the differently derived French nominals.

With this aim, I have analysed a large number of neologisms in French text corpora and data bases. As a first step, I have extracted *-(t)ion*, *-ment* and *-age* hapaxes from French journalistic text corpora (*Le Monde* 1994, *Le Monde* 1997-2002<sup>25</sup> of the

<sup>23</sup> Terminology according to Bauer 2001.

<sup>24</sup> Page 19.

<sup>25</sup> *Le Monde* 1994: 20.542.986 words, *Le Monde* 1997: 21.437.584 words, *Le Monde* 1998: 25.254.864 words, *Le Monde*



institute for Romance Linguistics, Universität Stuttgart). According to Baayen/Lieber 1991 and Baayen 1993, hapaxes and neologisms can be seen in close relation to each other, although not every low-frequency word is an actual new word. In the following section, I will present their theory in short and document the practical problems I had with its actual application. Moreover, I will try to find a working definition for neologisms that is compatible with the practical needs. In a further step, I have examined data from the former French *CRITER* corpus<sup>26</sup> (*Corpus du Réseau Interministériel de Terminologie*), which contains newly coined words that are approved of by the *Délégation générale à la langue française*. In this corpus, we can be certain to find nothing but neologisms.

The idea of this chapter is to first give the tools and terminology that can be used in a neologism analysis that goes beyond statistics; further it should provide an overview on new coinings in French, which are supposed to give us an impression of the default interpretations of different deverbal nominalisation processes. By the analysis of neologisms, we will be able to find out better about the regularities that the complicated French suffix system is able to provide. By the analysis of the contexts that the nominals surface in, I would like to further explore a question raised in the previous chapter: which concrete lexical units in a sentence as well as in a deverbal DP are responsible for the (aspectual) interpretation of an event and how do they influence one another?

## 1.1 Hapaxes and Neologisms

This section will provide a short theoretical excursion on neologisms. Such an excursion is important for the following empirical studies in this chapter of my work. It will help to establish the working definitions that can become crucial to estimate the results of my corpus analyses. Up to now, the term „neologism“ was used in this work without really questioning it and in the rather general sense of „newly coined word“. This definition is rather vague for the discussion of my empirical results. In recent literature, such a definition has often been looked for in the context of morphological productivity. Especially Baayen 1993, Baayen/Renouf 1996 and Plag

---

1999: 25.234.178 words, *Le Monde* 2000: 25.769.763 words, *Le Monde* 2001: ca. 26.000.000 words, *Le Monde* 2002: 29.761.933 words.

26 Nowadays *FranceTerme*.

1999, 2003 have discussed the idea of a relation between neologisms and hapax legomena. This connection came up first in Baayen/Lieber 1991, where the authors have developed a theory for the statistical calculation of productivity. In this theory, hapax legomena play an important role, because they can provide information about certain word formation processes: The more often a word is used, the higher the probability that the word is established among a larger speaker group. The rarer a form, the higher the probability that it will be a neologism. This does not mean, that every rare word or hapax in a corpus *is* a neologism (cf. Plag 2003: 54). The connection between hapaxes and neologisms, that Baayen/Lieber 1991 establish, must be seen in relation with the different types of morphological processes.

If a word formation process is unproductive, there will be no rule available for the recognition or production of neologisms. In this case, all existing forms depend on their storage in the mental lexicon. An unproductive morphological process shows a small number of low frequency types and only a few (or no) hapaxes. A productive word formation rule, on the other hand, will exhibit a large number of hapaxes, because even low-frequency words with the affix in question can be produced and understood. An important factor for the hapax-neologism-connection is the size of the examined corpus. As Plag 2003 states, a larger corpus will provide us with a high percentage of neologisms among the hapaxes. With small corpora, we run the risk to only come across rather well-known words of the language in question. But how can we finally and definitely know which one of our hapaxes is indeed a neologism? Baayen/Renouf 1996 compare their list of hapaxes with the entries of *Webster's Third* (nowadays about 470.000), a, as Plag (1999: 27) calls it, „reasonably large dictionary“. If a word in their hapax list does not appear in the dictionary, the probability should be high that the word is a neologism. The problems that arise, and that Baayen/Renouf themselves and also Plag admit, do not only concern the nature of dictionaries, but also the definition of the term „neologism“. A dictionary is a mere list of more or less arbitrary chosen words (cf. Plag 1999: 27). Moreover, it is a representation of existing words at a certain point of time in rather general linguistic contexts (even if we talk about larger dictionaries as in the case of *Webster's Third*). Certainly, a high frequency word will be more probable to be listed in a dictionary than a low frequency word; but to draw the conclusion the other way round is not possible. This would leave out too many examples of simply rare words or all the

special vocabulary that is not included in the general dictionaries.

Another problem that arises lies in the definition of the term „neologism“. Neologisms can be speaker or context dependent (Bauer 2001). The word *affalage* (*affaler – faire descendre en tirant. Affaler un cordage, un chalut, Le Nouveau Petit Robert 2007: 'let something down, let down a rope, a trawl net'*) for instance, which cannot be found in *Le Nouveau Petit Robert 2007* (60.000 entries), is very frequent on *Google* in the sailing vocabulary (*affalage du spi(nnaker)*, etc.). In an adequate context and for a speaker, who knows the subject, *affalage* can hardly be counted as neologism. The word has existed and frequently been used (almost exclusively) in this very precise context (ships/sailing), which means that there is a speaker community, who has taken the word up into their lexicon. On the other hand, *affalage* is not even listed in special dictionaries and vocabulary collections on the internet (only the base verb *affaler*).

And what about general text corpora (which could be representative for average, non-specialised speakers), like the journalistic corpus *Le Monde 2002*, where we find *affalage* as a hapax? Would this not be a hint, in the sense of Baayen/Lieber 1991 and also Plag 1999, that *affalage* could be a neologism? How can we exclude in this practical example that it is not one, if, or even because, it is not listed anywhere? The following part of the chapter will deal with these questions and I will try to find a way to cope with these more difficult cases.

## 1.2 A Working Definition of “Neologisms”

In the section above, I already mentioned my problems with neologisms, especially in their relation to hapaxes. In this part of my work, I try to find a solid definition for the term “neologism”, starting out from rather general points of lexicology. In order to define a term properly, it is often best to start in its surroundings. If we want to know whether a word is „new“ in a „list“ of words, we first need more information about the „list“. Lutzeier (1995:3) defines three different lists of words. The first one is the **mental lexicon**, which represents the stored vocabulary in the mind of an individual. The second list is, what Lutzeier calls **vocabulary** (Wortschatz) and which represents the frame of a random extract of a natural language. The vocabulary is the part where lexicographic work takes place. Third, Lutzeier mentions the **lexicon**

as opposed to grammar. Concerning the relation of these two parts of language as separate entities or parts of each other, Lutzeier does not want to come to a decision. For my purpose of definition, especially the second list is of interest.

Dictionaries can be counted among Lutzeier's term **vocabulary**. Concerning the practical utility of such lists, meanings could not differ more. Bauer 2001 considers words in relation to different speaker groups and examines the notion of "listedness". „If productivity is concerned with the potentiality of new formations, then it must be possible to discover whether or not something is new, and this implies that it can be compared with a list of formations which are not new but 'established'" (Bauer 2001: 34).

He discusses definitions of existing, established and potential words: according to him, dictionaries are lists of established words, that means words that are „part of the norm“ and „item-familiar to a large enough subset of the speech community to make it worth listing in reference works“ (Bauer 2001: 36). For our example above (*affalage*), we could conclude then, that it is an existing but not established word; we have seen it being used very frequently, but we cannot find it in any list, neither in the vocabulary of the norm, nor in that of a sub-group of speakers. Here, the important point is, that the word is not considered as the norm and therefore it will be new to the largest part of the speaker community. For our example above, *affalage*, this would mean that we definitely consider it as a new word (neologism), for it obviously exists and is not part of the norm. We neither find it in general dictionaries, nor in special ones.

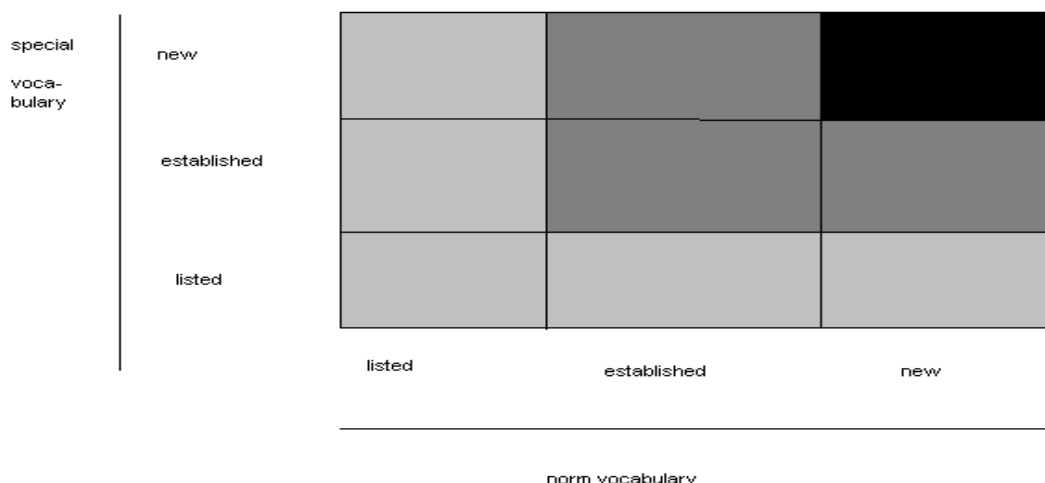
A problem with Bauer's approach is that he does not explain concretely what the so-called "norm" is or by whom it is determined. Moreover, the different areas of new, established and listed words overlap, in the general as well as in the special vocabulary. However, this approach offers us a good insight into the complex problem of dictionaries as reference works. It provides a terminology for different sets of words, but as these definitions take dictionaries as bases, they are too unprecise to help us with the concrete problem of differentiating between neologisms and non-neologisms.

Corbin 1987 is at odds with the unreliability of reference works. She provides two explanations for the non-listedness of established words: according to her, words are taken up into dictionaries either because of commercial criteria of the dictionary

publishers or because of their frequency - which is in her opinion a rather intuitive criterion and different for each lexicographer<sup>27</sup>. There is no explicit number that tells us if a word is frequent or not. In this context, Corbin also mentions the special vocabulary of sociolects or professional jargons: words that are considered rare in a dictionary of the norm, can be highly frequent in other domains and established. This means that the lexicographer's intuitiveness on the frequency of a word can be very different to that of the reader and also to more objective frequency calculations from for example text corpora. Another problem with dictionaries as reference lists, that Corbin mentions, is the high mobility of the vocabulary. Constantly new words are coined in every language, but only from a very superficial point of view we could say that there are only listed words and neologisms. A neologism is coined by an individual and needs the approbation of a speech community and the admission into a dictionary in order to be listed. However, a dictionary can never be as fast in its development as the very mobile vocabulary.

As seen above, the notion of the 'norm' comes up very often in the discussion on vocabulary or at least on the documentation and fixation of it.

(31)



27 See her comparative list of different French dictionaries on entries of „frequent“ words.

The figure in (31) is an attempt to sum up Bauer's categories for words and to show the problems that arise with them: the norm vocabulary is aligned along the x axis, the special vocabulary along the y axis. For each sort of vocabulary, there are areas for listed, established and new vocabulary. The important point is, that the areas in the model are not closed, but that the words can float in and between them. By help of this categorisation, we can evaluate the hapaxes found in the corpus. As *Le Monde* is a general journalistic newspaper, we will only consider hapaxes that fit into the black space of our model as really new words. In the next section, I will explain the methodology that I applied for my corpus study. I will give a list of points that take into account the factors discussed above and have to be considered when choosing neologisms from the extracted hapaxes.

### 1.3 The Ideal Neologism

The aim of this section is to shortly introduce a method that helps us to corner the words in the „new“ (black) space of the vocabulary model in the figure in (31). As seen above, there cannot be one single factor that decides if we deal with a neologism or not, or as Corbin (1987: 21) expresses it:

„[...] there is no really reliable lexical material, but we can agree, on the one hand, on refining and purifying the given material in order to eliminate non-linguistic waste, on the other hand, based on the obtained filtrate, on constructing a certainly virtual, but usable material. The morphologist can use two sources of information: the dictionaries and the judgment of acceptance or rejection of the speaker. If both of them are necessary, one alone is neither sufficient nor directly ready for application. (my translation)“<sup>28</sup>

The above mentioned case of *affalage* underlines Corbin 1987's statement on the work with morphological data, for it is by far not the only example that is difficult to analyse. What we need is a list of qualities that are characteristic for neologisms and

<sup>28</sup> Original quote: „[...] il n'existe pas de „données“ lexicales directement fiables, mais [qu'] il convient d'une part d'affiner, d'épurer les données disponibles pour en éliminer les scories non linguistiques, d'autre part à partir du filtrat obtenu, de construire un matériau fictif, certes, mais utilisable. Deux sources d'information sont à la disposition du morphologue: les dictionnaires, et les jugements d'acceptation ou de rejet émanant des locuteurs. Si toutes deux sont nécessaires, aucune n'est suffisante, ni directement prête à l'emploi.“ (Corbin 1987: 21).

that take listedness as well as usage into account. Table 4 below, which was compiled by my colleague Melanie Uth and me, tries to meet these requirements.

|   | <b>Criteria</b>   | <b>Corpora/Lists</b>   | <b>New word</b> |
|---|---|--|-----------------|
| 1 | listed in general dictionaries?   | <i>Trésor de la Langue Française, Le Petit Robert, Le Grand Robert, etc.</i> | -               |
| 2 | listed in special „dictionaries“?   | special dictionaries, official internet pages of specialist areas            | -               |
| 3 | listed in neologism data base?  | <i>CRITER data base</i>  | +               |
| 4 | diachronically attested?  | <i>Frantext</i>  | -/+             |
| 5 | established (in a special sub-group of speakers) but not listed?                            | <i>Google</i>  | -               |
| 6 | is there a word formation process taking place?<br>is the word formation rule recognisable? | <i>CRITER data base</i>  | -               |

Table 4: Criteria for Neologisms

The first criterion on the way to the ideal new word or real neologism is again the dictionaries (here in the plural). As mentioned before, the reasons for the listing of a word can depend on the intuition of the lexicographer, economic considerations or the edition of the dictionary. One dictionary might already have included what another one lacks. Examples are given in (32).

(32)

- a. *formatage*: found as hapax in the *Le Monde Corpus*; not listed in: *Trésor de la langue française informatisé, Petit Robert 1996*, listed in: *Grand Robert 1985*.
- b. *virgulage*: found as hapax in the *Le Monde Corpus*; not listed in: *Trésor de la langue française, Petit Robert 1996*, listed in: *Grand Robert 1985*.

But there is another sort of listedness, which plays a role as we can see in the case of the second criterion: if a word is listed in special dictionaries (or in another word collection that covers the vocabulary of a specialist area), it can or cannot be counted as a neologism, depending on the sort of text the word in question was used in. Examples are the hapaxes *gravage* ('(CD) burning') and *pigeage* (French term in wine making, which seems to designate a kind of cleaning process during the fermentation), which were not found in regular dictionaries, but listed in special

thematic vocabulary collections on the internet on IT and special wine vocabulary<sup>29</sup>.

The third and the sixth criterion belong together, because they refer to the same reference work. The *CRITER* data base is a typical result of the French language policy<sup>30</sup>. It is a terminology publication list of the *Commission générale de terminologie* with the aim of providing French expressions for English terminology for all possible topics. If a word is taken up in the *CRITER* neologism data base, we cannot only count it as a new word, but also see when it was created and what it means. However, there will not be many examples from the general corpora that fulfil this criterion.

A point that has not been mentioned so far is diachrony especially the usage of a word in that perspective. Therefore we have taken up the *Frantext* corpus<sup>31</sup> into our “reference works“. The *Frantext* corpus covers literary texts from the 16<sup>th</sup> up to the 20<sup>th</sup> century. As with some of the other criteria, the apparition of a word in *Frantext* is not exclusively a sign for an already established word. If the word in question is found once or twice in the *Frantext* corpus in recent years, but nowhere else, we can also come to the opposite conclusion, namely that this word *is* a newly coined word and that these texts are the proof of it. An example for the importance of this criterion is *figeage* ('coagulation'), which is not listed in the previously mentioned dictionaries but comes up in *Frantext* as a rather recent rare word.

Criterion 5 involves a medium that has often been questioned in the context of corpus linguistics: *Google*. As it is an open source and not a closed corpus with a certain number of words, it is impossible to tell if a word is used often or not. Moreover, we can never know everything about the sources of the site a word appears on<sup>32</sup>. What is more important for my work than mere frequency, is the question if a word is used more often by a certain speaker group than by others.

With the criteria in the table above, there should be a relatively safe way to identify a new word in the following empirical study. This means that every hapax I found in the text corpora has been checked for these criteria. The more of them the hapax matches, the more probably it will be a new word. With this procedure we take into account general and special vocabulary, listedness and usage, as well as diachronic

29 Some examples are [http://www.redwinebuzz.com/glossary\\_p.htm](http://www.redwinebuzz.com/glossary_p.htm), <http://www.loire-france.com/vins/vocabulaire.htm>, <http://jargonf.org/wiki/gravage>, etc.

30 <http://www.culture.gouv.fr/culture/dglf/terminologie/base-donnees.html> or respectively <http://franceterme.culture.fr/FranceTerme/>

31 <http://www.frantext.fr/>

32 Is it a native speaker who utters the sentence? In the case of French: is it a French or Canadian site? Furthermore, different levels and kinds of speech have to be considered.

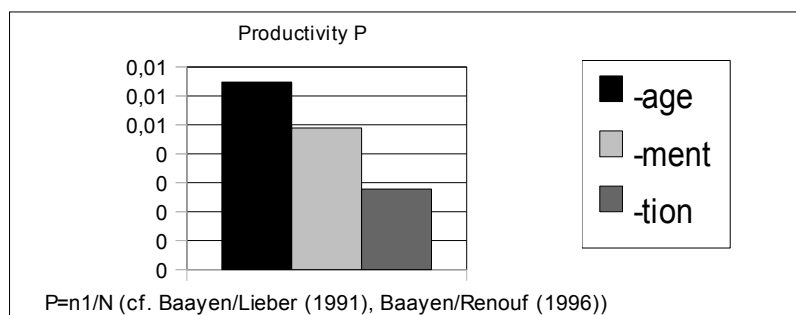


criteria. In the following paragraphs, I will introduce the actual application of the criteria introduced above and show the results of the empirical studies for the three French suffixes *-age*, *-(t)ion* and *-ment*.

#### 1.4 Extracted French Neologisms: New and Old Insights into the Competition between *-(t)ion*, *-ment* and *-age*

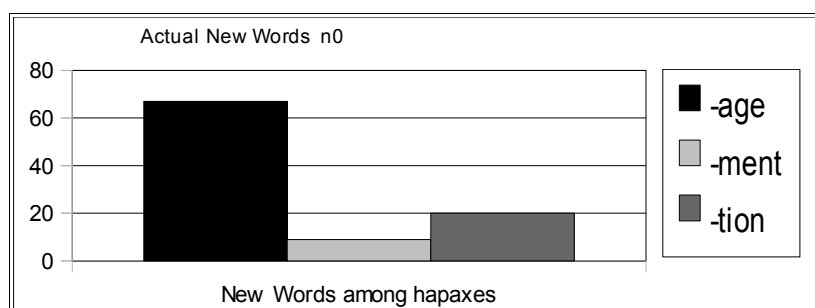
I have applied the criteria in table 4 on hapaxes extracted from the corpus *Le Monde* 1994, 1997-2002 in order to calculate their actual productivity first. At first I would like to present the statistical results that simply count all hapaxes, no matter if neologisms or not. The figure in (33) shows the productivity of *-age*, *-(t)ion* and *-ment* according to the *Le Monde* corpora. These figures are taken from Heinold 2007. We can see that *-age* is the most productive of the three suffixes, followed by *-ment* and then *-(t)ion*.

(33)



Already Lüdtké 1978 classified these three suffixes as the most important ones for the formation of action nouns, but he considers only *-age* and *-(t)ion* as progressively productive. This makes us doubt the high productivity attested for *-ment* in the figure above. When we apply, however, the criteria from table 4, we see a different picture. The actual new words for each process are shown in the figure in (34). The data are also taken from Heinold 2007.

(34)



In (34), we see that Lüdtke's estimation was confirmed. *-Ment* turns out to be the suffix with the fewest new words (only 9)<sup>33</sup>, compared to *-age*, which seems to be really productive (67 new coinings). The reason why *-ment* showed such a high frequency in the calculation with the mere hapaxes in (33) was, that many of them were just rare words of often very educated speech or even archaisms. Some examples can be seen in (35).

(35) *attisement* ('fanning (of flames)'), *tronçonnement* ('the cutting apart'), *chiffonnement* ('wrinkling'), *amourachement* ('infatuation'), etc.

Many of the *-(t)ion*-neologisms and hapaxes were from the scientific vocabulary. This suffix seems to be still restricted in its productivity to special thematic domains. As the *Le Monde Corpus* is a journalistic one and uses rather general vocabulary, the low number of neologisms with that suffix can be explained. The impression of *-(t)ion* as a scientific suffix is also confirmed by a look into the *CRITER* data base. The *-age* neologisms, on the other hand, are frequent, of various thematic domains and belong to different levels of language, although many examples of colloquial origin were found. Some examples of different registers are given in (36).

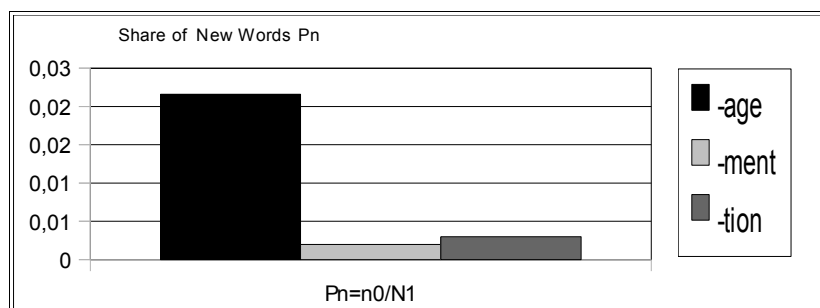
(36) *affalage* ('letting down a sail'), *baratinage* ('wheedling of sb'), *centrifugeage* ('centrifugation'), *chaloupage* ('dancing, swinging'), *charognage* ('going for carrion'), *cliquage* ('clicking (on the computer)'), *crapahutage* ('clambering'), *merdouillage* ('sucking, going wrong'), etc.

In (37) we see the share of actual new words of every suffix among the hapaxes that were extracted. Here, the picture becomes even more biased in favour of *-age*.

<sup>33</sup> The numbers seem very low when we consider the size of the corpus and have already been doubted. Many of the hapaxes extracted in the first stage were, however, not real derivations of deverbal nominals, but just new compounds (or newly prefixed variants) of already existing deverbal nominals: frequent combinations included *quasi-*, *auto-*, *après-*, *sous-*, *non-*, *contre-*, *semi-*, *vidéo-*, *éco-*, *multi-*, *mini-*, etc. All these cases were excluded in the reanalysis.

The numbers for new coinings with *-ment* and *-(t)ion* are extremely low.

(37)



When we take a look at the numbers above, it becomes obvious that we should not rely on the mere probability that hapaxes *could* be neologisms. Hapaxes can also be just rare words, archaisms (which is very often the case with the *-ment* and not so often with the *-age* derivatives) or new compositions with actual high frequency derivatives as second element. Nevertheless, all hapaxes are counted as potential new words in the statistical model, because it is based on the assumption that the share of neologisms among them is more or less the same for each word formation process in a corpus. This is not the case. As we have seen, it plays a role if the corpus is of journalistic, scientific or literary nature, how large it is and how far it reaches back in time.

Having applied the criteria for the identification of neologisms to the extracted *-age*, *-ment* and *-(t)ion* derivatives, we can observe the following results. The *-age* process creates a lot more neologisms than the *-ment* process, compared to the total number of hapaxes and in the entire sum. Moreover, the *-age* neologisms can be more easily and more clearly identified. With *-ment* hapaxes, we often encounter archaisms and simply rare words of the more educated vocabulary. The candidates for *-ment* neologisms are capricious: often they can be found with some few occurrences in the older literature of *Frantext*, but (no longer?) in general or special vocabulary lists. Another interesting fact is, that for almost every neologism candidate of *-ment*, there is already a listed rival<sup>34</sup> in *-age* or *-(t)ion*. This is not the case with the *-age* derivatives. It seems that *-age* is presently the most productive process of the three and is the one favoured, even when the derivation with the other two were possible.

All in all we could say that *-age* has left the other two processes behind, when we

<sup>34</sup> Only some examples are *bidonnement – bidonnage*, *chalouplement – chaloupage*, *parrainement – parrainage*, etc.

are speaking of productivity. Moreover, it attaches to bases of different registers or jargons (*affalage*, *baratinage*, *centrifugeage*, *merdouillage*) and of different origin (*zappage*, *dopage*, *cliquage*, *affalage*, *baratinage*)<sup>35</sup>. In order to find out more about the properties of derived nominal neologisms, we had to find the neologisms themselves first. In the next section, I will describe the problems that occurred in the analysis of the interpretations of the extracted neologisms. I will combine the theoretical classifications from the Grimshaw tradition and my actual data from French.

## 2 The Interpretation of Nominalisations in Natural Contexts

In works on the argument realisation properties of deverbal nominalisations, which are mostly based on Grimshaw 1990, it has often been argued that argument structure can only be observed with a certain class of nominals, the so-called *Complex Event nominals*. Other classes of nominals, such as *Simple Event* or *Result* nominals do not take obligatory arguments. The difference between the two types of event nominals is said to be in the complexity of the event, which can be divided into several sub-events. In this section, I would like to describe the problems that I faced with the theory-based classifications of nominalisations in the actual, practical case of my extracted neologisms. In order to determine, which interpretations the extracted neologisms have, I tried to look out for the indicators of *Complex* or *Simple Events* that are often mentioned in the literature<sup>36</sup>, such as obligatorily realised arguments of nominalisations, plurals in addition with aspectual modifiers, determiners, and so on. In arbitrary context (such as the one in my corpora opposed to the one constructed by linguists for their examples), however, such indicators are, firstly, rather rare.

Secondly, other rules seem to apply for indicators like argument realisation or determiners, because they are often influenced by the surrounding context, which appears in corpora, but not in constructed examples. In the following, I would like to show, why it is difficult to apply the Grimshaw properties of nominals to real corpus data. Especially, argument structure, as a criterion to identify certain readings of event nominals, will be discussed. I will show that context is a factor that cannot be left aside in the discussion on argument realisation even with event nominals.

<sup>35</sup> More on the topic of *-age* with English bases, in chapter 6.

<sup>36</sup> For a detailed overview on all the syntactic properties, cf. chapter 2.

Moreover, I would like to describe other means to deal with the different interpretations that derivatives in corpora display.

## 2.1 Syntactic Properties of Nominals: Different Reasons for Argument Realisation

In my corpus work on French (as well as on English and German) deverbal nominalisations, I systematically observed examples that are not supposed to exist according to Grimshaw 1990. The properties for which often unpredicted examples were found are, firstly, the obligation of the arguments and, secondly, the definiteness or indefiniteness of the determiners. In the following, especially argument structure with nominalisations, as a means for the interpretation of the event, will be analysed. In (38) typical examples are listed, which appeared during the extraction.

(38)

- a. Eng. *Meanwhile, despite the constant hunting and intensive efforts to reduce the coyote population, [...]*
- b. Ger. *Die Schmerzattacken und das ständige Vermeiden ruinieren den eigenen Ruf.*  
'The seizures of pain and the constant avoiding ruin the own reputation.'
- c. Ger. *Eine andere, lustige Bastelart ist das Stempeln und Drucken.*  
'Another funny kind of crafting is (the) stamping and (the) printing'
- d. Fr. *Pour Emirates Team New Zealand, il devenait évident que l' équipier d'Alinghi avait interféré sur l'affalage. Les Néo-zélandais ont donc déposé leur réclamation, dans les limites du temps réglementaire.*  
'For Emirates Team New Zealand, it became obvious that the team member of the Alinghi had interfered with the letting-down. So, the New Zealanders handed in their reclamation in the regular time limit.'

What are we to do with such examples? How can we determine with certainty, what their interpretation is? If we agree with Grimshaw's proposal, all nominals that realise their arguments obligatorily (and maybe have an aspectual modifier additionally) also display a *Complex Event* structure. Examples like those in (b) for instance would then be difficult to classify, because they show syntactic and semantic mismatches: on the one hand, the argument of *Vermeiden* ('avoiding') is not realised, which should classify the nominal as *Simple Event*. On the other hand, it is difficult to see how far this nominal can semantically not be divided into sub-events (which would turn it into a *Complex Event*). In the case of *Vermeiden*, we could say that the event is split into an action (trying not to run into people) and its result (successfully

not having met anyone). The problem, we face with this example is, that the participants of the action are somehow understood due to the context. Although subject and object are not realised directly with the nominal, the participants of *Vermeiden* are semantically present: we know from the meaning of the verb, that there must be a person who executes the action and another element being the theme of it. So, the diagnostics of argument realisation does not help us fundamentally for the distinction of Grimshaw's *Complex Event* nouns when we analyse larger contexts. Arguments that could be included in the meaning of the event denoted by the nominal might not surface in the direct surroundings, because they are realised elsewhere in the preceding context.

Another problem with argument realisation as an indicator for *Complex Events* in corpora is, that there are arguments that can easily be left out without diminishing our understanding of the entire event or without creating an impression of a “lack” (that people could have when hearing such combinations as *The frequent destroying by the enemy*). García/Portero 2002 discuss different cases, in which objects (of verbs) can easily be omitted in context. Besides the anaphoric relations that I mentioned above, where an object is predictable from the (preceding) context, objects can also be predictable by the meaning of the verb. García/Portero give examples like *dance a dance*, *sing a song*, *dream a dream*, *die a death*, which they categorise as having “cognate objects”. Such objects are that specific, that they can usually be left out. Other less specific objects are *clothes* for *sew* or *cigarette* for *smoke*. They are not as redundant as their cognate counterparts, but still easy to reconstruct when left out. A third reason for leaving out objects is, according to García/Portero, a differentiation of aspectual readings. They give the following examples that refer to verbal constructions:

(39)

- a. *John ate an apple \*for an hour/in an hour.* (accomplishment)
- b. *John was eating for an hour/\*in an hour.* (activity)

In this example, we see two events, expressed by the same verb, *to eat*. In (a), the object, *apple*, is realised. The whole sentence describes an accomplishment situation. In (b), the event designates an activity and the object is not expressed. In both sentences something is eaten, only in (a) the object is specified (apple) and in (b) it

is not. In expressing the object on the surface, the focus in (a) lies on the result of the event (the apple having disappeared) and in (b) on the action of *eating* as such, which would go into the same direction as the Grimshaw analysis. According to García/Portero, however, also indefinite and generic objects can provoke the activity reading<sup>37</sup>.

(40)

- a.        *He ate **a plate of spaghetti** in ten minutes.* (accomplishment)
- b.        *He ate **spaghetti** for ten minutes.* (activity)

In (40) we can see, that, although in both cases the object is realised, we obtain two interpretations, that differ in aspect. When we try to apply Grimshaw's semantic description of a *Complex Event* on these two examples, we get into trouble. In (40a) the syntactic and semantic conditions for a *Complex Event* are met: the object argument is realised and the event can be sub-divided into event<sub>1</sub>, the action, and event<sub>2</sub>, the resultant state, where the entire plate of spaghetti is gone. In (40b), we also find a realised argument, but in the semantics, the sub-event<sub>2</sub> seems to lack, since the entire sentence describes an activity and there is no visible result (yet), although we have an object argument that, theoretically, could undergo a change of state or is about to undergo a change of state. So the verb *eat* can either realise or not realise its argument, but when it does, it can even have two different aspectual interpretations, depending on the quantification of its object (cf. also Verkuyl 1972, Krifka 1989). In such cases, the presence of a realised object argument does not necessarily mean that we obtain a *Complex Event* interpretation. García/Portero's analysis of argument realisation factors in context can also be transferred to deverbal nominals. The role that the quantification of the realised argument plays will be discussed in detail in chapter 4 by help of Verkuyl's 1972 approach of aspect composition.

A paper, which also claims that argument realisation depends a lot on the context, is Kaufmann 2005. She analyses German deverbal nominalisations according to Grimshaw's classifications and properties. In a corpus study, Kaufmann deals with German nominalised infinitives, which she suggests can be compared to English *-ing*-nominalisations, concerning their verbal syntactic properties. The nominalised

<sup>37</sup> Such a distinction is also central in the theories of aspect composition, like Verkuyl or Krifka, which will be discussed in detail later.

infinitives of transitive verbs that she found, occurred most of the times either with only their object-argument or with no argument at all.

(41)

- a. *Beim Aufbrechen der Kasse blieb der 22-Jährige mit den Fingern stecken.*  
'During the breaking open of the cash register, the 22-year-old got his fingers stuck.'
- b. *Die Besonderheit dieser Technik liegt im schnellen Brennen des glasierten Gegenstandes.*  
'The specialty of this technology lies in the quick burning of the glazed item.'

(42)

- a. *Der Austausch von alten Heizkörpern gegen moderne erleichtert der Hausfrau auch die tägliche Arbeit durch bequemeres Reinigen.*  
'The exchange of old heaters for modern ones eases the housewife's daily chores through more comfortable cleaning.'
- b. *Die Schlösser wurden in einen normalen Sicherheitsbeschlag - ein äußeres Metallschild, das ein Schloss gegen gewaltsames Aufbrechen schützen soll – eingebaut.*  
'The locks were built into normal security plating - an external metal plate that was supposed to protect a lock against violent breakage.'

The difference between the examples in (41) and (42) lies, according to Kaufmann, not in the complexity of the events described by the nominals, but in their referential or non-referential use, as all carry an event argument<sup>38</sup>. The nominals in (41), with realised object, denote a concrete, individual event. They need to realise a participant in order to be identified. In the (41a) example for instance we look at a certain event at a certain point in time, which can be observed by other people (here, maybe the police or a camera) and in which a certain 22-year-old was involved. The nouns in (42) carry an event argument, too. They, however, do not express an individual event, but an event type. This is also underlined by their quantification. *Durch bequemes Reinigen*, as well as *gegen gewaltsames Aufbrechen*, are both bare nouns and express an unbounded, generic event.

Another factor that influences argument realisation with argument-structure-nominals, according to Kaufmann, are the semantic selection restrictions of the base verb. There are some arguments that are more typical for a verb than others. This is similar to what García/Portero 2002 claim for the examples from the verbal domain and the so-called cognate objects.

<sup>38</sup> Grimshaw 1990 as well as Kaufmann 2005 claim that some deverbal nominalisations carry an event argument, like verbs do, whereas others have a R(eferential)-argument and therefore display the referential properties of classical nouns. In Grimshaw's classification the nouns with Ev-argument are the Complex Event nouns. The nouns with R-argument are Simple Events or Results. Kaufmann rejects this linking of argument-structure with Grimshaw's event analysis and only adopts the two kinds of referential arguments.



- (43)
- a. *Sie passen sich den Körperformen besonders gut an und erleichtern auch das Atmen der Haut [...]*  
'They adapt particularly well to body forms and also ease the breathing of the skin [...].'
  - b. *Sie passen sich den Körperformen besonders gut an und erleichtern auch das Atmen.*  
'They adapt particularly well to body forms and also ease the breathing.'

Just *das Atmen* ('the breathing') in the example in (43b) implicates an object-argument denoting an agent, a person, which would be associated with the action expressed by the nominal. In (43a), however, the object-argument has to be realised, because *Die Haut* ('the skin') is not the argument of *Atmen* that would be associated that easily, when left out in the structure. This means that another reason for argument realisation is the disambiguation among several possible (non-typical) participants.

A third factor that can determine the surfacing of an argument is the "perceptibility" of an event. Kaufmann claims that events expressed by verbs of emission (*Klirren*, *Weinen*, *Schreien*, etc.) do not need to realise their participants, because they can be perceived without us knowing the person responsible for it. Spatio-temporal individuation of the event is possible via the sound (or the visible signal) that is produced in the event. Note, however, that the nominalisations derived from such verbs do not describe results. They are not able to form a plural ((44a) *\*die Knacken*, (44b) *\*die Klirren*, *\*die Dröhnen*).

- (44)
- a. *Als eine Funkstreife der Polizei gegen 3.40 Uhr [...] ein verdächtiges lautes Knacken vernahm, schöpfte sie Verdacht.*  
'When a police patrol heard a suspicious loud cracking around 3.40 a.m., they became suspicious.'
  - b. *Das Klirren und Dröhnen, die lauten Schreie, Anweisungen und Werftsirenen sind kaum noch zu hören, [...]*  
'The clinking and booming, the loud screams, instructions and dockyard sirens are hardly audible any more, [...]'<sup>39</sup>

All in all, Kaufmann considers the argument realisation of nominals with event argument to be mostly a semantic matter. In her analysis, the division into *Complex* and *Simple Events* is not of importance, but rather the presence or absence of the event argument. For nominals that carry such an argument, the realisation of their

39 All examples from Kaufmann 2005.

participants is, however, linked to usage factors. They express their participants in order to individuate and identify events. The omission of the argument can create an unbounded event reading, an event type.

To sum up, the realisation of object arguments does not seem to be an appropriate means to differentiate between *Complex* and other events. Firstly, in context this criterion is often not applicable. An object can easily be present in the linguistic surroundings or be semantically incorporated into the verb meaning (or at least strongly associated with it). Secondly, the syntactic criterion of object-argument realisation does not seem to be one hundred percent compatible with Grimshaw's idea of *Complex Event*, especially when aspectual differences are being expressed. It rather seems that the quantification of the object argument can have an aspectual impact. In the examples in (44), only the bounded quantification of the (a)-example contributes to an accomplishment reading in contrast to the activity interpretation of (b) with its unbounded object. This last point, the quantification of the object argument, will turn out to become essential in my later analysis that takes up the aspectual composition according to Verkuyl.

## 2.2 Non-nominal, Aspect Indicating Material in the Context

Another of Grimshaw's diagnostics, with which we can differentiate between the many readings that deverbal nominals display, is the presence of aspectual modifiers such as *frequent*, *constant* or the like. These adjectives, however, do only rarely appear with nominalisations of all kinds in corpus texts. Moreover, in many extracted (French) examples, they cannot be just added, either because it does not make sense in this certain example or because the construction itself would be odd. French speakers in general do not seem to like constructions like the one below very much. They often remark that the construction sounds unnatural, especially with the adjective in the pre-nominal position. However, they cannot specify the reason for this<sup>40</sup>.

---

<sup>40</sup> One reason, which will also be discussed in chapter 4, where constructed examples from English and German are presented, could be that the DP has to be judged for its grammaticality on its own, outside of a larger context. An event which would usually be expressed in sentence form (*They inflated the hoop frequently*) is presented in a reduced form (DP) which lacks any spatio-temporal anchoring via, for example, an inflected verb. When hearing such event DPs on their own, speakers often remark that they would rather use an entire sentence to express the same fact.

- (45) *Le fréquent gonflage du pneu. / Le gonflage fréquent du pneu*  
 'The frequent inflating of the hoop.'

The general problem with Grimshaw's properties of the different nominalisation types is that they do not really figure in that way in written corpora. They might be interesting when we would like to find out the grammatical properties of constructed data that can be judged by native speakers, but they cannot be applied in work with text corpora.

Another paper that deals with aspectual indicators of (French and Spanish) nominalisations is Huyghe/Marín 2007. As they assume the Vendlerian aspectual classes for base verbs, which they first try to classify according to dynamic and static situation types. A test that they mention for French is the possibility of embedding dynamic nominals into verbal structures, such as *effectuer un N* or *procéder à un N*. However, they admit that these surroundings, too, are not that frequently found. Modifiers that can be added in order to test the difference between duration and punctuality are the classical *de x heures/jours/mois* ('for x hours/days/months'), which are also well-known for English or German examples. However, it seems that such indicators are not very common in French and Spanish text corpora examples, too. This means that in order to specify the readings that appear in corpora, we cannot really make use of the diagnostics that theoretical works rely on. Moreover, we still have not resolved the question, which role these modifiers play in the interpretations of an event expressed by a nominal. Do they only *indicate* a certain aspect or do they *contribute* to the temporal interpretation of the event (cf. for instance Verkuyl 1993, de Swart 1998)? I will discuss this question in detail in chapter 4 in the section on inner and outer aspect. In the next section, I would like to analyse what information can be drawn from the immediate contexts of nominalisations and how far it can be applied in order to determine, for instance, aspectual differences of nominalisation meanings.

### 2.3 Nominalisations and Sortal Contexts

A work that takes the different contexts that nominalisations can appear in explicitly into consideration, is Spranger/Heid 2007. Here, ambiguous high-frequency *-ung-* nominalisations in German are analysed according to their contextual surroundings.

Interesting phenomena that can help to disambiguate the interpretations are lexical combination partners of the nominal in question or the syntactic structures they figure in. In order to distinguish between the different readings, Spranger/Heid use the classification of different nominalisation types by Ehrich/Rapp 2000. According to them, German *-ung*-nominals can be interpreted as events (in Ehrich/Rapp a subclass of eventualities and coming close to Grimshaw's *Complex Events*, because they are telic), resultant states or objects. Spranger/Heid (2007: 5) offer the following indicators to differentiate at least between objects and events.

| Type                                    | Examples  |
|---|---|
| Reference to event phase                | Nominalisation as subject: <i>Messung geht weiter</i> ('measuring goes on')   |
|   | Nominalisation as object: <i>Messung aufnehmen, fortsetzen, abschließen</i> ('take up, continue, finish measuring')         |
| Duration predicates                     | Adjectives: <i>fortlaufende</i> ('progressive'), <i>kontinuierliche</i> ('ongoing') <i>Messung</i>                          |
|   | Temporal PPs: <i>während der Messung</i> ('during the measuring')   |
| Selection restriction of verbs of order | <i>Messung anordnen, vorschreiben, veranlassen</i> ('arrange, prescribe')   |
| Lexical collocations                    | Support verbs: <i>Messung findet statt</i> ('measuring takes place'), <i>Messungen durchführen</i> ('conduct measurements') |
| Local/Temporal adjuncts                 | <i>Messungen an Straßen</i> ('at streets'), <i>Messungen im Sommer</i> ('in the summer')                                    |

Table 5: Context Indicators for Event Interpretations according to Spranger/Heid 2007

| Type                   | Examples   |
|------------------------|--|
| Static predicates      | <i>Messungen liegen vor</i> ('are available')  |
| Value indicating verbs | <i>Messung liegt bei &lt;value&gt;</i> ('Measured value is at <value>')  |
| Use with proving verbs | <i>Messung beweist/zeigt, dass.....</i> ('the measured values show that...'); <i>jemand zieht aus der Messung den Schluss, dass</i> ('from the measuring, one can conclude that...') |

Table 6: Context Indicators for Object Interpretations according to Spranger/Heid 2007

When we take a look at the indicators in table 5 and 6, we see that some of the properties of nominalisations suggested by Grimshaw, such as object argument realisation do not come up at all. Spranger/Heid rather analyse frequent combinations of verbal or adjectival lexical elements with the nominal in question. Via their meaning, such composite elements can show us, if the interpretation of the

nominalisation is rather static (*are available, is at x*) or rather dynamic (*takes place, are conducted, etc.*). Such an analysis is a corpus-oriented approach that can disambiguate the interpretation of the nominal for us as frequently appearing contexts are figured out. Sadly, this work does not really differentiate contexts of different aspects of events, such as activity opposed to accomplishment readings or the like. Although the authors mention duration predicates, they do not really go into detail and do not figure out a contrasting reading, such as “terminative” in comparison to “durative”.

In this part we have seen contrasting approaches that deal with the analysis of different interpretations of nominalisations. Whereas Grimshaw 1990 relies mostly on grammatical differences that can be shown in single (often opposed) constructions out of context, Spranger/Heid try to collect the most frequent semantic surroundings of nominalisations in corpora. Both approaches are not entirely applicable for my purposes: Grimshaw analyses grammatical constructions that do not figure very frequently in (especially French) corpus data. Moreover, the realisation of object-arguments is a complex matter with various backgrounds that cannot be applied equally to every example that might be extracted (see Kaufmann 2005 or García/Portero 2002). Spranger/Heid do analyse corpus data, but they do not explicitly distinguish between different kinds of events, such as activity or accomplishment. A mixture of both approaches can possibly bring about the data I am looking for. In the next part, I will introduce my analysis of the extracted French *-age*, *-ment* and *-(t)ion* neologisms and the syntactic and semantic contexts, I found with them.

### **3 Analysis of French Neologisms and their Syntactic and Semantic Surroundings**

Following the method of Spranger/Heid 2007, I have analysed the contexts of the *-age*, *-ment* and *-(t)ion* neologisms that were extracted beforehand from the *Le Monde* Corpora 1994, 1997-2002<sup>41</sup>. My purpose was to classify the event-nominalisations according to the different situation types that Smith 1991 proposes: accomplishments, achievements, activities, semelfactives. I choose this kind of analysis over the Grimshaw or Ehrich/Rapp distinction, because aspect will be a

---

41 For discussions on the methodology of extraction see section 1.1. of this chapter.

central point of my theoretical analysis in chapter 4. Moreover, this classification gives us the possibility to differentiate between several event types and define them concretely (see chapter 2). Unlike other approaches, I do not really take into consideration results or objects, but focus on different kinds of events. After presenting the observed interpretations of the neologisms of each process, I will discuss the syntactic and semantic indicators that add to the classification of the noun.

### 3.1 Interpretations of *-MENT* and *-(T)ION*-neologisms

The first two processes under consideration are French *-ment* and *-(t)ion*. They are analysed together, because they seem to contrast in their aspectual behaviour with *-age*-nominals, as we have seen in the literature, such as Martin 2007, 2008a or Uth 2008<sup>42</sup>. *-Ment* and *-(t)ion* both show a quite homogeneous picture, at least in their event readings. The tables below show the distribution of the observed interpretations, according to situation types. Moreover, I add the categories Result and Object, because they came up in the actual data; they will, however, not play a role in the later analysis.

| <i>Interpretation</i> | <i>-MENT</i> |
|-----------------------|--------------|
| <b>Accomplishment</b> | <b>6</b>     |
| Achievement           | -            |
| Activity              | 1            |
| Semelfactive          | -            |
| Result                | 1            |
| Object                | 1            |

Table 7: Results of the Neologism Analysis: Interpretations of *-ment*-nominals

| <i>Interpretation</i> | <i>-(T)ION</i> |
|-----------------------|----------------|
| <b>Accomplishment</b> | <b>16</b>      |
| Achievement           | -              |
| Activity              | 2              |
| Semelfactive          | -              |
| Result                | 1              |
| Object                | 1              |

Table 8: Results of the Neologism Analysis: Interpretations of *-(t)ion*-nominals

42 For a more detailed introduction of these approaches see chapter 2.

In the tables above, we can see that accomplishments are the situation types most often found with *-(t)ion* as well as with *-ment* nominals. This distribution can not only be traced back to the base verbs of the analysed nominals, which express dynamic events (Verkuyl 1993), but also to their syntactic surroundings. All of the observed accomplishment interpretations had one syntactic property in common that made them very easy to distinguish: all of the nominals in question had their object-arguments not only realised, either adjacently or somewhere in the near preceding context, but these objects were also count-nouns (as proposed in Smith 1991's definition of accomplishments). In (46) we see some examples.

- (46)
- a. *La **prosaïsation du contenu** entre deux couvertures de livre [...]*  
'The prosaisation of the content between two book covers...'
  - b. *[...] il inclut la privatisation des entreprises publiques, la **flexibilisation du régime de l'emploi**, la loi sur les hydrocarbures, [...]*  
'He includes the privatisation of the public companies, the flexibilisation of the form of employment, the law on the hydro-carbides...'

The realised count argument was the top indicator for determining an accomplishment reading. In such cases, also a realisation of the argument in preceding context was taken into account. The other situation types and interpretations such as object and result, could rather be detected via semantic contextual factors as proposed by Spranger/Heid or Ehrich/Rapp. In (47), the verb "entendre" indicates that we are talking about a sound, which is the result of an action and not the action or event itself<sup>43</sup>.

- (47) *On entend aussi le chaloupement des ensembles de percussions [...]*  
'One can hear as well the rocking of the percussion groups [...]

For the determination of an activity reading via contextual, semantic factors, there are several possibilities (of which we will discuss the majority in the section on *-age*, because there were many more examples). One of them is also mentioned by Spranger/Heid 2007, namely the modification by durational adjectives, such as *progressive* or *ongoing*, etc. I associate such predicates with activities, because they imply duration, which is a feature of activities according to Smith 1991, or non-

---

<sup>43</sup> It could for instance be pluralised, which would be a criterion for a result, according to Grimshaw.

terminativity in Verkuyl's 1993 terms. An example is given in (48).

- (48) [...] *il est clair que cette crise actuelle ne vient pas d'un quelconque désintérêt de la politique, [...], mais de cette vampirisation progressive du registre de la représentation.*  
 'It is obvious that this current crisis is not caused by an arbitrary lack of interest in politics, but by this preceding vampirisation of the way of representation.'

The question with this example, however, is, whether the non-terminative aspectual interpretation is caused by the event itself, expressed in the DP or by the mere addition of the aspectual modifier, *progressive*. It seems to me that if we take away the aspectual modifier and only look at the aspect that the DP displays, we should rather attest terminative aspect: *la vampirisation du registre de la représentation*. This is the problem that I have already mentioned several times throughout this work, for instance in the analysis of *Beklebung der Wand* by Ehrich/Rapp 2000 in chapter 2: is it possible that there are two different types of aspectual interpretation, one that only considers the event as it is expressed by the predicate as such and another one that can be brought about by elements on sentence level, such as tense, modal verbs or – as in this case – modifiers? Verkuyl 1972, 1993, 2005b offers a possibility to distinguish in such cases between “inner” and “outer” aspect. Inner aspect deals with the aspect on phrase-level (in Verkuyl's case the VP, in my case perhaps the DP/NP?); outer aspect, on the other hand, refers to aspect introduced on sentence level<sup>44</sup>. Is the same distinction important for nominalisations which express events? If it is, where does inner aspect for nominals end and outer aspect start? From the example in (48) it seems to me that a differentiation of different levels of aspect does matter. Such difficult cases, as the one above, will be reconsidered from Verkuyl's aspect compositional point of view in detail in chapter 4.

In general we can say that *-ment* and *-(t)ion* neologisms display what has been already tried to show with constructed examples, as the ones by Martin 2008a (*miaulage* vs. *miaulement*): they predominantly create accomplishments or bounded events. This is underlined by their syntactic behaviour: in all of the examined cases, a count object-argument was realised in the direct or proceeding context. This is a property of accomplishments in several theories, such as Smith 1991 or Verkuyl 1993. Activity readings were not only rare with these nominals, but seemed to be mostly caused by aspectual modifiers in their surroundings as it was the case in (48).

<sup>44</sup> For a contrasting view of the different levels of aspect and the influence other aspectual elements of the sentence can have on the predicate, see works on coercion and aspect shift, such as Moens 1987, Pustejovsky 1991, de Swart 1998, etc.



To sum up we can say that in the neologism analysis of *-ment* and *-(t)ion*, accomplishment readings are predominant. This fits well into the picture that Martin 2007 and Uth 2008 developed for these two suffixes: it seems that they are linked to terminative aspect. Moreover, they also figure frequently in syntactic frames that are characteristic for terminativity: they mostly appear with a bounded realised object-argument. In the next part, I will show which results were obtained for the *-age*-neologisms.

### 3.2 Interpretations of *-AGE*-neologisms

For the extracted *-age*-neologisms, the picture looks exactly the opposite way as those for *-ment* and *-(t)ion* above. In the table below the results are presented. The first property that becomes obvious, when looking at the *-age* data, is that activities are the dominant situation types, expressed by the extracted nominals.

| <i>Interpretation</i> | <i>-AGE</i>    |
|-----------------------|----------------|
| Accomplishment        | 4              |
| <b>Activity</b>       | <b>52 (+3)</b> |
| (Semelfactive         | 3)             |
| Result                | 4              |
| Object                | 2              |
| State                 | 2              |

Table 9: Results of the Neologism Analysis: Interpretations of *-age*-nominals

For the classification of activities, there were many different indicators. Most of them are associated with interpretations of regularity, ongoing aspect, attitudes or a hobby-like character. The top indicator was again the realised object-arguments somewhere in the (larger surrounding) context, but unlike with accomplishments, they had an unbounded quantification (*taggage de plaques* - 'tagging of signs'). In table 10 all the indicators are summed up.

|                            | <b>Indicators for activity readings with -age nominals</b>   |
|----------------------------|--|
| Object realisation         | The realised object must express unboundedness or mass interpretation  |
| Modification - durative    | <i>Une séance de x-age</i> (A session of x-age), <i>un mois de x-age</i> (A month of x-age)  |
| Modification – habitual    | <i>un travail/pratique de x-age</i> (a work/practice of x-age), <i>une compagnie de x-age</i> (a x-age company), <i>x-age d'habitude</i> (habitual x-age), <i>activités comme le x-age</i> (activities like x-age) |
| Modification - inchoative  | <i>à l'attente du x-age</i> (expecting the x-age), <i>x-age commençant</i> (the beginning x-age)   |
| Other syntactic indicators | Mass quantification of the -age nominal itself ( <i>Du x-age</i> )   |

Table 10: Context Indicators for Activity Readings Found with -age-nominals

There are many cases in which the deverbal nominals surface in modification constellations with adjectives, nouns or verbs that express duration, habitual character and beginning. All these three concepts are associated with activities, mostly because we do not know the endpoint of such events. Modifiers of duration express a time span, such as *une séance de* ('a x-session') or *un mois de* ('a month of'). Habitual modification takes place when kinds of work, working practices or activities and hobbies are mentioned. I also took *une compagnie de x-age* as a habitual modification, because in this expression it seems that the activity expressed by the -age nominal is typical for the work done in the mentioned enterprise, and in that sense it is also habitual, for it is done every day. Inchoative modifiers put the focus on the first part of an event, the activity that is going on, and spare the endpoint. Examples for such modifiers are *le x-age commençant* ('the beginning x-age') or *à l'attente du x-age* ('in anticipation of x-age'). A last criterion for an activity reading has to do with quantification as well: it seems that the quantification of the -age-nominal itself matters, too. It gives the entire expression an unspecific reading and renders it again hobby-like or in another way regular. Examples are the partitive or indefinite articles in the examples below.

(49)

- a. *Lui aussi, des boulots, il en a faits: **du castrage de maïs** au carrelage...*  
'He, too, has had jobs: cutting corn on the field squares...'
- b. *Désormais, M. Fabius multiplie les manifestations d'encouragement à l'égard de l'association. **Du cajolage**, sans engagement, ni acquiescement [...]*  
'In the meantime, Mr Fabius multiplies his encouraging manifestations towards the association. Flattering without commitment or approval...'
- c. *[...] l'importance au paléolithique des activités, non de chasse, mais de "**charognage**", **de dépeçage**, de transport [...]*  
'The importance of activities during the paleolithic times, not like hunting, but going for carrion, dismembering, transporting...'

So basically there are two types of elements that can help us with the disambiguation of nominals in context. On the one hand the sentence context in which a nominal is embedded can tell us, if we deal with an eventive, a resultative or an object interpretation, as it was already stated in several works such as Ehrich/Rapp 2000, Spranger/Heid 2007 or Barque et al. 2009. Even aspectual differences of events, such as duration in contrast to terminativity, can be expressed via certain modifiers. It seems to be the case however, that this kind of aspect is not necessarily the same as the one expressed by the nominal itself.

The aspect that the nominalised predicate expresses, on the other hand, can be attached to a different indicator: it seems that the syntactic configuration, in which the nominal is realised is central for the differentiation between bounded and unbounded event types. Here it is not only relevant, if the internal argument of the base verb is realised (in an *of*-phrase) somewhere in or understood by the context, but also how the internal argument is quantified. The same is true for the quantification of the deverbal DP, too. By the choice of the determiners we can differentiate between terminative and durative events. This last kind of aspect seems to be different than the aspect that is expressed in the entire sentence. A terminative nominalised predicate, like *la vampirisation du registre de la représentation*, can be presented under a progressive angle or viewpoint (Smith 1991). This is in my opinion what Verkuyl labels as inner and outer aspect. In chapter 4 I will give an analysis of these two kinds of aspect.

An interesting class of nominals found with the *-age* derivation, was what I call semelfactives. Smith 1991 attributes the following features to this class: [-STATIVE], [DURATION], [-TELIC]. This means that they share all features of the activity class, besides [DURATION], which has a positive value with activities. But, as mentioned before, one of the properties of the suffix *-age* is, that it is able to induce duration or

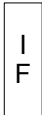
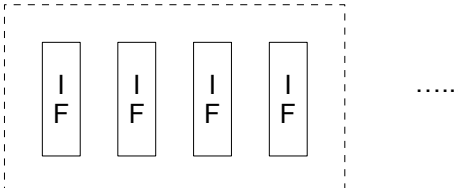
pluractionality. Recall the *miaulage* examples from chapter 2 (repeated here as (50)).

(50)

- a. *Plusieurs miaulements font ensemble un miaulage.*  
'Several meows (together) make a meowing.'
- b. *Une séance de miaulage. vs. Une séance de miaulages.*  
'A meowing-session' vs. 'A meowings-session'

In these examples, *miaulement* is the one, single cry of a cat that has the same features as the semelfactive class mentioned above: [-STATIC], [-TELIC], [-DURATIVE]. When we substitute the suffix with *-age*, we suddenly obtain an event that consists of several (sub-)cries and can be considered as a series with an internal plural of smaller events. The duration-feature changes its value from negative to positive. This is illustrated in (51)<sup>45</sup>.

(51)

- a. miauler: 'eject a meow-cry'
- b. un miaulement: 
- c. un miaulage: 

*Miauler* is a verb that can be described as in (51a), but designates on the other hand as well a longer lasting process, where several of the cries are ejected. When a derivation by *-ment* takes place, one meowing-event, one cry, is singled out and expressed by the nominal. It can also designate the mere outcome of this meow-ejection: the sound itself. This is confirmed by a judgment task with French native speakers concerning the sound emission verbs which was conducted by my colleague Melanie Uth and myself. In the task speakers were offered 15 animal sound emission verbs<sup>46</sup>. They had to decide first which nominals were the most

<sup>45</sup> In this illustration, I took over the labels I and F from Smith 1991.

<sup>46</sup> For the entire judgment task and the questionnaire speakers were confronted with see appendix.

natural ones to be formed out of those verbs. Here all of the 13 native speakers chose the *-ment* derivatives. The second question was, if the speakers were able to form *-age* derivatives of the same base verbs and if they remarked a meaning difference between the *-age* and the *-ment* nominal. Only half of the participants was able to answer this question, but all of them judged the *-ment*-nominals to express a single sound, whereas the *-age*-nominals rather stood for a repetitive action, possibly executed by several agents. The exact judgments can be found below.

(52)

- a. *-ment*-nominals: describes the cry of an animal
- b. *-age*-nominals: describes the process of uttering the cry, an action, a louder sound (than with *-ment*), several cries, cries of several animals, a way of uttering a sound

The judgments in (52) show that the speakers remark the inner plurality of the *-age*-nominals, but attribute them to different properties of the event, such as the numbers of participants, the number of cries, the intensity, etc. This inner plurality might also be the cause for the pejorative connotation speakers noticed for *-age*-nominals in the task<sup>47</sup>.

The difference between *-ment* and *-age*-nominals that the native speakers remarked is illustrated in ((51b) and (c)). For *miaulement* the initial point I and the final point F are reached at the same moment. This is the reason why it is classified as [-DURATIVE]. However, it does not entail a change of state or telicity in some sense, which is why it would take the feature [-TELIC] in Smith's 1991 terms. In (51c) I have tried to show, what the *-age* suffix is able to do. As a first step, it multiplies the smaller sub-events and creates an "eventive chain" (Martin 2007) from them. Each of the sub-events has the negative [DURATION] feature. When the separate cries are taken together and amalgamated into one single nominal (by *-age* derivation), the *meowing* has several stages and proceeds in time, which means that the overall event can be considered [+DURATIVE]. *-Age*, however, does not give us any hints about the exact initial or endpoint of this ongoing event. It just picks out a random period, where the event takes place. These are the unbounded characteristics that *-age* nominals display.

The cases in which *-age* nominalisations express a terminative or accomplishment-reading were rare in the corpus analysis (4 examples). As with the *-ment*-examples

<sup>47</sup> For more information on the judgment task and French sound emission verbs see Uth 2010.

that had non-terminative interpretation, we have to ask ourselves also in these cases, how the terminative aspect with *-age* is caused, as this seems to be an exception. Are the reasons to be found inside the NP, perhaps in a special property of the suffix or the complement of the nominal; or is the reason behind it again to be found in what Verkuyl calls “outer aspect”? I will speculate about the background of these interpretations later, in the chapters 4 and 5, where the data here will be reconsidered under the framework of Verkuyl 1993. The other, rarer readings that were found with *-age* nominals are result, state and object interpretations, but they will not matter here.

After the analysis of neologisms of the three most productive processes for the formation of action nominals in French, I would like to repeat the most important observations: 1. As already suspected by Martin 2007, 2008a and Uth 2008, the three French nominalisation suffixes considered here seem to be responsible for the introduction of different aspectual properties. Whereas *-ment* and *-(t)ion* derive terminative or bounded events, *-age* produces non-terminative or unbounded events. 2. The syntactic context that surrounds the derived nominal can also have an impact on its aspectual interpretation. Realised (mostly internal) arguments can change the aspect in the NP, depending on their quantification, whereas aspectual modifiers can be indicators for the aspect of the entire sentence or the manner in which an event is presented. Especially the role of modifiers still needs more clarification, because it seems that they are mostly responsible for the “outer” aspectual properties. 3. The parallels, drawn by Heinold 2008, that have already been mentioned in chapter 2, between the English *-ing*-suffix, the German nominalised infinitives and French *-age* seem to be further confirmed by the data given here. All three of these word formation processes are highly productive and derive mostly unbounded events.

To sum up, it seems that DPs, which contain event nominalisations, form aspectual units of their own. In contrast to analyses based on Grimshaw 1990, not only the realisation or non-realisation of an argument seems to be decisive for aspectual distinctions, but also the quantification of the realised argument. In the next chapter, I would like to introduce Verkuyl's 1972, 1993, 2005a theory of the composition of aspect, which deals exactly with the matter just mentioned. His theory, originally introduced for the analysis of the VP, will be reconsidered for the nominal domain. With this approach, I would like to clarify the role that the three French suffixes play

from a theoretical viewpoint.

## CHAPTER 4 – THE COMPOSITION OF ASPECT IN NOMINALS

There are recent theories from the lexical semantics framework, which have already dealt with the composition of deverbal nominalisations (and other complex lexical items), such as Lieber 2004 and works based on her approach (Trips 2007, Von Heusinger 2009, Uth 2010). Lieber's system takes into account similar principles that have been discussed up to here, such as boundedness/unboundedness or dynamics/statics. Moreover, her work is the compositional approach that has been widely accepted for the analysis of complex word formation. This theory, however, is interested in the question how aspect in *words* is constructed compositionally. Lieber's framework deals with "lexical semantic properties, rather than semantic properties that manifest themselves at higher levels of syntactic structure (for instance, phrases, sentences, propositions, discourse)." (Lieber 2004: 4).

My concern, on the other hand, is to look beyond the word level and describe, if and how word meanings can change by the manipulation of their closest surroundings, especially in the syntax. Therefore, my view is directed towards the entire NP (and its embedding in larger structures) and the aspectual function that derived nominalisations fulfil in interaction with their verbal arguments. For this purpose the aspect composition system of Verkuyl 1972, 1993, 2005a seemed the most interesting to me, although his theory mostly deals with aspect in the verbal domain. In his opinion, the aspectuality of a situation is constituted by its sub-elements: the verb and its participants. The assumption that makes his approach very unique in the discussion about aspect and events is that he takes the meaning of a verb to be (aspectually) "stable". Verbs can either express a "dynamic progress, change, non-stativity" or, its opposite, stativity<sup>48</sup>. Only by amalgamating with its participants, it can describe events that can be distinguished in what we know from the literature (Vendler 1957, 1968, Dowty 1972, Smith 1991) as accomplishment, achievement, activity, state and what other terms have appeared for the description of situations. This is the reason why Verkuyl himself speaks about "the VP as a unit", which should be in the focus of the analysis, and not the V alone. Moreover, he does

---

<sup>48</sup> There are a few, which are ambiguous, as we will see later in this chapter. Their aspectual status can be manipulated and even disambiguated by the addition of a particle.



not content himself by looking at the VP from the outside and determining the aspect of the entire unit. The main focus of Verkuyl's work lies in the differentiation of atoms that all together constitute this unit. To him, it is important to know which function every element of the VP takes over, which part of the entire meaning it contributes.

In this chapter, I am going to adapt Verkuyl's system to the nominal domain: I will try to find out, which elements in expressions that contain deverbal event nominalisations are responsible for which part of the aspectual meaning of the entire phrase. In such an approach every element that helps making up such a larger constituent has its function: the base verb, from which the nominalisation is derived, the arguments that can be realised or not or be quantified in different ways, and – this is special for the nominal domain – the suffix, which derives the nominal, and which is also made responsible for aspectual particularities in many approaches.

In the following, I am going to argue that the role, which the suffix plays in the aspectual composition of deverbal nominal expressions, can differ from language to language and results in many cases from the historical development of its semantic properties. Moreover, the distinction between the aspectual impact of inflectional and the one of derivational morphology are crucial for my analysis of nominalisations. As we have seen in chapter 2, languages like English and German provide suffixes, like *-ing* or *-en*, that also surface as inflectional morphology in the verbal domain, and that seem to influence the aspect of a nominal expression strongly in favour of an unambiguous unbounded interpretation. Classical nominal derivation suffixes in these languages, on the other hand (such as *-ation* or *-ung*), seem to be responsible for terminative properties and are ambiguous in their interpretations. In French the situation is different: there is no productive suffixation process available that comes up in the verbal domain, too, and could be made responsible for the derivation of event nominalisations with unambiguously unbounded event readings. I am going to argue, however, that the French *-age* derivation is a process that produces unbounded event readings as default interpretation (although other – mostly secondary<sup>49</sup> – interpretations can be derived). Like English *-ing* and German *-en*, it is able to introduce an aspectual feature that helps to construct duration; its rivals, French *-ment* and *-(t)ion* are not and rather have the purpose to create terminative interpretations.

Compared to English *-ing* and German *-en*, the durative feature of *-age* is of a

<sup>49</sup> cf. Lüdtke 1978.

different nature: whereas *-ing* and *-en* have a history as deverbal suffixes which have always expressed events (Demske 1999, Alexiadou 2001a), *-age* is a derivation suffix which has its origin in the deadjectival and denominal domain (Fleischmann 1990, Uth 2010). Where would it take the aspectual properties from that are associated with the verbal domain? I am proposing that the durative or non-terminative feature that *-age* contributes, is something similar to the plural operator P\* that Uth 2008 evokes for deverbal as well as for denominal French *-age* nominalisations. This pluralisation feature - in combination with an event situation - can lead to the durative aspectual interpretation, which “genuine” aspectual suffixes such as *-ing* or *-en* provoke. This means that we could distinguish two sorts of durative aspectual or temporal properties that a suffix can add: 'verbal' (typical for suffixes that derive nothing but events and often have equivalents in inflectional morphology) and 'nominal' one (typical for classic nominal derivation suffixes). Both kinds of aspectual properties could be brought in via different kinds of aspectual features. The verbal durative feature would, however, be “stronger” than the nominal one, because its exclusive task is to establish durative aspect in event situations. The nominal feature “just” derives unboundedness by default and can be interpreted only as referring to aspect in eventive, especially syntactic surroundings such as realised arguments (*l'attelage du cheval par le paysan pendant des heures* – 'the harnessing of the horse by the farmer for hours').

If we can exclude a dynamic development of the situation by context or the nature of the base, which the suffix attaches to (as it is in the examples we know from Spranger/Heid 2007 or Ehrich/Rapp 2000), other interpretations than the eventive one can take place and we could for instance obtain an (unbounded) collectivised object or instrument interpretation (*l'attelage du cheval a été cassé* – 'the harness of the horse was broken'<sup>50</sup>).

In 4.1, I will compare Verkuyl's approach to other works that deal with the quantification of events, aspect or argument realisation, such as Vendler 1957, 1968, Krifka 1989 and Tenny 1994. Moreover, I will show in how far these approaches diverge in their views on the interaction of quantification, argument structure and event structure with the one by Verkuyl. I am aware that there is other well-known work which is concerned with the mentioned topics, such as Dowty 1991, Jackendoff

---

<sup>50</sup> The reason why I attest a collectivised interpretation to *attelage*, will be explained in detail in the section on the historical development of *-age* in chapter 5.

1990 and many others. However I will not discuss them here for the following reason: I have chosen the approaches mentioned above, because it seems to me that they all have some major points in common with Verkuyl, but that they differ in others to a greater extent from his theory than it might have been pointed out up to now. In the following sections, I would like to shed some light on these differences.

In 4.1 to 4.5, I will introduce Verkuyl's aspectual composition and his Plus Principle in detail and show its application to different verb classes. I have decided on such a detailed description, because many semantic, syntactic and compositional tools and analyses that Verkuyl proposes are central for my suggestions for the NP later on and serve to derive my argumentation about the aspectual properties of deverbal nominals and their behaviour in context. In the following sub-chapters I will introduce the so-called “Plus Principle”, which is the algebraic mechanism that will be used for the composition of event-NPs. Moreover, I will take a special look at the way in which Verkuyl treats internal arguments and their omission, as well as *Complex Predicates*, because the analysis and illustration of such cases also play a major role in the discussion on event nominals.

In 4.6, I will make the Plus Principle applicable for the event nominalisation problem. We will take a look at English and German examples and see, which role the different suffixes play from a compositional point of view and how they interact with lexical as well as with syntactic aspectual structure. In 4.7 we will go beyond the NP and see how event nominalisations fit into sentences. I will furthermore take a look at gerunds by help of Alexiadou's 2001a analysis and try to show, why it is important to distinguish between different levels of aspectual construction and different types of morphology. In chapter 5, I would like to deal with the special difficulties of French and try to show the difference between what I call “flexible” and “fixed” aspectual features in suffixes.

## **1 Verkuyl's Plus Principle**

Verkuyl 1993 distinguishes between events of durative and events of terminative aspect.

- (53)
- a. *They ate sandwiches.* (durative)
  - b. *They ate three sandwiches.* (terminative)
  - c. *They ate a sandwich.* (terminative)

The examples in (53) display different aspectual properties, although they include the same verb ('eat'), the same subject and even the same object argument ('sandwich'). According to Verkuyl, the aspect of a (verbally expressed) event is compositionally formed out of the aspect of the verb and the quantification information of the argument(s). In (53a), we have an object-argument that expresses an unlimited mass, an unspecified quantity of sandwiches. In (53b) and (53c), the sandwiches are of specified quantity (*three, a*). In order to include such quantificational properties, as well as information on the dynamics of the event, which both add to the overall aspect of a situation, Verkuyl introduces the features [ $\pm$ SQA] for the specification of the argument and [ $\pm$ ADD TO] for the temporal structure of the verb. SQA means 'Specified quantity of A' and a positive value of that kind expresses boundedness. A negative value signifies unboundedness. The feature [ $\pm$ ADD TO] designates the nature of the verb: a positive value is inherent of verbs that "all pertain to something going on in time" (Verkuyl 1993: 16) or express a development along a time line or dynamicity. This includes mainly non-stative verbs of all kinds. A minus [ADD TO] feature is typical for stative situations. Via these two features, temporal (verb) and atemporal structure (NP arguments) can interact and construe the aspect of the entire situation. Together, these two features are able to compose terminative [+T] or durative [-T] events. This is a point, which makes Verkuyl's system, in my opinion, so valuable for the application on event nominalisations: with his analysis we can go beyond word level and connect temporal to atemporal structure without neglecting the compositional principles and the temporal semantic properties of the verbal base. Syntactic, argument-structure-related properties can be considered and described, without leaving out a semantic, aspectual analysis of the nominalisations themselves.

For the combination of his features, Verkuyl predicts three different aspectual scenarios that are described below (cf. also Verkuyl 1993: 18).

- (54)
- |    |   |              |
|----|---|--------------|
| a. | [-ADD TO] and [ $\pm$ SQA] ('No movement')        | - durative   |
|    | <i>Judith wants to eat a sandwich/sandwiches.</i> |              |
| b. | [+ADD TO] and [-SQA] ('Movement with leaks')      | - durative   |
|    | <i>Judith ate sandwiches.</i>                     |              |
| c. | [+ADD TO] and [+SQA] ('Bounded movement')         | -terminative |
|    | <i>Judith ate three sandwiches.</i>               |              |

In (54a) we combine a [-ADD TO] verb (*wants*), which can only describe states and never events, with randomly quantified arguments (*Judith*, *a sandwich*, *sandwiches*) and obtain durative aspect in all cases. In (54b), there is a verb that can express that something is going on in time (*eat*), but the unbounded [-SQA] argument, *sandwiches*, again produces durative aspect. In (54c), all features are positively set (*Judith*, *three sandwiches*, *eat*). Only in this case, when all features carry plus values, the composition of terminative aspect works. In this way we obtain events that can be counted or quantified over (Verkuyl 1993: 19). This is what Verkuyl calls “the Plus Principle”: Terminative aspect [+T] is built out of nothing but positive sub-atoms; it is the marked case. As soon as the verb's [ADD TO] or one of the arguments' [SQA] features is negative, we obtain [-T], or durative aspect. This is why Verkuyl considers durative aspect to be “the aspectual garbage can” (Verkuyl 1993: 21) or default aspect. This becomes visible in the examples in (55), where *Judith*, *eat* and *sandwich* are the elements taken into account, because they construe the aspect of the entire event together. The verb 'to eat' itself does not change in all of the considered examples. It always stays [+ADD TO]. This is what Verkuyl understands by “stable verb meanings”.

- (55)
- |    |                                     |                                     |
|----|-------------------------------------|-------------------------------------|
| a. | <i>Judith ate three sandwiches.</i> | [+SQA][+ADD TO][+SQA] = [+T]        |
| b. | <i>Judith ate sandwiches.</i>       | [+SQA][+ADD TO][-SQA] = [-T]        |
| c. | <i>Judith ate no sandwich.</i>      | [+SQA][+ADD TO][-SQA] = [-T]        |
| d. | <i>Judith wanted nothing.</i>       | [+SQA][-ADD TO][+SQA] = [-T]        |
| e. | <i>Nobody ate a sandwich.</i>       | [-SQA][+ADD TO][+SQA] = [-T]        |
| f. | <i>Nobody ate sandwiches.</i>       | [-SQA][+ADD TO][-SQA] = [-T]        |
| g. | <i>Nobody ate a sandwich.</i>       | [-SQA][+ADD TO][+SQA] = [-T] [sic!] |
| h. | <i>Judith wanted a sandwich.</i>    | [-SQA][-ADD TO][+SQA] = [-T]        |
| i. | <i>No one wanted a sandwich.</i>    | [-SQA][-ADD TO][+SQA] = [-T]        |

Among all the examples in (55)<sup>51</sup>, only (a) has nothing but positive atomic features and can thus produce terminative aspect. In (b), the internal argument, *sandwiches*, is a bare noun of unbounded nature and adds a minus feature. This is the reason for

51 Verkuyl 1993: 20.

the [-T] aspect of the sentence. In the other examples (c) to (i), as well, there is at least one minus feature present that can be made responsible for the durative nature of the situation.

The two features [ $\pm$  ADD TO] and [ $\pm$  SQA] can produce states, processes and events by combination of the verb and its argument NPs. Verkuyl (2005a: 23) gives the following ontological classification.

(56)

| NP | [ $\pm$ SQA] | [-SQA]  | [+SQA]    |
|----|--------------|---------|-----------|
|    | STATE        | PROCESS | EVENT     |
| V  | [-ADD TO]    |         | [+ADD TO] |

Verkuyl rejects the four aspectual classes of Vendler 1957, accomplishment, achievement, state and activity, that other approaches in the aspectual literature have taken over (for example Dowty 1972, 1979, Kamp/Reyle 1993). Verkuyl claims that the four Vendlerian classes are never achievable by the mere combination of the above mentioned features. In approaches, which rely on this classification, verbs are not really considered on their own.

*“The common linguistic practice is to smuggle information about the arguments, especially the internal argument preferably into a singular form. That is, write is treated as if it means ‘to write a letter’, ‘to write a book’, etc. This makes the verb write an accomplishment verb. In other words, the meaning of W is based on interpreting it as a set of pairs each having two individual members.” (Verkuyl 2005a: 30).*

In such an analysis certain objects, which often appear together with the verb, are considered to be part of the verb meaning (*to write a letter/a book*). However, as soon as we move away from such highly frequent combinations of verb and internal argument, there are various possibilities in which the verb *write* can be classified as an activity verb without further problems. In such cases, the change in aspect is, as Verkuyl argues, not caused by a different property of the verb itself, but just by the

different quantification of the realised arguments (*write letters/books*).

The different types of situations acknowledged by Verkuyl are the same that Ehrich/Rapp 2000 mention. However it seems to me that the two approaches really analyse different phenomena. Event, process and state are labels that are attributed to mere predicates in Verkuyl's theory. Ehrich/Rapp categorise entire sentences under those three classes: *Er ist bei der Beklebung der Wand vom Stuhl gefallen* ('He fell from the chair while sticking something to the wall') is considered to be a process, whereas *Nach der Beklebung der Wand sind die Kinder fortgelaufen* ('After having stuck something to the wall, the children ran away') is classified as event. If we stick to Verkuyl's rule of the composition of aspect from the verb and its internal argument, we should find the same type of aspect in both sentences, as they both contain *bekleben* + *die Wand*. It seems that Ehrich/Rapp do not categorise the event expressed by the event-NP, *Beklebung der Wand*, but the aspect of the sentence that the nominal is embedded in. In my opinion, however, we have to focus on the properties of the nominalised predicate only, if want to find out more about the aspectual role of suffixes. The examples given by Ehrich/Rapp are not very useful for this purpose, because they show no variation inside the deverbal DP/NP. So in what follows, I will use the terms event, process and state in the sense of Verkuyl as relating to the (in my case nominalised) predicate only.

There are other semantic approaches which have dealt with the constructions of predicates and aspect, such as Vendler 1957, 1968, Krifka 1989 or Tenny 1994. They also use semantic features which relate to quantification and dynamics of events. In the following sections, I will distinguish these approaches from the one by Verkuyl presented here and motivate why I have chosen the latter for my analysis of events.

## 1.1 Vendler's Four Event Types

One of the most essential distinctions among different types of events was made by Vendler 1957, 1968. His classification into States, Activities, Accomplishments and Achievements still serves as basis for much of the recent work on events and argument structure (Moens 1987, Grimshaw 1990, Dowty 1991, Smith 1991, Tenny 1994, and many others) and especially on nominalisations (Grimshaw 1990,

Alexiadou 2001, Borer 1994, 2001, etc.).

As a first step, Vendler distinguishes among dynamic and non-dynamic eventualities. Among the dynamic class we find the same verb types which Verkuyl classifies as [+ADD TO], such as *to run*, *to swim*, *to push the cart*, *to run a mile*, *to draw a circle*, *to recognise somebody*, *to reach the top*<sup>52</sup>, etc. Only states are considered as non-dynamic. Up to here, the Vendler and the Verkuyl classification do not differ substantially. Vendler's next step, however, is the differentiation of verb types according to a [ $\pm$  telic] feature. This could correspond in some way to the [ $\pm$  SQA] feature, which Verkuyl proposes. It seems that both features, [ $\pm$  telic] as well as [ $\pm$  SQA], are supposed to provide a limitation for the time line of the event, or in other words, boundedness. Whereas Vendler's [ $\pm$  telic] property seems to be a lexical feature of the verb, Verkuyl's [ $\pm$  SQA] is attributed to the quantificational qualities of the internal argument, brought in by its determiner. A second difference is that for Verkuyl the two features are equally important for the creation of aspect; for Vendler on the other hand, telicity is subordinate to dynamics and is only applicable for verbs with a plus value in this latter property, such as accomplishments, achievements and activities. A third feature in Vendler's analysis is [ $\pm$  durative]. This feature is used in order to distinguish, for instance, between accomplishments and achievements. In Verkuyl's approach, durativity is not a property which exists of its own accord, but has to be created. Its opponent is terminativity, which is often compared to telicity. In this opposition, however, it becomes obvious that firstly the two terms should not be mixed up and that secondly Verkuyl's boundaries of an event are set on a much higher level in the structure than those of Vendler, which seem to be inherent to the verb semantics.

In combinations, such as *to know a secret*, there is (for Vendler) no telicity analysis, because the verb itself is already classified as non-dynamic and is therefore not able to make a development toward a goal, which makes sense. However, the presence of the internal argument is neglected and does not play a role. Also from Verkuyl's point of view, this example would be analysed as a state. In his view, we would distinguish between the two aspectual contributors in the VP, the verb *to know* and its complement, *a secret*. The verb contains a [-ADD TO] feature, *a secret* a [+SQA] property. Applying the Plus Principle, we obtain [-T] aspect and a state, which is the same outcome as in Vendler's system. However, we have taken

<sup>52</sup> cf. Verkuyl (1993: 35).



into consideration two types of aspectual information (temporal vs. atemporal).

The same point can be made for activities like *to run*, especially, when we insert an endpoint or Path, as, for instance, in *to run home*. Verkuyl's analysis can easily capture this extension of the VP. By adding the goal of the running process, we observe a shift from activity (or “process” in Verkuyl's terms) to accomplishment (or “event”), which means that an unbounded event becomes bounded. This boundedness is definitely due to the presence of *home*. This extension of aspect into the VP, however, goes beyond, what is provided by Vendler's features, which are linked to the lexical aspect of the verb. In such a system, we would probably have to assume two different verbs: *to run* and *to run somewhere*. The first one would then be an activity verb, whereas the second could be classified as accomplishment verb. All in all, I prefer Verkuyl's analysis, because it distinguishes between the aspectual influence of the verb and the one of the argument. We will see in 4.6 in how far this point is important for nominalisations and their different interpretations.

Another work which discusses the construction of events and takes into account countability and the temporal structure of events is Krifka 1989. This approach is to be discussed in the next section.

## 1.2 Krifka's Quantised Predicates

Krifka 1989 also deals with different predicate types which can be distinguished according to their reference. Unlike Vendler, Krifka does not only deal with the notion of telicity, but also includes the countability and measurement of events and nominals.

Krifka differentiates mainly two types of predicates or respectively nominal reference, which are of interest for my discussion about the NP and the comparison with the approaches by Verkuyl or Vendler: cumulative and quantised nouns/predicates. Cumulative reference can be attested for an element *x* when any sum of parts which are *x* are *x* (Quine 1960). In the nominal domain, examples for that type of reference are *water*, *gold* or *milk* – in short, so called mass terms which cannot be counted, but only measured (*5 ounces of gold*, *\*5 gold*). Cumulative reference can also be attested for plural terms such as *apples* or *rings*. If there are two entities which fall into the category of *rings*, then their sum also

belongs to the category of *rings*.

On the other hand, we have quantised reference. Here, the sum of the elements does not amount to the same reference. *Two apples* and *two apples* do not amount to *two apples* (quantised), but *gold* and *gold* does amount to *gold* (cumulative). How is the difference between these two types of reference caused? Firstly, the inherent semantic properties of the nominal play a role. Here, mass (*gold, water*) and count nouns (*apple, ring*) are opposed. However, it seems that the quantification of the nominal in question is also of importance. Krifka distinguishes between counting (*the, a, two, seven, etc.*) and measuring (*an ounce of, a litre of, a glass of, a piece of, etc.*). Taken the different types of nouns with different quantification, we can obtain several combinations.

- (57)
- |                             |              |
|-----------------------------|--------------|
| a. <i>four apples</i>       | - quantised  |
| b. <i>a pound of apples</i> | - quantised  |
| c. <i>apples</i>            | - cumulative |
| d. <i>an apple</i>          | - quantised  |
| e. <i>*four water(s)</i>    |              |
| f. <i>a glass of water</i>  | - quantised  |
| g. <i>water</i>             | - cumulative |

As we can see in (57), quantised as well as cumulative reference is possible with count as well as with mass nouns, depending on the presence of a (counting or measuring) quantifier. Bare plurals with count nouns correspond to mass nouns and display cumulative reference.

The two kinds of reference can also be observed among predicates. As we can see in (58), Krifka opposes VPs like [*kostet drei Mark*] ('costs three Marks') and [*enthält Kupfer*] ('contains copper'). In his analysis, the first of these VPs is considered to have quantised reference, whereas the second one is cumulative.

- (58)
- |                                |   |            |
|--------------------------------|---|------------|
| a. [ <i>kostet drei Mark</i> ] | - | quantised  |
| b. [ <i>enthält Kupfer</i> ]   | - | cumulative |

This is mostly due to the kind of quantification: *three* in (58a) is considered to give boundaries to a countable entity, whereas the indefinite plural in combination with a mass noun, as in (58b), is responsible for an unbounded interpretation. It seems on the first glance that Krifka's analysis takes into account the same properties of VPs

as Verkuyl's: different types of quantification which lead to mass or count interpretations of events or, in other words, terminativity and duration.

However, when we take a more detailed look at the examples in (58) and try to analyse them by help of [ $\pm$ SQA] and [ $\pm$  ADD TO], we obtain a different picture. Whereas the determiner in Krifka's approach is very powerful, it is equally important for the creation of aspect as the lexical temporal property of the verb to Verkuyl.

- (59)
- |   |   |               |
|---|---|---------------|
| a. <i>kostet</i> [-ADD TO] + <i>drei Mark</i> [+ADD TO] | - | durative [-T] |
| b. <i>enthält</i> [-ADD TO] + <i>Kupfer</i> [-ADD TO]   | - | durative [-T] |

In Verkuyl's analysis (in contrast to Krifka's), the two predicates above would be considered as having the same aspectual property, [-T], in spite of the quantised element, *drei Mark*. The reason for this is the presence of a minus feature, which is brought in by the verb in both cases. According to the rules of the Plus Principle, this means, that the overall value of the sum is also minus. Here, verb and complement are equally important contributors to the aspect of the VP. Let us consider further examples.

- (60)
- |  |   |                  |
|--|---|------------------|
| a. <i>einen Ring haben</i>                                       | - | quantised        |
| b. <i>über drei Stufen stolpern</i>                              | - | quantised        |
| c. <i>einen Ring</i> [+ADD TO] + <i>haben</i> [-ADD TO]          | - | durative [-T]    |
| d. <i>über drei Stufen</i> [+ADD TO] + <i>stolpern</i> [+ADD TO] | - | terminative [+T] |

In (60), we see the two VPs, (a, c) *to have a ring* and (b, d) *to stumble over three steps*, in the comparative analysis. Whereas for Krifka (a and b), both are quantised (certainly due to the presence of the determiners of the complements, *einen* and *drei*), they would be classified differently under Verkuyl's approach (c and d). In (60c) and (60d), we can observe once more that the lexical dynamic feature carried by the verb is of as much importance as the structural quantificational feature of the complement. Especially in this example, it seems to me that Verkuyl's analysis makes sense: if we compare Krifka's quantised predicates to Verkuyl's terminative ones, and the cumulative to the durative ones, then I think that the VP *über drei Stufen stolpern* can be better described by the analysis in (60d), where we obtain terminative aspect and consider a dynamic event ('to stumble over sth'). Especially,

when we look at the predicate, *einen Ring haben*, it becomes obvious that Krifka's and Verkuyl's approaches are not the same at all, although they might deal with similar concepts. It makes sense at the first look that this VP can be called 'quantised' because of the properties of its complement. To analyse it as terminative, however, because of the presence of the quantifier *einen* seems to be problematic. So, although "quantised" and "terminative" are two concepts that deal with the countability and the temporal boundaries of an event, it becomes obvious in these examples that they are not exactly the same. It seems to me that Verkuyl's analysis of the predicate *to have a ring* as durative is appropriate, because it stresses the *state* of being in possession of the ring that does not change and can be seen as a property. It is a temporal property, whereas Krifka's label focuses merely on the count quality of an event. The clear temporal boundaries of an event might be the prerequisite for, but they are not countability itself.

This example shows very clearly that the concepts introduced by Krifka and Verkuyl cannot be compared at a ratio of 1:1. Although both, Krifka and Verkuyl, consider different aspectual properties of verbs and the quantification of predicates, these two elements have a very different status in the two approaches. For Verkuyl, aspect is a composed concept, in the construction of which both contributors, verb and complement, have an equally important role to play. For Krifka, aspect is a lexical property which exists already for a verb alone (as it is the case in Vendler's approach). The quantificational power of the complement is a separate element that is added to the already existing lexical aspectuality of the verb (or Aktionsart) and can influence its being 'quantised' or 'cumulative'.

Another factor for the composition of events, which both Krifka and Verkuyl consider, but to which they attribute a different status, is the external argument. Krifka gives a very detailed analysis of sentences like **Die Hühner legten alle ein Ei** ('The chickens all laid an egg.') as opposed to **Die Hühner legten je ein Ei** ('The chickens laid an egg each.') or respectively **Von den Hühnern legten die meisten ein Ei** ('Most of the chicken laid an egg.') in order to describe the predication relation of verbs. Examples of this kind also surface in Verkuyl, they are, however, not used in order to illustrate differences in inner aspect, but only to show to which kind of referent the VP relates. Verkuyl gives examples like *Three girls mailed five letters*, in which the multiplication relation that the external argument establishes is displayed.

For the analysis of inner aspect, this does, however, not play a role.

All in all, I hope that I have shown the very fine grained difference between Krifka's 1989 idea of quantised predicates and Verkuyl's terminative inner aspect. In the next section, I would like to introduce one more work which deals with aspect and its construction, Tenny's *Aspectual Roles and the Syntax-Semantic Interface*.

### 1.3 Tenny's Aspectual Roles

Tenny's 1994 work *Aspectual Roles and the Syntax-Semantic Interface* is another interesting approach which tries to link aspect and argument structure. Also in this theory we encounter semantic features and event types which have been introduced in a similar way in the other works discussed up to here. Like Verkuyl, Tenny acknowledges only three types of events (in contrast to all the works which take Vendler as a basis), which are generated out of two types of features and come very close to the properties we know from Verkuyl: there are states, processes and events, which can be produced when stative/non-stative verbs are combined with a delimitedness/non-delimitedness feature. The crucial difference between Tenny and Verkuyl seems to be that for Tenny this last property is rather inherent to verbs, not to VPs. This is underlined by the fact that she illustrates the different types of events mostly with examples of verbs, not with entire sentences. The aspectual information is rather of a lexical nature for Tenny, whereas Verkuyl never forgets to underline the different status of [ADD TO] and [SQA] information.

Tenny also discusses argument deletion, where she attests the verb a generic or unspecified object. This is similar to what I have shown in chapter 2 of this work for the different types of nominalisations under the Grimshaw analysis. It seems that also for Tenny the absence of an argument does not necessarily go along with the absence of aspectual information, a point which is, in my opinion, very important for the understanding and classification of the different event types, especially in the nominalisation discussion. What Tenny does not analyse, however, are cases which involve unbounded realised arguments, such as *Brian ate peppercorns*<sup>53</sup>.

An interesting feature in order to introduce Paths or Measures which Tenny uses are the so-called aspectual roles. They are not supposed to replace the usual

<sup>53</sup> She only opposes *Brian ate* vs. *Brian ate a peppercorn* in order to illustrate the aspectualities of verbs with different argument realisation possibilities.

thematic roles, because they contain a different kind of information than the latter ones do. Aspectual information is considered to be relevant for the syntactic structure, whereas thematic information is not. With these two kinds of roles it is possible to distinguish, for instance, information about the agent of an action and the information about a Path. Also in Verkuyl's approach the need for this separation of information is expressed. In general, Tenny's and Verkuyl's approach come very close to each other in the way they treat aspect and link it to argument structure, however for Tenny the lexical information of the verb itself seems to be more important than it is the case in Verkuyl's analysis, where we find a very balanced influence of all the participants in the VP.

All in all, Tenny discusses many different verb classes and various cases of argument realisation and deletion. Her aspectual roles, in which she distinguishes among Measure, Terminus or Path makes it possible to explain also traditionally problematic verbs, such as *to push*, in different syntactic surroundings. Moreover, her distinction among thematic and aspectual information also puts the focus on the role of the internal argument which is in many cases the bearer of the Measure/Path information.

A particularity of the Verkuyl approach which makes it, in my view, the one best applicable to the nominalisation problem which I am going to discuss, is the strict separation in lexical and structural, temporal and quantificational information. As we will see in this, and especially in the following chapter, the balanced influence of the participants in the VP - or the NP in the nominal domain - will turn out to be a central point for the analysis of (especially the difficult French) nominalisations later on. The adaptation of such an approach makes it possible to put the focus explicitly beyond the verb semantics and investigate in how far certain properties of the verb, its complement and – later on – derivational morphology interact. As my working space is in the gray zone between lexical semantics and syntax, it seems to me that Verkuyl's approach is the one which offers many tools that can be used in this area. For a separate analysis of syntax and lexical semantics there might be other, more elaborated and detailed approaches, but these are, in my opinion, concerned with slightly different problems than the ones I will deal with in this thesis.

## 1.4 Summary of the Discussed Approaches: *Aspekt* vs. *Aktionsart*

Already in chapter 2, I have discussed several aspectual approaches from the nominalisation literature. In the three previous sections, I have added a contrastive analysis of some of the most basic general semantic feature approaches that deal with aspect and event structure. As we have seen, most of them differentiate between similar semantic properties, which in some way all represent the opposition of dynamics/statics and boundedness/unboundedness, but it seems that not all of them attribute the same importance to each of these features. Moreover, the general question of what aspect is at all and where its separation from *Aktionsart* begins is not always entirely clear.

Especially Krifka 1989 gives a good historical overview of the different definitions of the terms up to today. In this description it becomes obvious that Verkuyl uses the aspectual terminology not in the most common sense. When we consider all the different definitions cited by Krifka, the basic idea seems to be that aspect is the mere distinction of terminativity and durativity on sentence level, whereas the categorisation into *Aktionsarten* involves further (lexical) properties of the event expressed by the verb. In the approaches discussed in the sections 1.1 to 1.3 of this chapter (which all mostly rely on Vendler), it seems that *Aktionsart* is considered to be a lexical property inherent of the verb, which includes temporal information and is represented by features such as [ $\pm$  dynamic], [ $\pm$  static] or the like<sup>54</sup>. Moreover, information about the time structure and the delimitedness of the event seems to be included in the verb meaning, too. This fact is mostly represented by features which involve some sort of duration, termination or culmination.

Also for Verkuyl, aspect is the differentiation between duration and termination. However, this distinction cannot be created on the lexical level alone. He further distinguishes between inner and outer aspect, which marks the boarder between phrase and sentence. This is one of the most interesting and fundamental points in his work. Nominalisation theories that also rely on aspect as a central criterion in the deverbal derivation of nominals (for instance from the Distributed Morphology Framework) use the notions of the two kinds of aspect frequently, but do not really

---

<sup>54</sup> The idea of *Aktionsart* as lexical semantic property becomes even more popular in some works from German linguistics, such as Flämig 1965 or Erben 1968. A interesting and very critical overview on these works and a comparison to the understanding of *Aktionsart* and aspect in the Slavonic literature can be found in Steinitz 1981.

explicitly mention which role the internal argument plays in their analyses<sup>55</sup>. This might be due to the fact that Grimshaw 1990, to whom most of these theories refer, is mainly concerned with the role of the external argument. It is, however, confusing from an aspect compositional point of view, that the mentioned approaches also mix terms like Aktionsart (of base verbs, for instance) into their reflections. As it is never mentioned if “Aktionsart of the VP” (Alexiadou et al. 2009: 16) refers to the meaning of the verb alone or if the internal argument is somehow included and if so, in which way, we obtain a mixture of terminology that is not always easy to cope with. In order to make clear, in which way I understand and use Verkuyl's terminology – also in comparison to other approaches that have been mentioned up to here – I have compiled the table below.

| Approaches                          | Sentence-level  | VP-level   | V-level  |
|-------------------------------------|---|--|--|
| Smith 1991                          | Viewpoint<br>(perfective/imperfective)                        | Situation types  | Situation types  |
| Alexiadou et al. 2009 <sup>56</sup> | Aspect, outer aspect  | Aktionsart, outer aspect? Inner aspect?                    | Aktionsart   |
| Vendler, Tenny, Krifka              | (Grammatical?) Aspect   | Aspect   | Aspect vs. Aktionsart  |
| Verkuyl 1993, 2005a, 2005b          | Grammatical aspect, outer aspect<br>(perfective/imperfective) | Predicational aspect, Aktionsart, inner aspect ( $\pm T$ ) | Dynamic properties of verbs ( $\pm ADD TO$ ) and other lexical properties, such as agency, etc., which are, however, not directly linked to aspect composition |

Table 11: Different Approaches to Aspect/Aktionsart: A Comparison of Terminology

In table 11 it becomes obvious that across theories the same terms are often used to describe different things. The aspect that is created on sentence level seems to be the one on which most approaches agree. This is the so-called grammatical aspect or outer aspect that takes influence via inflectional morphology (MacDonald 2006). On the lower levels, the picture is blurred. It seems that in many approaches the lexical and the VP-level cannot be easily kept apart. Even in Smith's approach, where the importance of the internal argument is acknowledged in the description of, for instance, the situation type of accomplishments, lexical (not necessarily temporal) information seems to matter, if an event is to be classified. Thus, accomplishments

<sup>55</sup> An exception is Borer 2005 and other works by her.

<sup>56</sup> I mention Alexiadou et al. 2009 as a representative of an – in my opinion – common view in the theories on aspect in nominalisations, where it is often very difficult to tell, on which level one type of aspect ends and another one begins.



are differentiated from achievements by the feature of duration. This differentiation, however, is not really necessary, when we would like to construe, what Verkuyl 2005b calls “predicational aspect”. Here, the only criterion is  $[\pm T]$  that tells us if an event executed by participants is terminative or not. The inner structure of that event, let us say, if it develops in one uninterrupted line or if there are interrupted sub-stages of sub-actions, is not of (primary) importance.

As we have seen in the previous chapter in the corpus analysis of French neologisms, I have, for instance, counted Smith's semelfactives and activities both as durative ( $[-T]$ ). In such an analysis, we do not oppose durative events to instantaneous (which would describe the *length of the moment* in which something happens), but to terminative events (which tells us something about the boundaries of this event, no matter how much time it may take). I am stressing the different roles that S-, VP- and V-level play, because in nominalisation, these levels are attributed somewhat different functions to which the role of (derivational in contrast to inflectional) morphology can be attached. This morphological problem, however, will only be resolved at the end of this chapter. In the next section, we will take a look at how the composition of a VP works in detail according to Verkuyl.

## 2 The Asymmetry of Aspect and the Composition of the VP

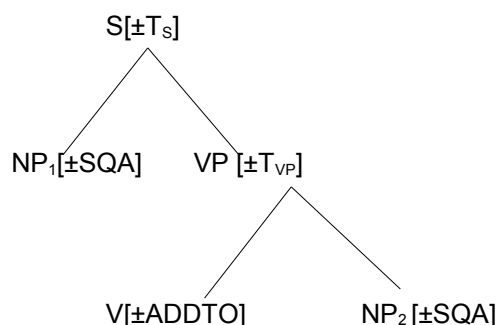
In the previous part we have already seen that both arguments can influence the aspectual interpretation of the entire phrase, although the internal argument seems to play a decisive role in the categorisation of the event type, as it can imply the “culmination point” that decides between an accomplishment or an activity (for a similar view, see also Krifka 1989 and Tenny 1994). Verkuyl does not really seem to like this term, because the information that indicates culmination is not that easy to detect, in his opinion. Quantificational information, on the other hand, is included in the determiner of the arguments and can easily fulfil its purposes in combination with the temporal structure. The entire event, which is designated by the VP, expresses a Path (Verkuyl 1978); the quantificational information of the internal argument can determine the final point of this Path and specify, if it is bounded or unbounded.

As the notion of “Path” is central in Verkuyl's analysis of the VP, and also for the classification of different types of event nominalisations later in this chapter, I will

give a short description of his idea of it. A Path can be created by combining temporal and atemporal structure. In the case of the VP, this means the merging of the verb and its internal argument. When we consider the aspectual analysis of a Path, we have to take a look at all the sub-intervals of action or movement that together constitute it, if we want to know of what nature it is. If we look at a walking event for instance as in *John walked home*, we can split the event into several sub-units. The space that John is going through is provided by the internal argument. It functions as a kind of “odometer” (Verkuyl 1993) that measures the distance until the aim of an action is reached. Only when John is really back home, the full distance of the walking event is accomplished. All the other stations that he might pass are milestones that trace the sub-intervals that have already been absolved in the walking-process. So we can either consider an event in its totality, from the beginning to its endpoint, established by the internal argument ([+T]), or we just take a look at any realised sub-part of it ([-T]).

However, let us trace the singular steps of the aspectual composition of the VP in detail. The analysis of every compositional step is interesting here, because later on, when the aspectual properties of deverbal nominalisations are to be illustrated, I would like to take up as many elements as possible from the original system. At first, verb and thematic object are combined into a VP and constitute together a terminative or durative unit  $[\pm T_{VP}]$ . Here, all possible combinations of plus and minus elements can take place respecting the rules of the Plus Principle. Verkuyl proceeds in several steps in the joining process of the singular elements in order to acknowledge the asymmetry between internal and external argument. The next step of aspectual composition takes place on a higher level and combines the VP with the external argument  $NP_1$  into an S node, which can again be  $[\pm T]$  (see the structure in (61)). As we can see,  $[\pm T]$  is a composed concept and does not exist on its own, no matter on which level of the construction.

(61)



At S-level, a “multiplication relation” takes place (Verkuyl 2005a: 21), which can attribute a proper VP to each of the members in NP<sub>1</sub>, as in the example below.

(62) *The three girls mailed five letters.*

In (62), there are two possible readings: the distributive meaning, in which each girl mailed five letters (3x5), and the collective one, in which all of the three girls mailed five letters all together (1x5). The formula for the distributive multiplication could also be expressed as in (1x5)+(1x5)+(1x5), which would mean that each of the girls obtains her proper terminative VP, whereas in the collective reading all of the girls receive the same VP-information, so that we cannot determine to which extent each of the girls was involved in the mailing action.

To sum up, we can say that the composition at VP-level is of different nature than the one at S-level. The internal argument, which is joined at VP-level, is part of the information about the Path of the event, which makes the VP an important aspectual unit. The joining at S-level makes sure that every element of the external argument NP obtains a VP of its own. Speaking in terms of aspect composition, there exists an asymmetry between the two composition processes: the internal argument and the verb form a very close symbiosis. This might be the reason why in many approaches there is no real differentiation between the meaning of the verb and the meaning of the verb combined with its object-argument, in other words the VP. In the discussion on nominalisations, the asymmetry between the two compositional levels is even easier to observe. Firstly, the internal object is realised more often than the external one (Kaufmann 2005 on German). Secondly, the nature, or at least the presence or absence of the internal argument, decides in various approaches between different

types of events, such as in Grimshaw 1990.

(63)

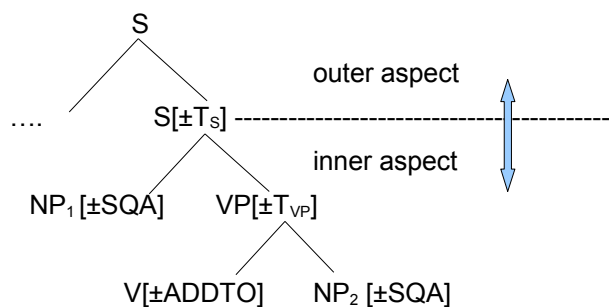
- a. *The examination of the patient took a long time.* - Complex  
 b. *The examination took a long time.* - Simple

In (63) the mere presence of the internal argument in the (a)-example leads to a different classification as in the (b) example, where this argument is left out. Although I do not agree with Grimshaw's event analysis, the presence of the internal argument seems to make a difference in aspect in her approach, too. She, however, just distinguishes between presence or absence of arguments and not between their quantification. In the next section, I would like to take a short look on what happens beyond the VP-level in Verkuyl's system, because this point will become important later on the the discussion about the role that the suffixes play.

### 3 Inner and Outer Aspect: What is the Role of Morphology?

Verkuyl differentiates in several of his works between inner and outer aspect. Outer aspect begins after the joining of the external argument (Verkuyl 2005a: 20).

(64)



Here, aspectual modifiers like *in an hour* [+T] or *for an hour* [-T] can enter the structure as well as inflectional morphology, which is related to aspect on sentence level. Aspect of such kind is, however, not of the same nature as the inner aspect that the verb and the thematic arguments contribute. With the notion of outer aspect, Verkuyl tries to deal with examples like the one in (65).

(65) *During almost all of his life Pekka read the paper for one week each year one hour a day.*

Here, Lindstedt 1984, 1985, from whom this example is taken, tries to show that aspect can be passed on in the syntax, layer by layer up to the top. This would mean that the top-most element is responsible for the final aspect of the entire sentence. With such examples the question arises, if the aspectual contribution stays the same on all levels of composition or if the aspect contributed by the verb and its participants weighs more than outer aspect and has to be considered separately (this issue is also discussed in works like Moens 1987, Pustejovsky 1991, Jackendoff 1997, Verkuyl 2005a, b and many others) .

Verkuyl argues that the levels of aspectual composition should be differentiated into inner and outer aspect as seen in (71). To him the aspectual value of a predicate is determined only once, remains intact and is independent of any temporal (grammatical) information (Verkuyl 2003, 2005b). To sum up, we could say that inner aspect refers to the situation that is made up by the verb and its components. Outer aspect tells us something about the view point from which this situation is presented. This means that we have to be careful in an analysis of entire sentences and must determine exactly, which element is responsible for which aspectual influence. In the following part on nominalisations we will see that such a distinction is not always easy to make as it seems that derivational suffixes are carriers of aspectual information as well. So the question arises what their exact function is in the DP, but also in the entire sentence.

In the previous chapter it was mentioned that there are frameworks which consider deverbal nominalisation suffixes to be inducers of outer aspect (Borer 1994, 2001, 2005, Alexiadou et al. 2009). This conclusion is drawn from the following assumptions on inner and outer aspect in general: 1. outer aspect is what manifests itself in morphology (MacDonald 2006) and 2. the derivational suffixes influence the viewpoint we obtain of an event constructed by the verb and its arguments (Alexiadou et al. 2009, Ferret et al. 2010).

Both of the arguments in favour of the expression of outer aspect by nominals have been taken up like this in much of the recent research on nominalisations. The question is, however, if they really apply in all cases. In my opinion, the first assumption is mostly connected to outer aspect and **inflectional** morphology (Verkuyl 2005a, MacDonald 2006). Obviously the conclusion has been made that

what inflectional morphology is to the sentence can be compared to what derivational morphology is in the DP. So both should be considered as inducers of outer aspect. I think, however, that the functions that the two types of morphology have should be kept apart: derivation is a lexical operation that is used to produce new lexical items with new semantic contents. Inflection is an operation that simply marks already existing words for grammatical properties (Anderson 1982). Although it is comprehensible that inflection should be associated with outer aspect, the aspectual power of a derivation suffix does not seem to be strong enough to mark the “viewpoint” of the DP on its own. If we look at the example below, we find a [+ADD TO] verb and a [-SQA] argument, which together make up a [-T] event in the VP. This is true for the NP in (a) as well as for the VP in (b). In (a) the suffix *-ung* represents terminative properties as does the perfect tense of *zerstören* in (b)<sup>57</sup>. If the analogy “inflection expresses outer aspect in the VP, whereas derivation expresses outer aspect in the NP” was true, we should obtain the same aspectual readings in both examples. We should find durative inner aspect presented in a closed domain (for (b) in the past) (Verkuyl 2005b).

(66)

- a.        *Städte* + *zerstören* → *Die Zerstör+ung + von Städten*        → *durativ*  
           *cities* + *destroy* → *The destruct+ion + of cities*  
           [-SQA] + [+ADD TO]
- b.        *Der Tornado war sehr stark. Er hat Städte zerstört.*        → *terminativ*  
           *The tornado was very strong. It destroyed cities.*

This interpretation is, in my opinion, not given in (a). If we combine the nominal with aspectual modifiers like *in einer Stunde* ('in an hour') and *stundenlang* ('for hours'), it is definitely the durative interpretation that is more acceptable, which underlines the internal [-T] aspect produced by the verb and (especially) its object. The “viewpoint” on the event as being terminated or presented in a closed domain, however, is difficult to deduce. This becomes even more obvious, if we use the DP from above in sentences with different tenses.

---

57 On aspect and the German tense system see Ehrich/Vater 1989, Grewendorf 1995, Welke 2005 and many others.

(67)

- a. *Die Zerstörung von deutschen Städten hat am 12. März stattgefunden.*  
 'The destruction of German cities took place on March 12.'  
 → durative event, presented in a closed domain in the past
- b. *Die Zerstörung von deutschen Städten fand gerade statt, als weitere Truppen eintrafen.*  
 'The destruction of German cities was taking place, when more troops arrived.'  
 → durative event, presented in an open domain in the past

By adding another aspectual unit on sentence level (a tensed verb) that anchors the nominal event in time, it becomes clear that the aspectual function of derivation and inflection cannot be compared that easily. In the following sections I will prepare the argumentation against outer aspect in derivational morphology. I will show what the important properties of inner aspect are and how derivational suffixes as carriers of temporal information can be included in Verkuyl's Plus Principle. For this purpose, I will introduce the complex predicate structure, which can also serve for the construction of nominalisations, in the following section.

#### 4 The Complex Predicate Structure

An example that has often been mentioned as a counterexample (by other authors and Verkuyl himself) to the Plus Principle is given in (68).

(68) *John pushed the cart.*

This exact case will not matter a lot in the discussion on nominalisations. Verkuyl's compositional analysis of such examples, however, can provide us with structures that are applicable for complex nominals, too. This is the reason why I will describe it here. The analysis of the sentence in (68), according to the Plus Principle, would result in a terminative interpretation: *John* and *the cart*, as well as the verb *push*, can be seen to be of positive value in their attributed features [SQA] and [ADD TO]. This means that the aspect of the entire sentence would be [+T<sub>s</sub>]. This is, however, not the case. *John pushed the cart* is definitely an activity and should thus be of [-T<sub>s</sub>] aspect. However, we do not really perceive a unit with a minus feature here. Verkuyl argues that *push* (and other verbs with similar properties, such as *stroke*, *paint*,

*knock, hammer, etc.*) is “a sort of hybrid between [+ADD TO] and [-ADD TO]” (Verkuyl 1993: 329). It can be combined by addition of a particle like *away* into a complex verb (*push away*). In such combinations the verb obtains a resultative interpretation and can be considered [+ADD TO]. Similar observations are made for the other verbs of that class<sup>58</sup>.

The element, which makes sure that terminative aspect is maintained, is the particle (in this example *away*), which is responsible for the dynamics of the event. The problem is that the small clause *the cart away* cannot be compared to real internal arguments such as *sandwich* in *eat a sandwich*. Semantically, it is difficult to establish a direct relation between *away* and *the cart*, in the same way as between *eat* and *the sandwich*. The syntactic problems with a small clause analysis of such examples are discussed in works such as Neeleman 1991, Neeleman and Weerman 1991 and others (cf. Verkuyl 1993: 335). Verkuyl uses a Complex-Predicate-Structure in order to deal with these difficult cases.

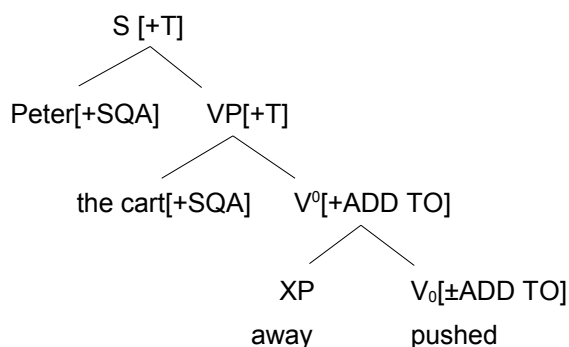
In such a structure there are two levels of V -  $V_0$  and  $V^0$ .  $V_0$  contains the specific lexical information of the verb. Syntactic information determining thematic roles is included on this level (via XP), but cannot be “used” yet. By merging the XP (*away* in the *push*-example), we obtain a higher and more complex V-node that can apply the syntactic information that XP and  $V_0$  add together. On  $V^0$  level the theta-role of the Complex Predicate can finally be assigned to the internal argument. In other words: syntactic information is already present at the lowest (lexical) V-level, but can only be applied in the syntax in the higher  $V^0$  node. This is the reason why the zone between the two V-levels cannot be considered entirely syntactic nor entirely lexical according to Verkuyl. A complex predicate structure as proposed by Verkuyl is shown below.

---

58 An interesting analysis of such cases is given in Tenny 1994. Arguments like *the cart* in *to push the cart* are not attributed the aspectual role of *measure* which direct internal arguments usually receive. As they are not affected by the pushing in the sense of an internal change, they cannot measure out the event. In order to determine the temporal endpoint of *push the cart*, an additional terminus has to be inserted, as in *to push the cart away/back/to the door*, etc.



(69)



The presence of the XP element *away* in the structure above decides, whether the event described by the verb is static or dynamic. By addition of *away*, we express that an object is moved and takes a Path, which is the prerequisite for a [+ADD TO] event. How far this explanation is valid for all the verbs of this class, will not be discussed here<sup>59</sup>. The mere idea, however, that there is a lexical level lower than V, where the decision about the argument structure properties or the dynamic qualities of a verb is made, can be interesting for the derivation of event nominals, where on a lexical level, the verbal base and a “particle” with aspectual properties - the suffix? – have to be combined. In the next section, I would like to show how Verkuyl's system deals with intransitive verbs and object omission, two phenomena that are also of importance for nominalisation theory, as we have seen in chapter 3.

## 5 Transitive Uses of Verbs and Object Omission

In chapters 2 and 3, it became obvious, that object realisation is not only an important matter with verbs, but even more so with event nominalisations. Entire theories are based on the question, if certain types of nominalisations have argument structure, and therefore obligatorily realise their (mostly internal) arguments or not. Also in Verkuyl's system of the Plus Principle, arguments are important: as shown above, their quantification can decide on the aspectuality of a verb phrase or a sentence. The role that is most closely related with the aspectual status of the VP, is the one that the internal argument has to play (see also Tenny 1994). This is the same with nominals derived from verbs. However, what happens in

<sup>59</sup> Again Tenny 1994 gives a very similar explanation for this class of verbs by help of her aspectual role model. To her, *push* verbs have an optional Path which must, however, be triggered by the insertion of a goal.

Verkuyl's system when the internal argument is left out? How can we explain that sentences like *He* [+SQA] *ate* [+ADD TO] express an activity and are of [-T] aspect, although apparently no minus value enters the construction? And what happens in general with intransitive(ly used) verbs? Can the Plus Principle distinguish between unaccusative and unergative intransitives? The first opposition to be described in what follows will be the one of transitive and intransitive verbs; then we will take a closer look at different types of intransitives.

Verbs like *to eat* have always been discussed in theories involving argument structure and aspect. They are of interest for such theories, because they can be transitively and intransitively used, as Verkuyl puts it. Note that he accords the same status to both uses. For transitive uses of verbs, frames with two arguments are provided. In this case the progressing in time of a [+ADD TO] verb is connected to the internal argument. This happens, according to Verkuyl 1993, via the formal tying to an "odometer" called *i*. In the case of [+ADD TO] verbs *i* must be  $> 0$ , which signifies the progressing in time. Thus, the formal representation for a transitively used verb would be the one in (70)<sup>60</sup>.

(70)  $\lambda I \lambda X \lambda i \lambda Y. [[V_0]](I)(i)(Y)(X)$

In the case of transitively used dynamic verbs, the Plus Principle applies insofar as the VP becomes [+T], as soon as the internal argument is [+SQA]. On the level of S, aspect can be changed by the [SQA] feature of the external argument.

With intransitively used verbs, it is also possible to define a Path to which the event is linked. Such is the case with **unaccusatively** used verbs. In Verkuyl's approach, they resemble transitively used verbs in their property of tying up the progressing in time to their internal argument. Syntactically, the internal argument ends up in subject position, as claimed by Government & Binding Theory. Semantically, it behaves in the same way as with transitively used verbs: as soon as it is [+SQA], the entire VP that contains the [+ADD TO] verb obtains terminative aspect. This means that the two VPs [*eat* [*three sandwiches*]] and [ $\Delta$  [*die* [*three patients*]]] behave in the same way, concerning their event semantics. The interesting point that Verkuyl makes is that he considers verbs as not yet being specified concerning their argument structural properties at  $V_0$  level. In his words, there are no "intransitive

60 Provided by Verkuyl 1993: 338.

verbs that can be used transitively” (Verkuyl 1993: 339), but just verbs that can be used in both ways. Only at  $V^0$  level, it is decided, which use will be applied by insertion of XP. This view fits into the picture of the aspectually stable verb meanings: the meaning of a verb alone is either plus or minus [ADD TO], although we have seen some examples in the previous section like *push* that are polysemous. To which argument the spatio-temporal progress of the event is attached, is decided later on. As soon as the verb in question enters a syntactic configuration at  $V^0$  level, we can determine its transitive, unaccusative or unergative status. The argument structure that is needed from case to case can be brought in by XP.

In **unergative** uses of verbs, one central element is lacking that can express the Path, which an element undergoes during the action specified by the verb: the internal argument. In Verkuyl's system, this is one of the reasons for the asymmetry of aspect. Paths are closely linked to the internal argument, because they signify the point where the Path ends. As verbs with such uses lack the endpoint of a Path, they are generally considered to express [-T] aspect where one is “not focused on progress in time” (Verkuyl 1993: 339). The speaker decides if he or she wants to use a certain verb with this or that argument structure (if such a differentiation is provided by the lexical entry of a verb), expressing this or that aspect. This is again an important point in the discussion on nominalisations. It is usually claimed that there are nominals that do or do not have argument structure, such as the *Complex* and *Simple Events* in Grimshaw's 1990 approach. This presence or lack of argument structure is made responsible for the lack of realised arguments. In Verkuyl's approach, we have the possibility to differentiate between different *uses* of verbs, that might also depend on the context in which an event surfaces.

After what we have seen up to here, it becomes obvious why I have chosen Verkuyl's system for the description and illustration of deverbal nominals. Firstly, it deals with aspect, which is also a big issue in the discussion on nominalisation (Grimshaw 1990, Alexiadou 2001a, Borer 2001, 2005, Martin 2007, 2008a, Uth 2008, Alexiadou et al. 2009, etc.) The special property of his theory is, however, that aspect is a composed construct, on lexical as well as on structural level. Every item in the VP has its influence on its inner aspect. In my opinion this is a point that has not yet been considered enough up to now in nominalisation theory. A second advantage of the Plus Principle is that it makes use of two properties that are also

very vividly discussed for the classification of nominalisations: the dynamics of an event, which is attached to a Path that must be undergone, and the quantification of the arguments into unbounded and bounded entities. The most interesting point made in Verkuyl 1993, 2005a, however, is that there are different V-levels, one that is rather attributed to the lexical domain, and one that, by attachment of an XP, is able to set and express the frame for the argument structure that the verb will have in the syntactic configuration. With such a system all possible uses of verbs can be described. The interaction of aspect on the lexical and on the structural level can be illustrated. If an internal argument in such a system does not surface, this does not necessarily mean that it *cannot* surface. This is what I was looking for for my theory of nominalisations.

## 6 Composition of Aspect in Deverbal Nominalisations

In the following section I would like to apply Verkuyl's theory, originally designed for the verbal domain, on deverbal nominalisations. The reasons for this are threefold: firstly, the situations that can be described by Verkuyl's terminology and combined out of his atomic features are exactly those, which continually occur in the literature on nominalisation (Grimshaw 1990, Ehrich/Rapp 2000, Alexiadou 2001a, Borer 2005) and seem to be of importance for the topic: State, Process and Event.

Secondly, the sub-atoms [ $\pm$ ADD TO] and [ $\pm$ SQA] that Verkuyl's aspectual theory applies for the verbal domain, seem to be also applicable in the discussion on nominalisation. Especially the role that the realised NP argument plays has been the subject of various theories (Grimshaw 1990, Alexiadou 2001a, Kaufmann 2005, Borer 2005, etc.). In these works, however, the focus was mostly on the presence or the absence of the NP argument in order to determine the exact interpretation of the often ambiguous nominalisations. However when the quantificational nature of the internal argument plays a role in a theory on verbal interpretation, why should it not be considered in a theory on deverbal nominals, which are often said to have inherited argument structure and other syntactic and semantic properties (Grimshaw 1990)? I would like to show in the following that the quantification of the internal argument is also responsible for changes in aspect within deverbal event-NPs.

A third reason for me to adapt Verkuyl's proposal in my theory on nominalisation can be found in the discussion on French nominalisations in chapter 2. As we have

seen there, French nominalisations do not exhibit the differentiations that Grimshaw 1990 and others propose for English, German or Romanian. In French, there are no unambiguously (Complex) eventive deverbal nominalisation patterns like *-ing* in English. Moreover, the three most productive French derivational patterns for the formation of *nomina actionis* are all ambiguous and produce more or less the same readings (Lüdtke 1978, Dubois/Dubois-Charlier 1999, Heinold 2005). The difference in their interpretation, however, lies in the aspectuality of the events they express. This suggests that nominalisation suffixes add their own aspectual or temporal properties to the event denoted by the NP. In order to include the suffixes in question into Verkuyl's system, we have to discuss three issues first.

1. If deverbal nominalisation suffixes can compositionally add to the aspect of an eventive situation, can they also be defined in relation to one of Verkuyl's atomic features? 2. And if so, at which level are they included into the aspectual structure of the entire NP? Or in Verkuyl's terms: what is the “aspectual algebra” for nominalisations? 3. What kind of aspect can the derivational suffixes be made responsible for? Inner or outer, terminative or durative aspect? These three questions are to be discussed in the following sections for English and German.

## **6.1 Inner and Outer Aspect, Derivation and Inflection, Lexicon and Syntax**

From the three previously mentioned questions, I will discuss the last one at the beginning, because it seems to me that this is the one, on which many answers to the other two depend. As mentioned before, Verkuyl distinguishes two sorts of aspect. Inner aspect is the one constituted inside the VP by the verb and its complements. It is realised by the object argument that designates a Path along which the event proceeds. It can never exist of its own accord, but must always be constructed from several units containing temporal and atemporal information. Outer aspect, on the other hand, is induced (as a whole) on sentence level. It can be realised, for instance, by inflectional morphology. It is not a composed construct, but a kind “viewpoint” information. Examples for both kinds of aspects are given below. They are all taken from MacDonald 2006.

(71)

- a. Jerome drank **a bottle of beer** last night.
- b. Jerome drank **beer** last night.
- c. Jerome **was drinking** a bottle of beer (when I left).
- d. Jerome **was drinking** beer (when I left).

In (71a) and (b), we see a distinction of inner aspect. The decisive element is the differently quantified inner argument that gives (a) its [+T] and (b) its [-T] interpretation. In (c) and (d), we observe what outer aspect means: although the inner aspectual distinction from (a) and (b) persists, both examples express an ongoing event that is caused by the progressive tense. The two types of events are presented in an open domain (Verkuyl 2005b). This is the reason why the phenomenon of outer aspect seems to be attached to morphological elements such as the *-ing* forms in (71). Note however, that the *-ing* suffixed forms above belong to the verbal domain and are realised on sentence level, that means outside the VP. This point is crucial for its comparison to *-ing* in the nominal domain. Another important fact that has to be remarked is, that the *-ing* in (71) is traditionally considered to be an inflectional suffix. According to Anderson 1982, inflection is “what is relevant to the syntax”<sup>61</sup>. MacDonald (2006: 2) states that “outer aspect has morphological manifestations that inner aspect does not.” This, however, is as I am going to argue not entirely true for the case of deverbal nominalisation. As already mentioned before, I, as well as other authors on this subject, assume that nominalisation suffixes are responsible for aspectual properties of derived nominals. The English nominalisation suffix, *-ing* for instance is strongly associated with durative aspect (Alexiadou et al. 2009). But how can a nominalising suffix introduce this aspectual information?

A first important difference between the nominalising *-ing* and the inflectional *-ing* of the verbal progressive form is, in my opinion, that the first one operates in derivations and thus takes a role rather attributed to the lexicon and to the formation of complex **words**. On the one hand, it is responsible for properties of the syntactic class of the newly derived word (in the case of *-ing*, a verbal element is transformed into a noun). On the other hand, it carries its own semantic information into a complex structure that can reach beyond word level and into the NP: it does, however, not have the aspectual power that we know from inflectional morphology, but just contributes its share in the construction of the event that is expressed inside the NP containing the nominalisation.

---

<sup>61</sup> Quoted from Emonds 1985.

(72)

- a. *The destroying of the city by the enemy was considered as an act of aggression against the entire nation.*
- b. *The destruction of the city by the enemy is being considered as an act of aggression against the entire nation.*

In (72a) the derivational *-ing* suffix does only influence the aspect inside the NP (or DP) that expresses the *destroying*-event and has no impact on the aspect on sentence level (expressed in the *considering*-event). The same can be said for *-ation* in (72b). Both suffixes are not really relevant for the aspect of the sentence as both can be considered as derivation morphemes and rather act on the base they attach to and its closest surroundings (the NP). For deverbal nominalisations, this leads to the following assumptions: the *-ing*-suffix that creates such nominals as *destroying* in (72a) is of a derivational nature. Inside the lexicon, it is able to create an NP from a verbal base, which contains aspectual information of its own. Base verb and suffix join their (possibly different) aspectual properties and create a new lexical item with new aspectual properties – the derived event nominal (a similar idea of derivation in contrast to inflection is also discussed in Anderson 1982). This means that the aspect induced by nominal *-ing* should be what Verkuyl calls inner aspect. It is a lexical-semantic, not a grammatical property. The choice of a certain nominalisation suffix does not depend on the “configurational properties” (Anderson 1982: 574) of its surroundings, but is rather motivated by semantic and morphological factors, as we will see later in this chapter. The aspect that nominalisation suffixes carry can, in my opinion, not be looked at separately from the event of the verbal base: it is not a syntactic, functional layer that is applied to a complete lexical item which has been extracted from the lexicon. In my approach it is rather considered to be a semantic unit, which operates inside the lexicon and can still be semantically and morphologically modified by inflection (plurals) or other lexical elements (object arguments) in the syntax.

The kind of aspect that the verbal *-ing* form in (72b) carries, on the other hand, operates in the syntax. It is an aspectual layer which is applied to a lexical item that has been extracted from the lexicon (if there is one). It is not compositional and represents outer aspect. In my opinion this differentiation is crucial, because this last type of aspect is more “powerful” than the first one, as we will see in what follows. For my theory of nominalisation we can thus define the relation between aspect, morpho-

logy, lexicon and syntax as follows.

| In the Lexicon:                    | In the Syntax:                                 |
|------------------------------------|--|
| Derivation                         | Inflection                                     |
| Inner Aspect: semantic composition | Outer Aspect: functional layer, aspectual head |

Table 12: Aspect: Lexicon vs. Syntax

In table 12 we see that there are two types of aspect that are represented by two different types of morphology and attributed to two different domains of language. So if the aspect that nominalisation suffixes carry is indeed inner aspect, it should be possible to express it in terms of Verkuyl's Plus Principle, in analogy to the mechanisms that operate inside the VP. I will try to do this in the following two sections.

## 6.2 The “Aspectual Power” of English and German Nominalisation Suffixes

As we have seen in the contrastive examples on English nominalisations in chapter 2, the aspectual information that is associated with *-ing*-derived nominals is that of duration, whereas *-ation* nominals are generally responsible for terminative interpretations<sup>62</sup>. However, we cannot be sure what information the suffixes exactly contribute to the overall meaning of a nominalisation and how “powerful” this information is. Let us assume at first that there are three aspectual elements that can influence the composed aspect inside an NP containing a nominalisation: (1) the base verb, (2) the suffix and (3) a realised internal argument of the event nominal. The aspectual information that the base verb and the realised complement add, stays the same as in Verkuyl's analysis of the VP: the verb can be [ $\pm$  ADD TO], the realised argument [ $\pm$  SQA].

The property, which the suffix introduces, however, is not so easy to determine. In his analysis of verbal examples like to *push the cart away* Verkuyl 1993 does not attribute a proper aspectual feature to particles like *away*. Particles that can surface in Complex Predicates are able to force the verb into expressing a Path. In this way,

<sup>62</sup> Another distinction often made between the two suffixes in question is the opposition of an agentive (*-ing*) vs. a non-agentive interpretation (*-ation*). This contrast will not be discussed at this point, as according to Verkuyl the concepts of agentivity and durativity should be clearly kept apart and be discussed separately. In the Verkuyl approach to inner aspect the mere temporal set up of the event is considered (Path vs. No Path) and the focus is on the internal argument. For a detailed discussion on the agentive nature of *-ing*-nominals, see, among others, Alexiadou 2001a.



aspectually ambiguous verbs like *push* can obtain a terminative interpretation. *Push*'s Path information is described as  $[[\Theta- ]]$ , which is supposed to express that the Path is determined, whereas particles like *on* as in *John pushed the carts on* are considered to contain an undetermined Path information, which causes the activity interpretation. The Path information that the particles bring in, however, is just needed in order to disambiguate the different meanings that verbs, such as *push*, can display, as they are not exactly fixed in the value of their  $[\pm\text{ADD TO}]$  feature.

Derivation suffixes, however, do more than just serve for the disambiguation purposes for verbal bases that are not specified in their temporal information. Firstly, they also attach to verbal bases that are fixed in the value of their  $[\pm\text{ADD TO}]$  feature. Secondly, they are assumed to contain aspectual information in a similar way than inflectional suffixes do (cf. the examples by Martin 2007 in (21) and (22)). Thirdly, they serve to create a new lexical item with a certain meaning attached to it. In contrast to inflectional suffixes they do, however, not just produce a new word form and have a semantic purpose that goes beyond mere grammatical modification. Whereas the English past progressive tense, for instance, offers an aspectual and temporal frame in which sentences are presented (and nothing more), deverbal nominalisation suffixes, like English *-ing*, however, serve to create new lexical items, which, although expressing an event on their own already, can again be inserted into sentences with a certain aspectual presentation frame. The temporal or aspectual content that derivation suffixes have seems to play a role in the composition of the event itself and not so much in its way of presentation. Moreover, derivation suffixes, especially in French, show various semantic properties in addition to their aspectual ones.

Although several works from the nominalisation literature, such as Alexiadou 2001a, Borer 2005, Iordăchioaia/Soare 2008, Ferret et al. 2010, argue that nominalisation suffixes create outer aspect and can thus be represented and treated in analogy to inflectional morphology, I would like to raise the question, if we should not differentiate between these two types of suffixes and the two types of information they insert into structures. In chapters 2 and 3 I have already shown that especially suffixes with terminative properties, such as English *-ation* or German *-ung*, cause problems when surfacing in constellations with  $[-\text{SQA}]$ -objects, as it is the case with *Die stundenlange Zerstörung von Städten vs. das stundenlange Zerstören von Städten*.

In such examples the aspectual interpretation is definitely durative, which is caused by the [-SQA]-argument *von Städten* in spite of the nominalisation suffixes. Concerning the aspectual interpretation of the entire nominal event (which includes the entire NP) – it seems to me – there is no difference between the two examples. The different viewpoints or perspectives that the above mentioned literature would like to attribute to such examples is not perceptible to me. Within the mentioned approaches the nominal construction containing the *-ung*-suffix should be presented in a closed eventive domain, which it is not. The only semantic difference to be observed is the agentivity of the nominalised infinitive. This property, however, is explicitly not taken into consideration in Verkuyl's aspectual analysis, and therefore I will neither do so here<sup>63</sup>. To me it seems that the aspectual impact that nominalisation suffixes have belongs to the domain of inner aspect, because they do not so much present an event in a certain perspective, but rather add semantic information that is used in order to create the event (and the new lexical item) itself. It seems plausible that this information is expressed by one of the aspectual features involved in the composition of aspect. But which one will it be?

It does not seem very probable that the derivation suffix contains a [±SQA] feature, because this is strictly associated with determiners and their quantificational information in the nominal domain of the arguments. Furthermore, [SQA] is a grammatical kind of feature. The [±ADD TO] feature on the other hand is of lexical nature and related to the dynamics or statics of an event. This is, in my opinion, exactly the interpretation being brought about by the two suffixes, *-ing* and *-ation*. *To destroy something* is a dynamic event [+ADD TO], but depending on the suffix a speaker attaches to it, if he wants to express it nominally, he can name the entire *destroying*-process from the beginning to the end including its result in this single lexical item, or he can “freeze” the mere action and separate it from its result by attaching the *-ing*-suffix - which would result in the creation of a different lexical item. This event semantics, however, can be neutralised again by the attachment of a [-SQA] object, as we have seen it in the examples above. Thus the [ADD TO] feature should be the one responsible for the aspectual properties that derivational suffixes can have.

---

63 cf. also Tenny 1994 for the separation of aspectual/event-information and “other” semantic information in the description of events: in her approach she assumes even two types of roles that a verb can distribute – the thematic and the aspectual roles.

However how could a suffix have obtained or developed such a feature that is exhibiting something about temporal development and event structure? I am convinced that some of the explanations for this possibility might be observed when we take a look at the historical development of a word formation process as well as at its status in inflectional morphology (if it appears there).

Consider for instance the English nominalising *-ing*-suffix. Already in Old English, its (high frequency<sup>64</sup>) predecessor *-ung* expressed that “the subject [of an action], [I], is located in the middle of doing something” (Alexiadou 2001b: 6), in deverbal nominals such as *huntunge* ('hunting') in the example below.

- (73) *Gyrstandae ic waes on huntunge.*  
 'Yesterday I was on hunting.'

Also in present day English, verbal *-ing* is responsible for the description of a moment, a sub-stage, in an ongoing action or event, not for the dynamic development of the overall situation. This is the reason why I would suggest that the English derivational suffix *-ing* has no dynamic properties. It is not able to express the temporal development of an event from the beginning to the end. If we wanted to describe such a property in the features provided by Verkuyl, we could come to the conclusion, that *-ing* has a [-ADD TO] feature: it takes an event, which itself could be both dynamic or static, but just picks out one certain point in time in the middle of it where a certain state, not a development can be perceived. A point, in contrast to a time span, can not describe dynamics.

- (74)
- a. *The destroying of the city / the examining of the patient for hours*
  - b. *?The destroying of the city in an hour / ?the examining of the patient in an hour*
  - c. *The destroying of the city ended in its destruction.*
  - d. *The examining of the patient ended in his examination.*
  - e. *#The destruction of the city ended in its destroying.*
  - f. *#The examination of the patient ended in its examining.*

The suffix *-ation*, on the other hand, is able to express entire situations, from their beginning to their end. During such a time span the development of an event can be observed. This is the reason why I would attribute a certain dynamic property to *-ation* nominals – in Verkuyls terms an [+ADD TO] feature. The historical

---

64 cf. Quirk/Wrenn 1955.

development of the *-ation*-suffix in English (as well as the *-(t)ion*-suffix in French) has not yet been analysed under the perspective of aspect. Latin grammars, however, mention that the Latin *-ion/-tion* was a classical derivation suffix which served already for the formation of deverbal and deadjectival abstract nouns at the time (Leumann 1977). It has never been associated with inflectional morphology or the verbal domain and has always described actions, their result or a condition (*Trésor de la langue française, Cambridge Dictionary Online*). This property of being able to include a final state of an event seems to be maintained nowadays and can be expressed from an aspectual point of view in a positive dynamic feature.

(75)

- a. *The destruction of the city in an hour / the examination of the patient in an hour*
- b. *?The destruction of the city for an hour / ? the examination of the patient for an hour*

An analogical distribution of features could take place for German. Although the *-ung* derivation is said to result from the same pattern as English *-ing* (Alexiadou 2001b, Demske 1999), a general aspect shift towards a perfective interpretation has diachronically been observed for German (Demske 1999). This historical development will also become interesting later in this chapter, when I am going to test the compatibility of different kinds of verb classes with the suffixes in question. The aspect of the German nominalised infinitives, which is imperfective, can be deduced from the verbal domain and inflectional morphology. Infinitives describe a kind of activity or state, not a specific event that can be located in space and time (via its participants) and be observed in its development. This would mean that German *-ung* carries the feature [+ADD TO], whereas derivational *-en* induces [-ADD TO] in derived nominal NPs<sup>65</sup>.

I am going to argue in the following that the nominalisation suffixes in question can add their aspectual properties by means of Verkuyl's [ $\pm$ ADD TO] feature to the overall event expressed in the NP according to the rules of the Plus Principle. There are derivation suffixes that can produce duration (like English *-ing*), [-T], in

65 Up to here, I have not said a lot on the status of the suffix *-en*, which is classified as inflectional morpheme in works like Eisenberg 1998 also with nominalised infinitives. Eisenberg considers this kind of derivation as "syntactic conversion". Up to here, I have been constantly speaking about the suffix *-en* as opposed to *-ung*, a derivational morpheme, (as have other works, such as Polenz 1980, Erben 1983, Olsen 1986, Motsch 2004), because, in my opinion, this is the morphological unit which carries the aspectual feature I have been hinting to and which has a strong impact on the aspectual properties of the derived nominal. I am aware that from a merely morphological perspective, the suffix *-en* would in many analyses not be considered the one that brings about the change of lexical class from V to N. Here, a conversion that is responsible for this re-categorisation would be assumed as additional step. The other possibility could be to assume a derivational suffix *-en* that has developed from the inflectional *-en* suffix. I favour the latter point of view and will show in this work that inflectional and derivational *-en* take over different functions in the induction of aspect into a larger structure (such as VP and NP).

combination with verbs, and there are other ones that are responsible for a terminative interpretation, [+T], (like English *-ation*). What happens on the sentence level from an aspectual point of view will not be considered for the moment (outer aspect). In the following I will take a closer look at combinations of aspectual elements in English and German NPs.

In table 13 below I have listed all the possible combinations (including suffixes and internal verb arguments) that could appear inside an NP on the base of an [+ADD TO] verb. I have assumed the property [+ADD TO] for *-ation* and [-ADD TO] for *-ing*. At the moment, we do not yet care about the different stages of composition and therefore neither about the compositional structure of the NP.

| Verb               | Suffix           | Complement          | Sum         |
|--------------------|------------------|---------------------|-------------|
| [+ ADD TO] destroy | -ing [-ADD TO]   | Of the city [+ SQA] | [- T]       |
| [+ ADD TO] destroy | -ing [-ADD TO]   | Of cities [- SQA]   | [-T]        |
| [+ ADD TO] destroy | -ation [+ADD TO] | Of the city [+ SQA] | <b>[+T]</b> |
| [+ ADD TO] destroy | -ation [+ADD TO] | Of cities [- SQA]   | [-T]        |

Table 13: Aspect Composition in English Nominals

All examples in table 13 have in common that their base verb contains a plus value of the [ADD TO] feature. The reason behind this is that, if we started out with a minus value already, we would not be able – according to the Plus Principle – to witness aspectual changes, because a minus value cannot be “neutralised” or turned around. In the first row, the combination of such an [+ADD TO] verb with *-ing*-suffixation, which has a minus value, and the object, that is of plus value, constitute together [-T] aspect and we obtain *the destroying of the city*. Even though we mention a bounded Path – which would be a perfect prerequisite for a terminative interpretation - the *-ing*-suffix allows us to look at a moment *in the middle* of the destroying event, not at the overall situation. As the suffix is the only element in this combination that contains a feature with minus value, it must be made responsible for the durative imperfective aspect of the NP. It seems that Verkuyl's Plus Principle can be maintained also in the NP, and even in combination with derivational morphology: as soon as a minus value (introduced here by the *-ing* suffix) comes into play, the entire construction becomes durative in aspect. *The destroying of the city* just focuses on an action that – in future – might bring about a result (*destruction*).

The Path is mentioned (*the city*), but not gone through. The result of the action taking place can only be introduced at sentence level, such as in *The destroying of the city resulted in its destruction*, but not in the NP itself.

Durative aspect that results from the rules of the Plus Principle can also be observed in row two and row four in table 13, repeated below as (76), where at least one minus value is included.

(76)

a. *the destroying of cities*

b. *the destruction of cities*

In (76a), it is again the suffix that contains a negative feature value; but also the unbounded internal argument is negatively set. In this combination there are two elements that make sure that the nominal event is interpreted duratively. In (76b), the unboundedness of the internal argument is enough to turn the meaning from [+T] into [-T] – this is a major point of the Plus Principle: one single negative value suffices in order to obtain non-terminative readings. In these examples it becomes also obvious that the “aspectual force” of a nominalising suffix and the one of the realised internal argument are equally high. *-Ing*, however, can be considered as “mightier” than *-ation*, because it is able to change aspect (into [-T]), whereas *-ation* can only maintain an already existing positive [ADD TO] feature. This, however, has nothing to do with inner and outer aspect, but just with the rules of the Plus Principle, where minus values count more than plus values. From a logical point of view this “mightiness” of the minus value is due to the rules of the *and*-gate, which implements logical conjunction. From an event semantic, compositional point of view, the predominance of durative aspect can be explained by the necessity to explicitly install a bounded Path that can determine the end point of an event or action in order to construe terminativity. As discussed in the five first sections of chapter 4, the prerequisite for [+T] aspect is not only the presence of an internal argument (see discussion on unergatives and omitted objects), but also its positive [SQA] value. Duration is a lot easier to construct. We could for instance simply not mention the Path, along which the action proceeds or quantify the object with [-SQA].

The only combination in table 13, which ends up in a terminative interpretation is *the destruction of the city* in row three. This example regularly comes up in the literature and is judged as a *Complex Event* in Grimshaw's system, which has the

same properties as an accomplishment situation and therefore terminative aspect. Other cases like the ones shown in row 2 and 4 in table 12 are not really discussed there. From what we have seen above it seems that the Plus Principle is applicable in all of these cases, without yet knowing the different steps of the combination process. The important point is that as soon as one negative valued feature enters the compositional structure of the NP, the entire expression becomes durative in aspect.

In the compositional structure of an event nominal or rather an event-NP one more step is needed, compared to the original process, provided by Verkuyl for the VP. As we have seen above, this additional step is the derivation via the nominalisation suffix. The aspectual properties, which make up the aspect of the phrase, however, are the same in the VP and in the event-NP ([ADD TO] and [SQA]).

On the naturalness of the constructions generated in the table above, the meaning of native speakers differ, even when they surface in sentences with aspectual modifiers that are supposed to underline (or contrast with) the aspect that the nominal constructions contain. In general, NPs containing *-ing*-nominals are not as easily accepted as *-ation*-nominals. Speakers note that they rather prefer the verbal construction in situations in which an event is to be described and not the very condensed nominalised variant. Moreover, [-SQA] internal arguments are not really appreciated in nominal constructions either. From the theoretical side, however, Verkuyl's Plus Principle is not only fully applicable to deverbally derived NPs, it also seems that on NP-level there is something like inner aspect in contrast to an outer aspect, that is created on higher levels in the syntax (for instance in the sentence in which the nominal is embedded) and does not determine about the (in)terminativity of a nominal expression in the same way as the elements inside the NP do.

In order to test how far native speakers perceived aspect in nominalisations and if they were able to attach aspectual differences to a certain element in the NP, the nominal expressions from table 13 were combined with aspectual modifiers, indicating a match or a mismatch situation concerning aspectual properties. The possible combinations are listed in table 14. In the column that indicates the possible grammatical judgments that were expected only *the destruction of the city* was supposed to go along with the terminative modification *in an hour*. As all the other NPs are non-terminative in aspect, they should only allow for durative modifiers as

for hours. Speakers were supposed to judge the sentences below by fixed labels reaching from 'completely natural' via 'acceptable' and 'not really natural' to 'unacceptable'. Moreover, speakers were supposed to put the expressions in question into a hierarchy reaching from 'most natural' to 'least natural'.

I did not conduct this task in order to obtain statistically evaluable results that support my theoretical assumptions (as for this purpose, there were not enough speakers available). The aim was to check, if native speakers can really be aware of the very subtle semantic changes that each element in the NP can cause according to my assumptions.

The problem with nominalisations is that information, which is normally extended in a whole sentence, is comprised via the derivation process into a smaller constituent that can itself become part of a sentence, which again contains other (outer) aspectual or temporal properties besides those inside the NP. This is shown below.

(77) The destruction of cities took place yesterday.

When speakers are supposed to judge, if the event in (77) is terminative or durative, they often do not look at the aspect in the NP (which would be durative according to the Plus Principle), but get confused by the terminative interpretation of the simple past tense of the verb. This problematic becomes even more obvious when we look at a sentence which came up more than once up to now: *The destroying of the city ended in its destruction*. If we consider the entire sentence, it is very hard to tell what aspect the sentence has because the answer to this depends on the event we are looking at, the destroying- or the ending-event. Naturally, a speaker would consider the aspect on sentence level as the one that matters and classify the sentence as terminative (due to the inner aspect of the ending-event or to the outer aspect brought about by the chosen tense). However, the aspect I was interested in in this work, is the one of the destroying event. This is the reason why I would like speakers to take a look at the bare event-NPs.

On the other hand, when nominal events are supposed to be judged out of context, it seems that speakers intuitively try to find a surrounding on sentence level where this nominal constituent might fit in (Schütze 1996). This constructed individual context, however, is not under the control of the researcher. The correct



differentiation between the two events and inner and outer aspect of each of these events is, in my opinion, not a very easy task for speakers with no real linguistic background. As Verkuyl has shown in several of his works we must keep apart many (often overlapping) factors which can be responsible for aspect on the lexical and on the syntactic level and on which also the meaning of experts diverge (cf. the discussion on aspect shift and coercion versus several aspectual levels in a sentence that I have mentioned on several occasions in the chapters before).

A second reason for this task was to find out if speakers of English and German – languages in which parallel classifications of nominal patterns are assumed – judged the according sentences in their language in the same way, and if thus the claims made for the aspectual properties of the different derivations could be better understood.

| Verb               | Suffix           | Complement          | Sum   | Modification     | Grammaticality |
|--------------------|------------------|---------------------|-------|------------------|----------------|
| [+ ADD TO] destroy | -ing [-ADD TO]   | Of the city [+ SQA] | [- T] | In an hour [+T]  | *              |
|                    |                  |                     |       | For an hour [-T] | OK             |
| [+ ADD TO] destroy | -ing [-ADD TO]   | Of cities [- SQA]   | [-T]  | In an hour [+T]  | *              |
|                    |                  |                     |       | For an hour [-T] | OK             |
| [+ ADD TO] destroy | -ation [+ADD TO] | Of the city [+ SQA] | [+T]  | In an hour [+T]  | <b>OK</b>      |
|                    |                  |                     |       | For an hour [-T] | *              |
| [+ ADD TO] destroy | -ation [+ADD TO] | Of cities [- SQA]   | [-T]  | In an hour [+T]  | *              |
|                    |                  |                     |       | For an hour [-T] | OK             |

Table 14: Predicted Aspectual Interpretation of English Event NPs

As expected, the speaker judgments for English were quite diverging; for many of the expressions there was no consensus at all and judgments were distributed almost equally on all possible labels. The only expression, which most of the speakers were certain on, was *the destruction of the city in an hour*. In both tasks this combination was qualified as the most natural one. Speaking in terms of the Plus Principle: the joining of three positive values of all participants of the nominal expression - the base verb, the suffix and the [+SQA] quantified object-argument – might provide an easily recognisable terminative unit. In terms of duration, the situation seems to be more difficult. Even in *the destroying of cities for hours*, where the majority of the sub-units are of minus value, there was no consensus about its

acceptability with the durative modifier. However the question arises, if this rejection of the form is due to aspectual reasons or – as indicated beforehand – to the preference of the verbal over the nominal form with durative events. Several speakers explicitly mentioned this as a reason.

Let us now have a look at the German nominalisation patterns and how they should be perceived by speakers in terms of the Plus Principle. In table 15 the combinations of the German suffixes with differently quantified internal arguments and a base verb are displayed. As already suggested in chapters 2 and 3, the German nominalised infinitives in *-en* are assumed to have the same properties as English *-ing* and are therefore qualified as [-ADD TO]. The *-ung* derivation is supposed to add a [+ADD TO] feature.

| Verb                | Suffix         | Complement          | Sum         | Modification         | Grammaticality |
|---------------------|----------------|---------------------|-------------|----------------------|----------------|
| [+ ADD TO] zerstör- | -en [-ADD TO]  | Der Satdt [+ SQA]   | [- T]       | In einer Stunde [+T] | *              |
|                     |                |                     |             | Stundenlang [-T]     | OK             |
| [+ ADD TO] zerstör- | -en [-ADD TO]  | Von Städten [- SQA] | [-T]        | In einer Stunde [+T] | *              |
|                     |                |                     |             | Stundenlang [-T]     | OK             |
| [+ ADD TO] zerstör- | -ung [+ADD TO] | Der Stadt [+ SQA]   | <b>[+T]</b> | In einer Stunde [+T] | <b>OK</b>      |
|                     |                |                     |             | Stundenlang [-T]     | *              |
| [+ ADD TO] zerstör- | -ung [+ADD TO] | Von Städten [- SQA] | [-T]        | In einer Stunde [+T] | *              |
|                     |                |                     |             | Stundenlang [-T]     | OK             |

Table 15: Predicted Aspectual Interpretation of German Event NPs

In general, the German distribution follows the same combination patterns as the English ones. The comments of the German speakers, however, were more useful than those of the English ones. Especially the second task in which the expressions should be ordered on a hierarchy showed interesting results. Below, the ranking of the sentences, as judged by the German speakers, is displayed. The examples that were supposed to be aspectually fitting with their attributed modifier due to the combination of their aspectual sub-parts are marked in bold writing.

(78)

Die stundenlange [-T] Zerstörung der Stadt [+T]  
**Die Zerstörung der Stadt [+T] in einer Stunde [+T]**  
**Das stundenlange [-T] Zerstören der Stadt [-T]**  
**Das stundenlange [-T] Zerstören von Städten [-T]**  
**Die stundenlange [-T] Zerstörung von Städten [-T]**  
 Das Zerstören der Stadt [-T] in einer Stunde [+T]  
 Die Zerstörung von Städten [-T] in einer Stunde [+T]  
 Das Zerstören von Städten [-T] in einer Stunde [+T]

In (78) the four combinations that were supposed to be grammatical or aspectually fitting were judged as such. The only result that does not fit in at all is the aspectually odd pair of nominal expression ([+T]) and modifier ([-T]) on the first rank. This, however, could be explained with the fact that German speakers (like the English ones for *-ing*) generally remarked that they did not like the nominalised infinitives much and rather preferred the verbal form in such cases. The speakers also seemed to be very aware of the aspectual clashes in the examples on rank 6, 7 and 8 on the hierarchy. Many of them remarked that with a different (ly quantified) determiner, they would accept the expressions. All in all, the speaker judgments showed, firstly, that the aspectual impact that the internal argument has should not be neglected and, secondly, that also other than semantic properties might be considered when a speaker chooses a certain suffix in order to express an event. The most interesting point was though, that speakers seem to be sensitive to different aspectual combinations in nominalisations.

To sum up, we can say that for English and German Verkuyl's Plus Principle seems to work out in the nominal domain, too. Obviously, deverbal nominalisations keep the aspectual feature of their base verbs, [ $\pm$ ADD TO] that tells us something about their dynamic or static properties. By derivation, the suffix adds another aspectual feature. In the case of English *-ing* and German *-en* this is a [-ADD TO], for English *-ation* and German *-ung* a [+ADD TO] value. The internal argument that is more frequently realised with nominalisations than the external one (see Kaufmann 2005 for German) can also be added to the nominalisation construction and induces its own aspectual property, which is determined by its quantification [ $\pm$ SQA]. So in general Verkuyl's Plus Principle, which he originally created for the verbal domain and that he applies on the VP level, can also be used for the nominal domain and the NP. A point that has not yet been addressed so far, is the compositional structure of the NP. In the next section, I will try to apply Verkuyl's aspectual algebra for the

nominal domain and check, how far this is compatible with what we have known up to here about the structure of derived nominalisations from frameworks like Distributed Morphology (Alexiadou 2001a, Kamp/Roßdeutscher 2007, Alexiadou/Grimshaw 2008, Alexiadou et al. 2009).

### **6.3 The Aspectual Structure of the Event-NP**

In this section I would like to consider the aspectual algebra of the NP and look at the relations between the single elements. For this purpose I will stick to Verkuyl's suggestions for the verbal domain, verify how far this can be maintained in the NP and if this makes sense from the aspect-compositional point of view. For this purpose I am going to introduce an additional calculation step to include the suffix into the structure.

In order to establish a structure that covers correctly all the syntactic and semantic details, we should proceed step by step and work parallel to the construction of the VP – from the smallest to the larger compositional unit. The first step in the composition of the NP is certainly, to combine the base verb and the suffix, because they constitute one lexical item. However, how can this be done when we also have to consider the argument structure information that the verbal base introduces?

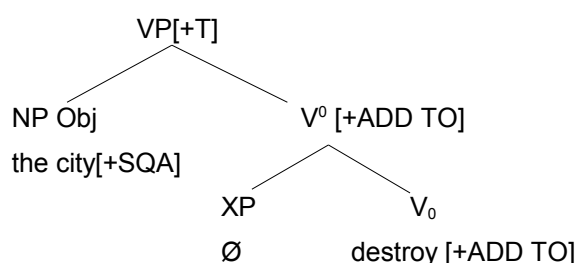
In approaches from the Distributed Morphology Framework base verb and internal argument are combined first, because they constitute the VP that undergoes nominalisation by the suffix. As the purpose of nominalisation suffixes in these approaches is to insert outer aspect (a perspective under which the VP is presented), the suffix itself constitutes a functional node that is applied to the lexical material of the VP. In my view, however, the suffix is a lexical unit with the primary purpose of deriving a new word. This derivation is complicated by the presence of argument structure information that has to be represented by the means of the nominal category. Therefore I need a system that differentiates between word and syntactic structure: the creation of the nominal is a lexical operation, whereas the realisation of the object-argument happens in the syntax.

In his analysis of the VP Verkuyl 1993 assumes a Complex V in which particles can be inserted that determine the aspectual interpretation of the phrase. I have discussed such cases in section 4.4. For the creation of a deverbal nominal nothing

should contradict our keeping this complex V structure for the verbal base. This means that also in the derived NP we can have a  $V_0$  and a  $V^0$  level. Also in nominalisations, particles (or prefixes or particles acting as prefixes) can be included, which influence the Path information of the NP (Ger. *Das Schieben des Wagens* [-T] vs. *das Wegschieben des Wagens* [+T]).

The first problem appears in the next step of the structure. If we stick to the Plus Principle, as it was applied in the verbal domain, a VP should be projected now, which is done by the realisation of the internal argument. This is illustrated in (79). Together,  $V^0$  and the internal argument, should make up the aspect of the VP, which is either terminative or durative.

(79)



This step, the direct realisation of the object NP, does, however, not take place with nominalisations. From my point of view the aspectual information at the VP-level of a derived nominal is still the one of its  $V^0$ . This means that up to this point only the [ $\pm$  ADD TO] information is present. The value that the [ $\pm$  ADD TO]-feature of the verb takes can be decisive for the question, which nominalisation suffixes can be attached. Consider the distribution for *-ing* in table 16 and *-ation* in table 17 with different kinds of verbs, which were chosen according to their [ADD TO] values and their possibility to realise a Path as an internal argument.

We cannot only observe that *-ing* can be combined with almost all kinds of aspectual bases and does not “mind” the possibility to realise or omit an internal argument, we also get an idea about the reasons for this behaviour. As *-ing* is able to add a negative value to a structure, it will turn any possible combination into a durative interpretation anyway.

| <b>-ING [-ADD TO]</b>   |   |      |
|-------------------------|---|------|
| Modals [-ADD TO]        | Wanting, needing, but: *musting, *caning  | ± OK |
| Statives [-ADD TO]      | Knowing <sup>66</sup> , hating, loving, being, pushing, hoping, fearing, understanding, owning  | OK   |
| Unergatives [+ADD TO]   | Working, singing, running, laughing, drinking, hammering, writing, hyperventilating   | OK   |
| Unaccusatives [+ADD TO] | Arriving, dying, falling, melting, starving, dehydrating, growing, drowning, suffocating, withering, occurring, emerging  | OK   |
| Transitives [+ADD TO]   | Destroying of a city, activating of the spectators, eating of a sandwich, building of a bridge, writing of a letter, examining of a student, abstracting of the real world, creating of the world, filtering of the substance | OK   |

Table 16: English Verb Types under *-ing*-derivation

The *-ation* suffix, on the other hand, bears a positive feature. As soon as it is combined with a negative unit (such as stative verbs), it would produce an element of durative aspect as well. This scenario seems to be avoided. Terminative aspect is difficult enough to maintain and additionally there is *-ing* that can take over the derivation of the negatively valued base verbs. Certainly, for *-ation* there are additional morphological restrictions that decide, if a form is possible or not, such as the ending of the verbal stem in *-ate*, *-ify*, *-ize* or its Latinate origin (Plag 1999).

| <b>-ATION [+ADD TO]</b> |  |  |
|-------------------------|--|--|
| Modals [-ADD TO]        | No modals with latinate bases available <sup>67</sup>  | -  |
| Statives [-ADD TO]      | No statives with latinate bases available <sup>68</sup>  | -  |
| Unergatives [+ADD TO]   | Hyperventilation, reaction, participation, intervention, *Workation, *singation, *runation, *laughation, *drinkation, *hammeration, *writation   | +OK, (-OK only with non-latinates bases) |
| Unaccusatives [+ADD TO] | Starvation, dehydration, suffocation, recognition, perception, *arrivation, *dyation, *fallation, *meltation, *growation, *drownation, *witheration, *occuration, *emergation  | +OK, (-OK only with non-latinates bases) |
| Transitives [+ADD TO]   | Destruction of a city, examination of a student, activation of the spectators, abstraction of the real world, creation of the world, filtration of the substance, administration of a measure to assess participation, the reduction of stress, *eatation of a sandwich, *buildation of a bridge, *writation of a letter | +OK, (-OK only with non-latinates bases) |

Table 17: English Verb Types under *-ation*-derivation

66 There are works (such as Demske 1999), which claim that *-ing* is not possible with statives. All of the mentioned stative *-ing* nominals, however, were frequently found on the internet, also in situations with realised internal argument.

67 There are only \*Wantation, \*needation, \*mustation, \*canation. But as Plag 2003 observes, the requirement for a formation in *-ation* is a Latinate base.

68 \*Knowation, \*hatation, \*lovation, \*beation, \*pushation, \*hopation, \*fearation, \*understandation, \*ownation

Similar observations can be made for the German suffixes. In table 18 it becomes visible that the [-ADD TO] suffix, *-en*, can attach to aspectual units of both kinds of values. As with English *-ing*, there also seem to be no other semantic or morphological restrictions for a derivation of that kind.

| <b>-EN [-ADD TO]</b>    |   |           |
|-------------------------|---|-----------|
| Modals [-ADD TO]        | Das Wollen, das Müssen, das Können, das Sollen, but: ?das Brauchen  | Mostly OK |
| Statives [-ADD TO]      | Das Wissen, das Hassen, das Lieben, das Sein, das Hoffen, das Fürchten, das Verstehen, das Besitzen   | OK        |
| Unergatives [+ADD TO]   | Das Arbeiten, das Singen, das Laufen, das Lachen, das Trinken, das Hämmern, das Schreiben   | OK        |
| Unaccusatives [+ADD TO] | Das Ankommen, das Sterben, das Fallen, das Schmelzen, das Verblühen, das Wachsen, das Ertrinken, das Entstehen, das Ersticken, das Verwelken  | OK        |
| Transitives [+ADD TO]   | Das Zerstören einer Stadt, das Aktivieren der Zuschauer, das Essen eines Brötchens, das Bauen einer Brücke, das Schreiben eines Briefs, das Prüfen eines Studenten, das Abstrahieren des Wirklichen | OK        |

Table 18: German Verb Types as Nominalised Infinitives

The *-ung*-suffix on the other hand, is as sensitive to aspectual values as English *-ation*. As itself is of positive [ADD TO] value, it seems to prefer positive bases. Why? Because in a combination with a negative [ADD TO] base verb, it would be rather “useless”: its positive, dynamic feature would simply be overruled and the entire derived unit be of negative value, therefore durative in aspect. An interesting issue in the German *-ung* table is the behaviour of unergative and unaccusative bases. The bases themselves might be carrying a positive [ADD TO] feature, which should be a good prerequisite for a combination with *-ung*. The special quality of unergatives, however, is that due to their lack of an internal argument, which would be able to express a Path, their [SQA]-feature is always judged as having a negative value (see the first five sections of this chapter). As this information on argument structure is already present at the lexical level, where base verb and suffix combine, it could be possible that the negative [SQA] feature of unergatives sort of “repels” the suffixes with positive aspectual properties for same reasons that I mentioned for stative verbs.

Unaccusatives, on the other hand, do have an internal argument and are able to

express a Path. This could be the reason why there are some combinations of such bases with an *-ung*-suffix: there is at least a small chance that the internal argument carries a positive [SQA] feature, which would then not render the aspectual impact of the suffix useless.

| <b>-UNG [+ADD TO]</b>   |  |           |
|-------------------------|--|-----------|
| Modals [-ADD TO]        | *Wollung, *Brauchung, *Müssung, *Könnung, *Sollung   | Not OK    |
| Statives [-ADD TO]      | *Wissung, *Hassung, *Liebung, *Seinung, *Fürchtung, *Verstehung, but: Hoffnung (hope), Besitzung (property)  | Not OK    |
| Unergatives [+ADD TO]   | *Arbeitung, *Singung, *Laufung, *Lachung, *Trinkung, *Hämmerung, *Schreibung (only in compounds like Großschreibung 'capital writing'), *Rufung, *Schreitung, *Rennung, *Essung  | Not OK    |
| Unaccusatives [+ADD TO] | Erstickung, Verblühung, Entstehung, Verwelkung, Ertrinkung, *Ankommung, *Sterbung, *Fallung, *Schmelzung (not in non-causative use), *Wachung  | ±OK       |
| Transitives [+ADD TO]   | Erschaffung de Welt, Filterung der Substanz, Verwaltung des Ergebnisses, Zerstörung einer Stadt, Prüfung eines Studenten, Aktivierung der Zuschauer, Abstrahierung des Wirklichen, but: ? Bauung einer Brücke (rather: Ver-, Be-, Er-bauung), ?Schreibung eines Briefes (rather in compounds), *Essung eines Brötchens | Mostly OK |

Table 19: German Verb Types under *-ung*-derivation

Earlier in this chapter, we have heard about the systematic aspectual shift that the German *-ung*-suffix underwent in its history (Demske 1999). Being terminative nowadays, it still derived durative events in Middle High German. When we compare the data by Demske 2000 in (80) to the table above, it becomes even more obvious that firstly there is aspectual information in derivational suffixes and that secondly this information matters for the compatibility of the said suffix and the base to which it attaches.

|      |                           |   |                            |
|------|---------------------------|---|----------------------------|
| (80) | <i>Middle High German</i> |   | <i>New High German</i>     |
|      | a. hoerunge               | - | *Hörung ('hearing')        |
|      | sehunge                   | - | *Sehung ('seeing')         |
|      | schauwunge                | - | *Schauung ('looking (at)') |
|      | b. harrunge               | - | *Harrung ('abiding')       |
|      | vurhtunge                 | - | *Fürchtung ('fearing')     |
|      | wünschunge                | - | *Wünschung ('wishing')     |

All the examples in (80) have in common that their base verbs are verbs of perception, statives or modals, and are thus [-ADD TO] verbs. In New High German,



we have just seen that such bases seem to be only compatible with [-ADD TO] suffixes. When we consider the aspect shift of the *-ung*-suffix, attested by Demske, from durative to terminative (or from [-ADD TO] to [+ADD TO]), the grammaticality of the Middle High German forms in (80) can be explained as well as their change to ungrammaticality in New High German: a [-ADD TO] suffix is compatible with all kinds of base verbs thanks to the aspectual power of the minus value. [+ADD TO] suffixes, like *-ung* after its aspectual shift, rather attach to [+ADD TO] bases in order not to be overruled by a minus value of another feature in the construction.

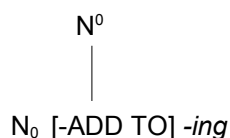
Up to here, we have seen that suffixes seem to be sensitive to the aspectual properties of the other units, which help them to constitute the aspect of event-NPs. The question, however, remains how the single aspectual parts, which constitute an event-NP, are arranged and joined. With deverbal nominalisations we have a VP, which does not project the direct object NP, but instead attaches a nominalisation suffix. How is this last one internally built up and what is its status in the syntax?

In the Distributed Morphology framework and other syntax-based approaches, where nominalisations are also vividly discussed, suffixes like *-ing* are considered to be either aspectual (*-ing*) or nominal heads (*-ation*), depending on their syntactic properties (Alexiadou 2001a, Borer 2001). From the aspect compositional point of view, I agree that the suffixes in question are responsible for aspectual properties. English *-ing* and German *-en* induce an [-ADD TO] feature, as shown above. A different role, however, would be attributed to the English *-ation* and the German *-ung* suffix. Nominalisation analyses from the Distributed Morphology framework have largely adopted the Grimshaw 1990 division into *Complex* and *Simple Events*. This is the reason why *-ation* in such approaches sometimes induces aspect (or argument structure) – which would end in the *Complex Event* interpretation – and sometimes it does not (*Simple Event* interpretation). In my approach, the suffixes of the *-ation*-class *always* “induce aspectual properties”, namely their dynamic temporal information in the [+ADD TO] feature, as soon as an event context is given. The distinction in *Complex* and *Simple Events* is not considered in aspect composition, at least not in the way that Grimshaw discusses it. Either terminative aspect is maintained by the plus-value of *-ation* or it is inverted by another element in the structure, which itself contains a minus value. The result or object interpretations, that *-ation* can also produce, are left out at this point of the discussion. I just stick to

the different kinds of events that can be composed.

The parallels between *-ing*, *-ation*, *-en* and *-ung* in my approach and in Distributed Morphology are the following: in both theories these suffixes induce temporal, aspectual or grammatical properties into a structure. In the Distributed Morphology approaches, however, suffixes are either aspectual heads and project an AspP (and thus behave like inflection) or, in the case of *Simple Events* and Results, nominal heads. In my approach, we always find aspectual information introduced by the suffix, no matter, if the event is complex or simple. The semantics of the suffix is in all the cases embedded in an N, because the syntactic class of the base is changed via the derivation and we obtain a noun. By representing the suffix as a nominal head with the aspectual feature [ $\pm$  ADD TO], we underline its derivative nature and attribute the word formation operation to the lexical level. In this way we can set it apart from inflectional suffixes, which surface in the syntax of the sentence and can be functional heads. For my construction of the NP, I assume different levels of N as it was the case with verbs in Verkuyl 1993.

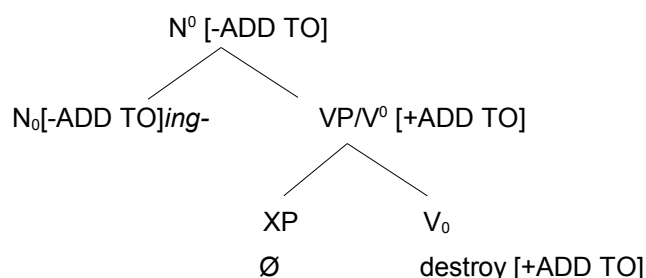
(81)



In (81), we see the lexical aspectual information of the derivational *-ing*-suffix on  $N_0$  level. I have assumed two N-levels in analogy to the complex V in Verkuyl's analysis. The suffix on its own is not a real nominal yet; it only carries the grammatical information common to nouns. Moreover, it owns semantic information, the [-ADD TO] feature, which tells us that it is able to produce durative aspect. The *-ing*-suffix, thus, has a similar syntactic status as the particle *away* in the complex predicate *to push the cart away*, which we have seen before in this chapter. Its syntactic (N) and aspectual ([-ADD TO]) information can only be applied on a higher level in the structure, which is called  $N^0$ . Unlike the particle, it does not "strengthen" an originally neutral verbal base in a certain aspectual interpretation; it takes a verbal element that is already fixed in its temporal properties (either plus or minus [ADD TO]) and derives a new lexical item by addition of its proper [ADD TO] value. Below, I

have tried to illustrate this. The derivative is a nominal from the syntactic point of view, but has temporal properties and denotes an event. In this analysis it becomes clear that at this point of the construction of the event is, however, not complete yet. Neither is aspect. So far there is only temporal, not structural information available. We are only aware that there is something developing in time, that some *destroying* is going on, but this action is not yet specified in what concerns its temporal boundaries or its participants. In the terms of Verkuyl's features: there is only lexical [ADD TO]-information, but no [SQA]-properties and therefore no real inner aspect.

(82)



The grammatical properties of the suffix (category change from V to N) cannot be used on the lower level, N<sub>0</sub>, as there is no verbal information yet. Now, in N<sup>0</sup> at a further level in the lexical structure, suffix and base come together and construe one temporal lexical unit, *destroying*. The VP/V<sup>0</sup>, which still has the [+ADD TO] properties of the base verb, and the nominalising suffix, which, in the case of English *-ing*, adds [-ADD TO] aspect, produce a more complex, lexical item with a minus value.

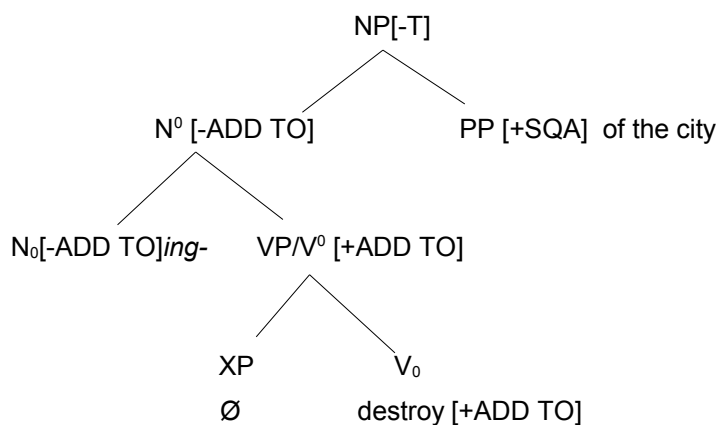
I have assumed different levels of N, here, because the nominalising suffix is not the nominal itself, but simply adds semantic and morphological information. The task of the *-ing*-suffix is to induce (other, additional) temporal properties into the structure<sup>69</sup> by means of a category change. Up to here we have constructed a new noun that expresses an event with certain temporal properties. The aspect composition process is not finished yet, though, because we have not yet inserted the [SQA] information needed for the composition of [±T].

In the next step, on NP level, the grammatical information of N<sup>0</sup> and the information about argument structure, introduced by the verbal base, are joined. At this point we

<sup>69</sup> It might be the case that such suffixes do *contain* more semantic information than just aspect, but this does not matter from an aspect compositional point of view. As will be discussed in detail in chapter 6, the French suffix *-age* for instance is able to induce a negative bias into a nominal (Farge 2004, Heinold 2009). This negative bias might be an interesting quality of *-age* (also in comparison with other French nominalisation suffixes), for the composition of aspect it is, however, not of importance.

leave the lexical and enter the syntactic domain<sup>70</sup>. The lexical information of the verb concerning its arguments, which has not yet been applied up to now, but passed on further upwards in the structure, can be realised at this point. The problem is, however, that an NP cannot attach an internal argument directly, in the same way a verb can (not to mention an additional external argument). This means that the nominal uses the syntactic possibilities of its class to make as much of the information about argument structure as possible: it attaches the internal argument, which is central for the composition of inner aspect according to Verkuyl in a PP as shown in (83) .

(83)



From a semantic point of view, the aspectual information of the NP is now complete. The Path defined by the internal argument is taken up into the structure and thus into the meaning of the entire phrase. The *-ing* suffix, however, tells us that in this special event the action is not brought to an end ([-ADD TO]), although the Path exists and could theoretically be measured ([+SQA]). In deverbal nominalisation structures as in (83) the asymmetry of the two verbal arguments becomes again obvious. If there was an external argument to be realised (as for instance *by the allied forces*), we would have to attach this participant on a higher level, in an optional *by*-phrase. Speaking from the point of view of aspectual composition, the information that the internal argument contributes is very important: it can tell us something about the terminative or durative nature of the event laid out by the nominal (cf. also Tenny 1994). This is probably the reason why it is realised more often than the external argument with nominals (Kaufmann 2005). This syntactic

<sup>70</sup> Verkuyl (1993: 338) calls the different lexical levels a “twilight zone” where syntactic as well as lexical information is provided. This means that by the nominalisation process we have stretched that zone a bit further into the nominal domain.

class only has the *of*-PP, in which it can attach one of its participants. In transitive uses the external argument has not so much impact on the aspect of the NP, but rather adds side information that is needed in order to identify the causer of the action. This information is not necessarily needed from an aspect compositional point of view. Therefore, the external argument is easier to neglect in nominal constructions.

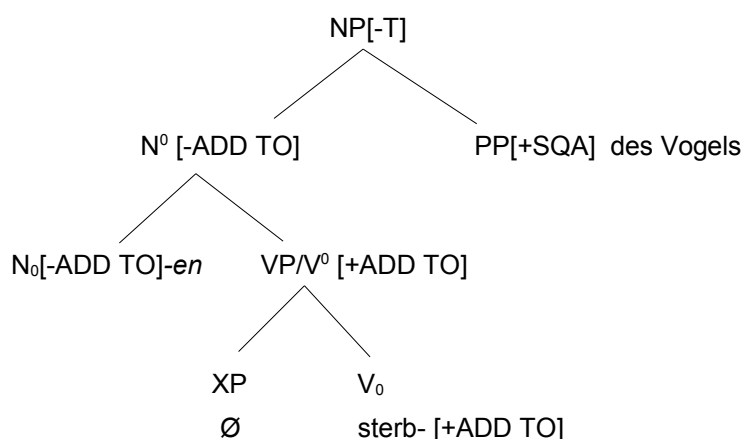
However let us take a look at other cases of nominalisation and find out, if the Plus Principle can further be applied. In the theoretical chapter 2 on nominalisation literature, we have seen that there is a consensus across different frameworks that the *-ation* process for English (and *-ung* for German) are ambiguous in their interpretations: on the one hand, they are considered to derive nominals with, on the other hand, readings without argument structure. According to Grimshaw 1990 and other analyses, the second class of nominalisations, which lacks argument structure, is interpreted as result or, what she calls, *Simple Event*. Recall, that in my system there is no division into *Complex* and *Simple Events*. There are either events that express their Path (which can be specific or not), which means that they realise their internal argument, or events that do not do so in order to express an ongoing process. As indicated by Verkuyl 1993, in both cases – with or without realised object - we can obtain plus or minus [T] interpretations. This means that we have to differentiate between three possible scenarios: if the internal argument is realised, 1. a [+SQA] NP is a prerequisite for [+T] aspect (that can be changed by addition of a suffix of negative value), whereas 2. a [-SQA] NP in internal argument position will definitely derive a [-T] expression. 3. If the internal argument, on the other hand, is not realised or does not exist (as with unergative verbs) we will in each case obtain [-T] as no Path information is expressed. This last scenario is to be discussed in the next part.

#### **6.4 Intransitive Verbs and their Aspectual Influence on the NP**

In this part, I would like to deal with intransitive verbs and their behaviour under nominal derivation. For this purpose I will consider German examples of unergative and unaccusative nature. Note that in German as well as in English [+ADD TO] suffixes like *-ation* and *-ung*, are not very well compatible with different kinds of

intransitives, as we have seen in tables 15, 16, 17 and 18. In (84), we find an illustration of the possible compositional analysis of unaccusatives, such as *das Sterben des Vogels* ('the dying of the bird').

(84)



As illustrated above we start with a verbal base in an unaccusative frame, which generates an internal argument, *des Vogels*, that semantically designates a Path. In the verbal syntax this argument would be moved into subject position on sentence level (*Der Vogel stirbt*). Here, in the nominal domain, it can be realised as a PP with *of* as it is also the case with internal arguments of transitive verbs. In (84), the NP expresses durative aspect, because the nominalisation suffix adds a [-ADD TO] feature. The interesting point is, that if we firstly consider the fact that intransitive verbs cannot appear with [+ADD TO] suffixes and if we secondly assume that the Plus Principle can be applied in the way described above, it should follow that there can be no intransitive unaccusative uses of verbs in suffixed nominalisations that express terminative aspect. This is confirmed, when we look at the examples below.

(85) \**Sterbung* ('dying'), \**Ankunft* ('arriving'), \**Zerbrechung* ('breaking'), \*(*Hin*)*fallung* ('falling'),  
\**Verwelkung* ('withering'), ?*Schmelzung* ('melting')

As soon as one single minus value enters the structure (and this function is taken by the suffix *-en*), the entire construction obtains durative aspect. Then, it does not matter, if we realise the internal argument or not and if it is positively or negatively quantified. The durative aspect is caused by the single suffix that is available for the

nominal derivation of such bases: *-en* .

(86)

- a. ??*Das Sterben des Vogels in zwei Stunden (berührte das Kind)*.  
'The dying of the bird in two hours (moved the child).'
- b. ?*Das Sterben des Vogels fand am späten Nachmittag statt*.  
'The dying of the bird took place in the late afternoon.'
- c. *Das stundenlange Sterben des Vogels (berührte das Kind)*.  
'The dying of the bird for hours (moved the child).'
- d. ??*Das Fallen des Bergsteigers in zwei Minuten (gab ihm Zeit sein Leben revuepassieren zu lassen)*.  
'The falling of the mountaineer in two minutes (gave him the time to reconsider his life).'
- f. ?*Das Fallen des Bergsteigers fand gestern statt*.  
'The falling of the mountaineer took place yesterday.'
- g. *Das zwei Minuten lange Fallen des Bergsteigers (gab ihm Zeit sein Leben revue passieren zu lassen)*.  
'The falling of the mountaineer for two minutes (gave him the time to reconsider his life).'

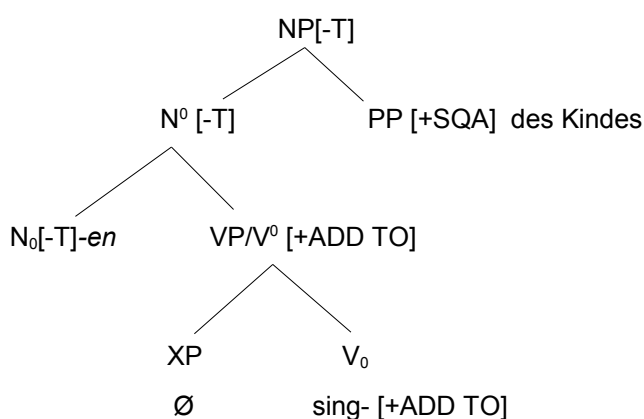
Although the examples in (86) might seem constructed, they tell us something about the aspectual properties of *Sterben* and *Fallen*. The suspicion, mentioned above, seems to be confirmed. In spite of the fact expressed by the VP, *Peter died*, which is a temporal development and therefore of a [+ADD TO] nature, it changes its aspect by the addition of the nominalisation suffix *-en* that induces a minus value feature, namely [-ADD TO]. The same should be true for all verbs in the unaccusative use under suffixation: as the only suffixes applicable for these verb uses in English (*-ing*) and German (*-en*) is of negative [ADD TO] value, the entire NP will also be of durative aspect.

With unergatively used intransitives the situation is different. They have only one argument, the external one. This means that they do not specify a Path that could possibly indicate the end of an action. Consequently, a [+T] reading with unergatively used verbs can never be caused by the realised argument. If an argument is realised, it is the external one, and this is, as we have seen in Verkuyl 1993, rather responsible for the attribution of a certain VP to a certain subject. In such constructions it would not be possible to name a precise Path as a kind of odometer that measures the progress in time of a certain event (a similar view is expressed in Tenny 1994). In his analysis of unergative VPs, Verkuyl 1993 comes to the conclusion that, if they do not realise an internal argument that could indicate a Path, they are considered to be of [-T] nature. This means that there is no possible way in

which an unergatively used verb could become terminative in aspect, because a minus feature is present due to the omission of a Path. I will adopt the same view for nominals that are derived from unergatively used verbs.

Their compositional structure looks similar to the unaccusatively used deverbal nominals. As there is no internal argument that would be preferably realised due to aspectual reasons (determination of the Path), we can attach the external argument with a PP on NP-level and mention the causer of the action. This is shown in (87) in *das Singen des Kindes* ('the singing of the child').

(87)



Up to here, the Plus Principle seems to make sense with all different kinds of verbal uses in suffixed event nominalisations. Transitive as well as intransitive uses can be explained. With both unergative and unaccusative base verbs, we always obtain [-T] aspect, although this is due to different factors: with unergative bases, durative aspect is caused by the lack of the internal argument (and thus the Path information). With unaccusatives, there is Path information, but the only nominalisation suffix compatible with such bases is *-en*, which induces [-ADD TO]. In this system the omission of an argument obtains a totally different role, as we have known it from Grimshaw's approach. Its realisation is no longer an indicator for presence or absence of argument structure, but (in many cases) a means to influence the aspect of an event situation (cf. Kaufmann 2005, García/Portero 2002). Such a system is also applicable for nominalisations in larger natural contexts, where internal arguments often do not have to be mentioned, but can be deduced and understood from their surroundings or from the meaning of the verb.



In the next part, I would like to come back once again to the distinction between Grimshaw's *Simple* and *Complex Events*, which is often attached to the realisation of arguments in nominalisation approaches of all kinds.

## 6.5 The Meaning of an Omitted Object in the NP

In Verkuyl's theory of aspectuality the internal argument is the bearer of the Path-information; its realisation can determine if a construction is durative (*Peter ate*) or terminative (*Peter ate a sandwich*). The aspect of a realised object depends on its quantification, which is expressed in the [SQA]-feature. When the internal argument is not realised, Verkuyl automatically attributes [-T] aspect to the situation, because the Path to which a possible endpoint of an action could be attached is missing. Let us consider this point in the context of nominalisations of transitive verbs. In table 20, I have listed all the possible combinations of suffixes, realised and unrealised internal arguments<sup>71</sup> with a transitive [+ADD TO] base verb. In the first two rows, where the nominal is derived by *-en*, the aspect of the entire expression is [-T] in every case, because of the durative nature of the suffix. This is true with and without the realisation of the object. The interesting examples are those containing the *-ung*-nominal. Here, a realisation or a dropping of the object-argument could be responsible for a difference in aspectual interpretation, if we agree with the theory.

| Verb               | Suffix          | Complement        | Sum   | Modification         | Grammaticality |
|--------------------|-----------------|-------------------|-------|----------------------|----------------|
| [+ ADD TO] zerstör | -en [-ADD TO]   | Der Stadt [+ SQA] | [- T] | In einer Stunde [+T] | *              |
|                    |                 |                   |       | stundenlanges [-T]   | OK             |
| [+ ADD TO] zerstör | -en [-ADD TO]   | ∅ [-T]            | [-T]  | In einer Stunde [+T] | *              |
|                    |                 |                   |       | stundenlange [-T]    | OK             |
| [+ ADD TO] zerstör | -ung [+ADD TO]  | Der Stadt [+ SQA] | [+T]  | In einer Stunde [+T] | <b>OK</b>      |
|                    |                 |                   |       | stundenlange [-T]    | *              |
| [+ ADD TO] zerstör | - ung [+ADD TO] | ∅ [-T]            | [-T]  | In einer Stunde [+T] | *              |
|                    |                 |                   |       | stundenlange [-T]    | OK             |

Table 20: Event-NPs and the Aspectual Role of Omitted Objects

As expected, *die Zerstörung der Stadt* is of terminative nature, as all sub-units that

71 I used German examples, because they were easier to judge for me as a native speaker.

compose this constituent carry positively set aspectual features. When we drop the internal argument, *die Stadt*, this gap should, according to Verkuyl and the application of the theory in the verbal domain, provoke a [-T] reading. When we compare *die Zerstörung* [-T] *in einer Stunde* [+T] and *die stundenlange* [-T] *Zerstörung* [-T], it seems to me that the deverbal nominal without the realised object is much more natural with the [-T] modifier. In *das stundenlange Zerstören*, we have two provokers of [-T] aspect: the omitted internal argument and the *-en*-suffix, which both contribute negative values. These examples are in my opinion a clear hint that the non-realisation of an internal argument with nominals can be alone responsible for a change in aspect, no matter which nominalisation suffix we use. It becomes obvious is that *-ung* does not go along with terminative interpretations in 100 per cent of the cases. We can observe durative event readings with that suffix as soon as we assume a minus value for the internal argument (either by omission or by a certain quantification).

Let us sum up what has been stated for the composition of aspect along the lines of Verkuyl's Plus Principle in the NP up to here. 1. deverbal event-NPs can be composed in analogy to events in the VP by the Plus Principle. 2. The role that morphology plays is, however, different in the NP. Derivation suffixes serve for the construction of inner and not for the induction of outer aspect. 3. The items that make up the inner aspect of the NP are the base verb, the derivation suffix and the internal argument that is realised in a PP, attached on NP level. 4. In English, *-ing* is the bearer of a [-ADD TO], *-ation* of a [+ADD TO] feature. The German equivalents are the nominalised infinitives ([-ADD TO]) and the derivation in *-ung* ([+ADD TO]). Deverbal nominalisation suffixes can thus be considered as the morphological manifestation of inner aspect in event situations presented by nominals. 5. The fact that an internal argument is realised alone cannot serve to conclude on the aspectual interpretation of the NP. Non-realisation of the argument, on the other hand, is a safe hint to a durative semantics, as it is the case in the VP, too.

What is the new clue in this approach to deverbal nominalisations? A central element that distinguishes my analysis from other compositional ones (such as for instance Lieber 2004), is that my analysis goes beyond the lexical level and touches the area between lexicon **and** syntax in the NP. It investigates the impact which lexical semantic properties of the verb (and morphology) can have for the syntax, but

sticks to a separation of these two levels. The internal argument of event nominalisations plays an important role in my discussion on aspect. Frameworks like Distributed Morphology or other syntactic approaches, which also have discussed nominalisations vividly and often argue for an aspectual analysis (Alexiadou 2001a, Borer 2001, Iordăchioaia/Soare 2008, etc.) have focused a lot on the analysis of the external argument (also a Grimshaw tradition), but only rarely mention the explicit function that the internal argument has in their theories, although we have seen here that it seems to be of immense importance to the aspectual differences expressed by nominals (for an exception see Borer 2005). In the mentioned approaches the internal argument mostly comes into play, when it is to be omitted, which signifies a lack of argument structure. From a structural point of view, my analysis is not that far away though from what is suggested by some Distributed Morphology approaches. Also in Alexiadou 2001a, 2009, Alexiadou et al. 2009, the base verb's VP is the complement of a nominal unit, the suffix. An example from Alexiadou et al. 2009 is given below.

(88) [DP D the [NumberP Number [ClassP Class [NP N -ing [VP read]]]]]

How the interior of the suffix unit is built up and where and how the internal argument is realised, however, is not really mentioned. From a semantic point of view it stays rather unclear how inner aspect is construed. It seems that it is mainly the NumP which is responsible for the countability of the event. The most important difference is, however, that in Distributed Morphology aspect is not a constructed, lexical concept, but is either induced as a whole by a suffix (*-ing*) or not (*-ation*)<sup>72</sup>.

Many of the problems with aspectual analyses in the various existing theoretical systems are certainly due to the mixing of different aspect and situation type concepts. The nominalisation analyses from the Distributed Morphology frameworks use the Verkuyl terminology, such as “inner” and “outer aspect”, but they do not really go into detail how these are constructed or realised. It seems that in these approaches mostly the impact of the suffix is considered. The close interaction of temporal and atemporal structure, however, as well as the semantics of the base verb and the influence of the internal argument on the semantics of the whole phrase

72 Cf. also Borer 1994, 2001 & 2005 on a slightly different view on the aspectual status of the different suffixes.

are not really represented in the structure<sup>73</sup>. Approaches like the one by Alexiadou et al. 2009 do contain oppositions like boundedness vs. unboundedness. The NumP, however, in which such features are supposed to be situated, is structurally not really related to or conditioned by the VP. From an aspect compositional point of view, it is difficult to see how far the structure in (88) combines temporal and atemporal information in order to construe the inner aspect of the VP out of them.

From a semantic perspective, the main issue of Verkuyl's Plus Principle is, in my opinion, that the importance of the base verb does not lie in what it expresses from a lexical-conceptual point of view, but only from an aspectual one, or in other words, its temporal contribution to [ $\pm$ T]. The only point where the deeper semantics of a verb is considered in the Plus Principle is in the Complex Predicates of verbs, such as *to push (away)*. The fact that the further semantic properties, such as agentivity or (inherent lexical) telicity do not play a role for the construction of the VP does not seem to be a big problem. Agentivity, for instance, is a quality which is closely linked to the external argument, as we will see in the following sections. Such information can play a role at a higher point in the structure, but is not needed for the creation of inner aspect.

In the next sections I would like to go further into detail with the comparison of my semantic compositional approach of the NP and the mostly syntactic ones by Alexiadou, Iordăchioaia/Soare and Borer. Also in these works, aspect is a central element, which has to be represented in the structure in order to distinguish between different nominalisation types. I would thus like to show in which points my system differs from theirs and where they share common ideas. Up to now, I have only dealt with phrases, more explicitly the NP. The following sections are to show how these NPs can be syntactically integrated into more elaborated DPs and why the differentiation of a lexical and a syntactic level is of importance.

## **7 The Structure of Complex Lexical Items and their Implementation in the Structures of Sentences**

For a subject such as deverbal nominalisations where semantic and syntactic

---

73 Borer 2005 might be an exception to this. She assumes different aspectual projections depending on the quantification or absence of the internal argument. But even her system stays with the idea that suffixes are aspectual heads, which does not seem to fit into the idea that aspect is a constructed phenomenon.

properties are closely linked and matter for the classification and interpretation of complex lexical items (Chomsky 1970), it seems to be natural that there are many frameworks which try to represent lexical information in syntactic structures already at a very low level, because as Alexiadou 2001a puts it, “lexicon and syntax are both dependent on grammar: if one of the components is modified, the other will also undergo certain changes” (p.3f).

Examples for such models in different languages are Borer 2001, 2003, 2005, Iordăchioaia/Soare 2008, and the already mentioned Alexiadou 2001a, 2009, Alexiadou et al. 2009. In the following, I would like to give a short outline of these approaches, because they go beyond the NP in their syntax and try to integrate the external argument and aspectual modifiers into their analyses. Moreover, they discuss additional types of nominalisations by help of which the differentiation of derivational and inflectional morphology that I am constantly talking about can be illustrated. I will compare their syntactic analysis of nominalisations to mine and show in how far the two systems are similar and where parallels exist. In the end I hope to show that the analysis of lexical items which I have introduced in this chapter by help of Verkuyl's semantic composition can be integrated into syntactic structures of the DP without completely abandoning the lexical level.

## 7.1 Alexiadou's 'Verbal' Nominals

Already in her 2001a work Alexiadou differentiates between two very general types of nominalisation which come up frequently in English (Chomsky 1970). She compares verbal gerunds such as (89a), which attach their internal argument directly, to other *-ing*-forms which use the PP in order to express the object. Among those last ones count all the nominalisation types, we have come across up to here (89b)<sup>74</sup>.

---

<sup>74</sup> Examples taken from an Alexiadou/Schäfer 2006 talk at Universität Stuttgart, “External Argument Realisation in Nominalisation”, SFB 732 colloquium.

(89)

- a. *John's destroying the manuscript*
- b. *John's/the destroying/destruction of the manuscript*

Also the role of the external argument is different for the two types of nouns: the (a)-type must realise the external argument (*\*The destroying the manuscript*), whereas for the (b)-type, it is optional. Moreover the realisation of the external argument works for the (b)-type also in an optional adjoined *by*-phrase, whereas this is not the case for the (a)-type.

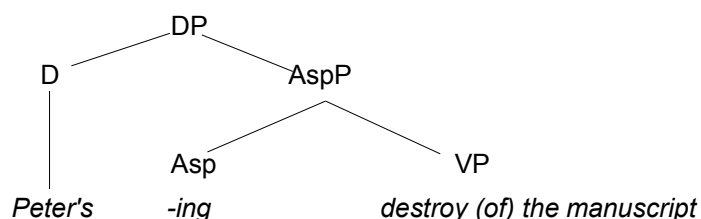
(90)

- a. *\*The destroying the manuscript by John*
- b. *The destroying/destruction of the manuscript by John*

All of this suggests that nominalisations of the two kinds seem to have a different grammatical status. In Alexiadou's works the (a)-type will be called "verbal", the (b)-type "nominal" nominalisations for exactly the properties illustrated in (89) and (90). Among the so-called "mixed" nominals fall the *-ing*-derivations of the (b)-type: they exhibit properties of nominal nouns but are formed with the same suffix as the verbal type.

In Iordăchioaia/Soare 2008 as well as in Alexiadou et al. 2009, the following differences in syntactic analysis arise from these properties.

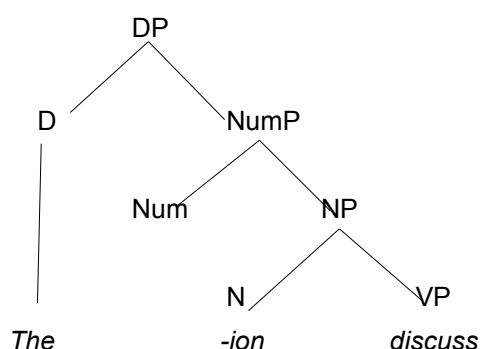
(91)



The analysis above considers the derivation suffix to be an aspectual head which attaches directly to a VP. The aspectual information which the suffix contains is described as unbounded or imperfective. This means that aspect is seen as a construct from several sub-entities, but that it is a property of its own which exists as grammatical feature and can only attach to VPs. Thus Alexiadou et al. consider derivation suffixes (or at least English *-ing*) to be inducers of outer aspect, which is

contrary to my assumptions here. Their 'nominal' suffixes, on the other hand, such as English *-ation*, are integrated structures of the kind we see below.

(92)



In contrast to the suffix with the verbal properties in (91), *-(at)ion* is a nominal head (which is supposed to illustrate the change in category) that projects a NumP. The NumP also contains a feature which is linked to aspectual properties, namely a morphological plural that can only apply to count nouns. In this way perfective aspect or boundedness is achieved.

As we can see, Alexiadou's as well as Iordăchioaia/Soare's analyses of the different types of nominals attribute similar aspectual qualities to the same suffixes as mine does. The reasons for this, however, are motivated differently. In Distributed Morphology the application of nominal and verbal elements in the structure (N-head vs. Asp-head) are supposed to differentiate between "real" nominalisation suffixes (such as *-ation*), which are responsible for a category change (V to N) and induce those nominal properties we know from Grimshaw 1990, such as plural, countability or possible semantic shifts to resultative readings. These are all the qualities common to Grimshaw's third class of nominalisations, which is ambiguous between *Complex Event*, *Simple Event* and *Result* interpretation as well as to the second class, which cannot produce *Complex Events* at all.

The verbal properties of suffixes, such as *-ing*, are supposed to underline the fact that derivatives of such kind produce exclusively event readings (thus the AspP) and

were attributed to the unambiguous *Complex Event* class in Grimshaw's system.

As in my analysis of the different nominalisation types the Grimshaw classification was given up for the reasons discussed in chapters 1, 2 and 3, I do not think that the differentiation between verbal and nominal nominalisations in the way it is made in the literature mentioned above is necessary.

Another central point in which the above mentioned analyses differ from mine is the aspectual status of derivation suffixes. In the Distributed Morphology approaches shown here, suffixes either induce outer aspect, as it is the case with *-ing*, or they do not induce aspect as such but are embedded under a NumP. This leads to a nominal count interpretation that can be interpreted as terminative aspect in combination with a deverbal nominal. This property, however, is of structural, not of (lexical) temporal nature (as it is the case with suffixes in my analysis). Moreover, the count property does not come from the suffix itself, but from the dominating NumP.

In such a syntactic approach it seems that outer aspect always has to be durative; there is no feature for a terminative variant (for a different analysis see Borer 2005). In what follows I would like to discuss how result interpretations as well as Alexiadou's "verbal" nominalisations can fit into the aspect compositional approach.

## 7.2 Result Interpretations in the Aspect Compositional Approach

In the system I have introduced in this chapter, the different aspectualities (terminative vs. durative) result from a fusion of temporal information on word level and quantificational information realised in the syntax (but already present at a lexical stage). Both types of suffixes, *-ing* as well as *-ation*, are considered to be nominal heads, which is supposed to account for their classification as "derivational". In this way we can differentiate between real nominalisations (such as *-ation* and 'nominal' *-ing*) and gerunds (like 'verbal' *-ing*). In the syntactic analysis of 'verbal' and 'nominal' *-ing*-nouns, as we see them in the examples in (92), it is difficult to deduce syntactic properties such as the different realisation of the internal argument as PP or as directly attached object just by the structure. Certainly, the presence of NumP from Alexiadou's analysis that is supposed to be the syntactic realisation of morphological plural marking can be considered as an indicator for a 'nominal' *-ing*-interpretation, which either goes along with an object realised as PP or no object at



all.

In other languages, such as French or Romanian, where also Grimshaw's *Complex Event* nominals pluralise (Iordăchioaia/Soare 2008) the trigger for the projection of a NumP could be a certain aspectuality of the nominal, for instance. The NumP would probably rather attach to NPs with terminative aspect ([+T]) and could cause a repetitive reading, so that we observe several terminative events. This is illustrated in the examples below from Roeper 1993 and Alexiadou 2001a for Germanic languages and Roodenburg 2005 and Iordăchioaia/Soare 2008 for Romance languages.

(93)

- a. *John*<sub>Theme</sub> *needs discussion.*
- b. *John*<sub>Theme</sub> *needs discussions.*
- c. *die Beobachtung von Vögeln*<sub>Theme</sub>.  
'the observation of the birds'
- d. *die Beobachtungen von Vögeln*<sub>Theme</sub>.  
'the observations of the birds'
- e. *les destructions fréquentes des quartiers populaires (pour élever des tours stalinienne)*  
'the frequent destructions of the popular quarters (in order to raise Stalinist towers)
- f. *demolările frecvente ale cartierelor vechi de către comuniști.*  
'the frequent destructions of old quarters by the communists'

In (93a) and (b) we see that as soon as a NumP is projected, the theme reading for the argument is blocked and we can only obtain a referential semantics (Iordăchioaia 2007). Up to here I have not yet discussed other than event interpretations. How would an illustration of result nominals look in the aspect compositional approach? As there is no event, there will be no aspectual interpretation. Aspect cannot be constructed, because the [SQA] information, expressed by the internal argument, is not realised (*John needs discussion* \_\_\_\_). Below I have tried to illustrate this lack of aspectual information in a structure.



which is durative, cannot (Iordăchioaia/Soare 2008).

As we have seen, the representation of different aspect in events as well as resultative readings are possible in my system without making use of an AspP for the distinction of different interpretations. In the next section, I would like to come back to the so-called 'verbal nominals' from Alexiadou's analysis.

### 7.3 What is the Aspect of 'Verbal' Nominals?

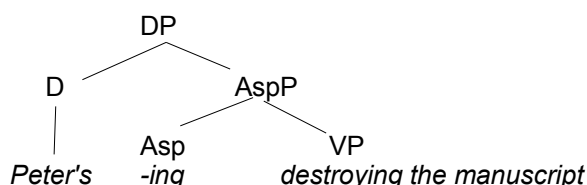
In the mostly syntactic literature on nominalisations, the English gerunds, such as *Tom's destroying the manuscript* are often considered to be more 'verbal' than the nominals with which we have dealt up to here. The fact that they realise their argument directly and obligatorily, absolutely need to mention their agent and cannot appear with a determiner (*\*The destroying the manuscript (by Tom)*) raises doubts, if this morphological process can be considered a real derivation. Obviously properties of the nominal class have not been (entirely) transmitted to the newly created word. I do not want to contradict the traditional analysis of gerunds as NPs (Abney 1987), however, they seem to be defective to some extent, unlike the other nominalisations we have seen so far. For this reason, one could come to the conclusion that the system which I have proposed for my nominal derivations earlier in this chapter cannot be applied in the case of gerunds as no real lexical category change from verb to (complete) noun seems to take place<sup>75</sup>.

For the syntactic analysis of such nominals this viewpoint does, however, not turn out to be problematic. As I do not take gerunds to be "real" derivations, their aspect is not a compositional concept which unites lexical and structural level. Thus the aspect induction for gerunds can be considered as a purely syntactic operation as it is the case with Alexiadou's AspP construction. We would then obtain the traditional VP-node containing a directly realised internal argument dominated by the *-ing-* suffix, which is no longer an item with lexical, but with structural information. This is illustrated below.

---

<sup>75</sup> This category change is represented by the suffix being a N-head.

(95)



The kind of aspect we see in (95) would be considered as outer or grammatical aspect. Comparing the two types of *-ing*-constructions, we could conclude that only real nominalisation suffixes, which produce elements that show all syntactic properties of their new lexical class, are able to help construct inner aspect.

The status of the *-ing*-suffix that produces the gerunds is in my opinion hard to determine. Whereas Alexiadou 2001a analyses derivational *-ing*-nouns (*Peter's destruction of the city*) as “mixed”, with elements from the verbal and the nominal class, I would rather attribute this term to the gerund *-ing*: on the one hand it produces items which can appear in positions typical for NPs (Alexiadou 2001a) and are dominated by a DP-node, on the other hand the syntactic properties that these items exhibit are clearly verbal. In addition, the kind of aspect they insert into the structure seems to be of a syntactic or inflectional nature. From such a point of view, which is more a morphological one, gerunds should not be analysed in the same way as “real” derivations. Aspectually they have more in common with inflectional morphology, because they can bring about a certain aspect on their own and are not part of a lexical-compositional machinery<sup>76</sup>. For this reason I would attribute them a status between derivation and inflection, which could then be the “mixed” class.

In this section I have tried to include the much discussed gerunds into my approach of aspect composition in nominals. I did this from a point of view which focuses on the part that morphology plays in this interaction process of lexicon and syntax. All in all, I think that my analysis is not that far away from what Alexiadou, Iordăchioaia and Soare have proposed. The main difference lies in the addition of a lexical level in my word structure and a slightly different classification of the types of nominals.

<sup>76</sup> A similar differentiation is made by Yoon 1996 for Korean, English and Spanish: he stipulates that the *-ing*-affix in nominal gerund phrases cannot be considered to be a nominalising element. He tries to distinguish between lexical and phrasal derivation, which seems to go into the same direction that I have proposed here, although Yoon goes much further and tries additionally to link this hypothesis to the inflectional *-ing*-suffix. However it seems that there is a lot of data from languages other than English (for instance Spanish, Korean or Turkish) which underline such a distinction.

In the next section I would like to take into account an approach which has dealt with different kinds of AspPs, but tries to keep the analysis on a syntactic level. We will see in how far overlaps and differences exist.

#### 7.4 Borer's Different Types of Aspect Projection

In her 2001 paper “The Forming, the Formation and the Form of Nominals” Borer introduces two sorts of aspect for the derivation of deverbal nominals. In her approach types of nominals similar to those in the Alexiadou literature are distinguished: argument structure nominals and non-argument structure or referential nominals. Moreover, also Borer takes over the Grimshaw terminology and divides events into *Simple* and *Complex* ones. Other than Alexiadou or Iordăchioaia/Soare Borer's analysis does not try to explain the different types of nominals by the presence or absence of an AspP in the structure, but rather by the nature of the AspP (which is present in all “argument structure nominals”).

Borer claims that as soon as we interpret a deverbal nominal as an event, an aspectual structure is projected. In order to differentiate between two types of aspectual readings she introduces Asp<sub>P</sub> and Asp<sub>E</sub>. The first type of aspect introduces processes (thus the P). Asp<sub>P</sub> seems to be non-terminative and projected by the *-ing-* suffix. If there is such a thing as a realised object in Asp<sub>P</sub> constructions, Borer attributes an “originator” reading to it, such as in *John's loving of Mary*. The second type of aspect, Asp<sub>E</sub>, projects an endstate (thus the E) and brings about a terminative interpretation of the event nominal. Morphologically such aspect is realised by *-ation*. In the structure AspP nodes directly dominate the VP and are dominated again by NPs and later integrated into a DP. This is a crucial difference to Alexiadou's analysis, for instance. It seems that the construction of Borer's NP proceeds in the same chronology as mine does. At the beginning we find (verbal) roots (or lexical elements in my approach) which then become specified in aspect (because the speaker chooses to express an event) and thus build an NP. The step “specification of aspect”, however, is not executed in the same manner.

Whereas for Borer aspect seems to be a structural element that exists of its own accord and just needs to be projected, my kind of aspect is put together from different types of features and also touches a lexical level. To Borer suffixes are

aspect “inducers”, which means that they already carry completed aspect in them. My suffixes, at least the merely derivational ones, are only one (of several) means that can contribute its share to the construction of an aspectual NP.

Also in Borer's analysis we find a distinction of aspectual properties associated with certain nominals or derivation processes. Aspect, however, has a different status than in a lexically based approach, because it is a structural element which must only be inserted. This is a particularity that all the syntactic approaches we have seen here share. In the structure itself Borer, however, presents two different types of AspPs in contrast to Alexiadou who opposes aspectual and nominal heads in order to illustrate the different interpretations of events. What both approaches lack is, in my opinion, the possibility to distinguish between derivational and inflectional morphology as well as between inner and outer (structurally induced) aspect. As I have shown in the previous section in my analysis of gerunds, a differentiation between these concepts could be of importance for our understanding of grammatical and semantic properties of nominalisations. All in all, it has become visible that Borer's approach proceeds in a very similar way as mine in the construction of the aspectual construction of nominal events.

Up to here, I have spared the French nominalisations, mostly because in the Grimshaw 1990 system they cause a lot of trouble for the assumed classes of suffixes and their “argument structure properties”. As I hope to have introduced my ideas on Verkuyl's approach and its applicability in the nominal domain now, I can consider the French deverbal nominalisation suffixes in the next chapter. We will see that the problems, that a Grimshawian analysis of the French suffix landscape would bring about (cf. Heinold 2005, 2007), are easier to cope with under an aspect composition analysis.



## CHAPTER 5 – FRENCH NOMINALS AND ASPECT COMPOSITION

The reason why I considered the question of suffixes as aspectual units in the first place, is the French deverbal nominalisation system. As already mentioned in chapter 2, the French suffixation patterns do not make much sense when they are analysed under Grimshaw's classification (Heinold 2005, 2007). In French, mainly three productive suffixes are available for the formation of action nominals. All three of them are ambiguous in the sense of Grimshaw 1990. This means that all three of them are able to produce events, results, objects, places, instruments and many other readings (cf. Lüdtke 1978, Dubois/Dubois-Charlier 1999, Heinold 2005), although in the literature there seems to be a consensus that the event interpretation is the predominant one (see also Uth 2008 on the diachronic perspective). Thus, the question remains why are there three patterns (and even more, if we count the less productive formations such as *-ise*, *-erie*, *-ade*, *-ure*, *-ée*, etc.), which serve exactly the same purposes. If we leave apart possible phonological or morphological factors that could influence the base's choice of a suffix, we could conclude that there must be some, although rather subtle, semantic differences that justify the co-existence of these processes. Recent literature, such as Martin 2007, Huyghe/Marín 2007, Uth 2008 or Ferret et al. 2010, seems to be of the opinion that, firstly, such differences exist, secondly, that they are to be found in the event interpretations of the nominals in question and, thirdly, that they are of aspectual nature. In chapters 2 and 3, I have discussed this point in detail. There, the data suggests that *-age* is responsible for durative, *-(t)ion* and *-ment* for terminative interpretations. In this point they can be compared to the English and German processes that have been considered in chapter 4. The table below shows the aspectual features of the suffixes from English, German and French that are of importance in the present work in an overview. The feature values for French were chosen in analogy to the English and German ones.



| <b>Language</b> | <b>Suffix</b>  | <b>Aspectual property</b> |
|-----------------|----------------|---------------------------|
| English         | <i>-ing</i>    | [-ADD TO]                 |
|                 | <i>-ation</i>  | [+ADD TO]                 |
| German          | <i>-en</i>     | [-ADD TO]                 |
|                 | <i>-ung</i>    | [+ADD TO]                 |
| French          | <i>-age</i>    | [-ADD TO]                 |
|                 | <i>-ment</i>   | [+ADD TO]                 |
|                 | <i>-(t)ion</i> | [+ADD TO]                 |

Table 21: Aspectual Features of English, German & French Suffixes - Part I

When we take a look at table 20, we can see that the suffixes, which induce a [-ADD TO] property in English and German also appear in the verbal domain. There, the English suffix *-ing* for instance has the same function as in the nominal domain: to cause a durative reading. A similar statement can be made for the German *-en* nominals. In the verbal domain, the suffix appears with infinitives, which neither describe terminative situations on their own. However what about *-age*, the French suffix that is supposed to bear [-ADD TO]? It is a nominal derivation suffix, as are *-ment* and *-(t)ion*, and is not linked in any way to the verbal domain. So, where can it get its aspectual properties from and what could they look like? In order to clear this issue a diachronic perspective could be of use. In the following, I will discuss, why and how the French *-age* suffix is able to induce durative properties. Moreover, I will show in a cross-linguistic comparison, to what extent it is similar to its English and German equivalents, *-ing* and *-en*.

## 1 -Age's Diachronic Development

Uth 2008 gives an overview on the functions that *-age* had from the Old French period up to now. *-Age* in Old French is considered to be derived from the Latin suffix *-aticu*, which was responsible for the creation of relational adjectives from nouns. Its function was to denote “types of nouns instead of concrete tokens” (Uth 2008, following Vergnaud/Zubizaretta 1992) or “kinds” in the sense of Krifka et al. 1995, as in *census terraticus* ('tax on land'). Here, *census terraticus* would be conceived of as a kind of tax, namely the one on land. In the transition period to Old French, these

adjectives were nominalised and served as names for taxes, rights or status (Fleischmann 1990, Uth 2008). Two other functions that *-age* newly acquired in the Old French period, were the capability to derive denominal group terms (96a) and deverbal event nominalisations (96b) (Uth 2008: 205). Examples are given below.

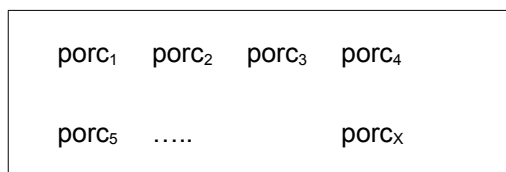
(96)

- a. *toutes mes bestes et le meilleur porc du porcage*  
'all my beasts and the best pig of the herd of pigs'
- b. *il firent le mariage du dit chevalier et de...*  
'they conducted the marriage of the mentioned knight and...'

Uth's claim for the semantic properties of the group terms built by *-age* is the following: in order to denote a group, *-age* makes use of a quality that already its ancestor, the Latin *-aticu*, had in order to create kind terms. What group and kind terms have in common, according to Uth, is that both rely on an "undefined number of instantiations" of properties (in the case of kinds) or individuals (in the case of groups). The herd of pigs, which denotes a group, for instance, is composed of an unknown number of single, individual pigs. *Baronage*, on the other hand, is derived from the noun *baron* and is the collecting term for all the qualities that make up a baron. The same is true for *veuvage* ('widowhood') or *eschevinage* ('rank of jury men'). This means that *-age* (as well as Latin *-aticu*) is able to derive nouns that express an internal plurality of instantiations (pigs, properties of barons, properties of widows, etc.), but at the same time obtain an exterior frame that gives them boundaries. In (97), I have tried to illustrate this for *porcage*.

(97)

porcage



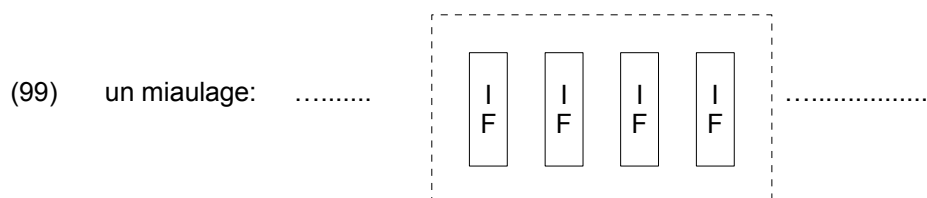
The herd of pigs, *porcage*, of which we do not know exactly how many individuals it comprises, just that there are more than one, is "collectivised" (Uth 2008) by the *-age*-derivation. Internally, it is plural, externally it is a singular unit. The same can be observed with properties. *Veuvage*, for instance, could be translated as "everything that makes a person a widow". This is the reason why Uth assumes a plural operator P\* (Link 1983) for Old French *-age* that causes the pluralisation of the nominal base

(*porc*).

The interesting thing about *-age*, however, is that it can not only refer to the group as a whole, as seen in (97), but also to the members that make up the group, which is a difference. This is an issue that has been remarked for group denoting terms in general. For the English *committee*, for instance, Barker 1992 argues that all its single members do not have the same properties as the entire group. Bill, for example, can be a member of committee A, whereas committee A cannot (Barker 1992: 73). An example for such a reading is given below (Uth 2008). Here, the group individuals, the knights that make up the group, are focused.

- (98) *Li quens a fait son barnage asanbler.*  
'The king made (all) his knights assemble.'

The third interpretation that Old French *-age* was able to derive, were, as mentioned above, event readings. Those, however, were not really frequent, because the rival process *-ment* was already in charge of this task. In Uth's Old French corpora, only 0,5% of the *-age* nominals, compared to 99,5% of the *-ment* nominals displayed event interpretations. Uth suggests that the reason why *-age* has developed into such a productive pattern today in the eventive domain, lies in the fact that *-age* projected its pluralisation properties from the denominal onto the deverbal derivation processes and thus, introduces a way of expressing events that *-ment* lacks. This seems quite reasonable when we compare the illustration in (98) that refers to Old French *-age* as a denominal suffix, to the illustration in chapter 3, (repeated here as (99)), which is supposed to represent the structure of *miaulage*, a deverbal derivation in *-age*.



In both representations, we observe that an individual (being or event) is at first pluralised into an undetermined number and then collectivised by the *-age* suffix. Externally, *miaulage* as well as *porcage* are singular, but internally, they are

composed of an unknown number of sub-units. This unknown number of units is what gives *-age* the property to derive unbounded interpretations with events, as has been discussed and illustrated with examples in detail in chapter 3. This is what makes *-age*, in my opinion, similar to English *-ing* and the German nominalised infinitives. The particularity of *-age*, however, is that unlike *-ing* and *-en*, its faculty to express unboundedness is not genuinely verbal or temporal. Whereas the unboundedness character of the two Germanic suffixes does also refer to events in the verbal domain, where it is responsible for outer aspect, the one introduced by *-age* is originally merely quantificational and designed for individuals or properties. It is only *applied* on temporal units (events), which seems quite a difference to me. This origin of *-age* in the denominal/deadjectival domain is also responsible for another of its properties that makes it special in its description of events: *-age* can not only refer to “groups of events”, but also to actual instances. This opposition is shown in the Old French examples from Uth below.

(100)

- a. *si disent que il queroient passage...*  
'they said that they asked for passing (the right to pass)'
- b. *cil m abandona le passage de la haie mout doucement.*  
'He very gently allowed me to pass the hedge.'

In (100a) a general event of passing is evoked, whereas in (100b) an individual example of passing is singled out, namely the passing of the hedge. This last one is what Uth understands by “true event nominalisations”.

To sum up we can say that *-age*, to which the same aspectual properties as English *-ing* and German *-en* have been attributed before, has, however, a very different history than its Germanic equivalents. Its origin can be traced back to the Latin deadjectival and the Old French denominal domain, where it served to create kinds and groups. This group forming property, however, has been shifted to the deverbal domain (Uth 2008), where *-age* is nowadays capable of producing unbounded event readings. In the next part, I will discuss how these properties can now be analysed from the point of view of aspect composition and to what extent *-age*'s history is important for its present behaviour.

## 2 Non-eventive *-age*-interpretations: Collectivised Plurals

As mentioned before, *-age*'s role is not as clear cut as the one of English *-ing* and German *-en*. On the one hand, we have seen that concerning events it has found its proper role in the French suffix landscape, which justifies its co-existence with patterns like *-ment* and *-(t)ion*, which also derive events, but are from a different aspectual nature. A strange particularity is, however, that *-age*, unlike *-ing* and *-en*, derives also results, states, places, instruments, etc. in large numbers (Dubois/Dubois-Charlier 1999, Heinold 2005).

- (101)
- |    |  |                |
|----|--|----------------|
| a. | <i>Le passage de la haie par le paysan</i>       |                |
|    | 'The passing of the hedge by the farmer'         | -event         |
| b. | <i>Le passage qui mène vers la Seine</i>         |                |
|    | 'The passage way that leads to the river Seine.' | - object/place |

This is shown in the examples in (101). Here *passage* can serve as a means to express an action that is going on (a) or an object or place where one can carry out the action denoted by the verb (b). Such secondary interpretations are normal with high-frequency *-age* derivatives (Lüdtke 1978, Heinold 2005). From the study of neologisms in chapter 3, we can, however, conclude that the predominant and original meaning of *-age* derivatives is the eventive one. In the following, I am going to argue that French *-age* derives durative events by default. It is possible though that *-age*-nominals develop secondary, no longer eventive meanings. This is, in my opinion, due to *-age*'s historical background in the deadjectival and denominal domain. *-Ing* and *-en*, which have their predominant function in the deverbal domain, nowadays, are more precise and more exclusive in their function as aspectual marker for events. They refer originally to verbal, temporal units. The aspectual feature that *-age* carries and that resembles rather a plural operator, as evoked by Uth 2008, however, cannot only be applied to events, but also to individuals and properties. Examples are given below.

(102)

- a. *Le barrage* ('the dam'): all the obstacles that serve to bar something
- b. *L'attelage* ('the harness'): all the straps that serve to harness a horse
- c. *Le plumage* ('the feathering'): all the feathers of a bird
- d. *Le passage* ('the passage'): street surrounded by several walls

In (102) we see that no matter, if the *-age*-derivative is deverbal (a,b,d) or denominal (c), it designates an object that is made up of several smaller units on the inside. The plurality caused by *-age* is maintained, but no longer used to refer to an event as such, but rather to all the objects or instruments that serve to conduct the action expressed by the verb. Lieber (2004: 1) says about ambiguities of such kind: "[...] the meaning of an affix is fluid enough to allow all of these meanings in combination with particular bases".<sup>77</sup> Interpretations as the ones in (102) will not be discussed in detail here. The main focus of the following parts will lie on the event reading.

### 3 Aspectual and Other Semantic Oppositions of *-age*, *-ment* & *-(t)ion* with High Frequency Derivatives

As already shown by the *miaulage* examples from Martin 2007, 2008a in chapter 2 and my hapax analysis in chapter 3, we have a reason to believe that *-age* is the French suffix responsible for the derivation of unbounded events in contrast to *-ment* and *-(t)ion*, which express terminativity. The examples by Martin, however, have often been criticised as being not really frequent French words. It is a fact that on the internet they mostly come up in linguistic sources. My neologism data are already one step to a further proof for *-age*'s properties, but the few data that were obtained for *-ment* and *-(t)ion* in this study might not be considered convincing enough. This is the reason why I will compare high frequency doublets of the three processes and analyse the event readings they exhibit in this section. Moreover, I will describe in short, which other semantic particularities are typical for the three rival patterns and have been observed in the literature.

There are large lists of *-(t)ion* and *-ment* doublets already to be found in Lüdtké 1978, but the pairs discussed here have been extracted from the *Le Monde Corpora* of the *Institute for Romance Languages* at the Universität Stuttgart<sup>78</sup>. The major

<sup>77</sup> This comment originally refers to the ambiguities of the English *-er* suffixation, but I think it fits very well for our purposes here, too.

<sup>78</sup> Thanks to Achim Stein, who put the list to my disposal.

problem that arises when we would like to discuss high(er) frequency derivatives in French, is that the opposed forms show more than the event readings (of different aspectuality) in most of the cases. One of the doublets often serves to express (mostly fixed) very particular meanings in special contexts (sometimes almost collocation-like), differences in register or literary opposed to figurative meanings.

(103)

- a. *barrage* vs. *barrement* (barrer – 'to barricade')
- b. *décrochage* vs. *décrochement* (décrocher – 'to unhook', 'to tear off')
- c. *doublage* vs. *doublement* (doubler – 'to double')
- d. *raffinage* vs. *raffinement* (raffiner – 'to refine', 'to improve')
- e. *rechauffage* vs. *rechauffement* (rechauffer – 'to warm')

*Barrage* in (103a), for instance, has almost lost its event interpretation entirely, and mainly designates the object, which serves as barricade, such as a dam or weir. *Barrement*, on the other hand, is the form that mainly denotes the event (*le barrement de la porte, le barrement du cheque*, etc.). The special thing about *décrochage* in (103b) compared to *décrochement* is, that it describes a figurative way of “unhooking”. It is mostly used in the context where a student or pupil loses contact to the rest of the class at school (*décrochage scolaire*). *Décrochement* on the other hand is the literal action of, for instance, taking up the phone, where you have to unhook or lift the receiver. *Doublage* (103c) appears almost exclusively in a cinematic context and simply means the synchronisation of a movie, whereas *doublement* really refers to the action in which something becomes the double amount, size or number. *Raffinage* (103d) is very restricted to the refining of petrol, whereas *raffinement* is a general improvement and *rechauffement* (103e) preferentially appears with the adjective *climatique*, meaning global warming. Such examples, where *-age* and *-ment* doublets cannot simply be opposed in order to check for aspect in the sense of Martin 2007, 2008a, are common with high frequency nominals.

Martin 2008b gives an overview on additional properties that distinguish *-age* and *-ment*. One of the oppositions that she mentions is agentivity. This point has already been discussed by Kelling 2004 for French high frequency nominals. In the Distributed Morphology framework this property also comes up and would be related to a difference in VoiceP (Alexiadou 2001a, Alexiadou et al. 2007). Many *-age* nominals show active transitive readings, whereas their *-ment*-doublets would rather

be interpreted as anticausative reflexives. This opposition is shown in the examples below.

- (104)
- a. *Le blanchissage du sucre semble requérir de nombreux produits chimiques.*  
'The bleaching of the sugar seems to require numerous chemical products.'  
→ transitive: someone bleaches the sugar
  - b. *[...] il serait possible de s'opposer au blanchissement du cheveu, si on le désire!*  
'It would be possible to struggle against a turning white of the hair, if one wishes to.'  
→ anticausative reflexive: the hair gets white (by itself)
  - c. *On vous offre aussi le gonflage de la roue de secours.*  
'You are offered as well the inflating of the emergency wheel.'  
→ transitive: someone will inflate your emergency wheel
  - d. *Il est survenu un léger gonflement de la partie supérieure droite de la face [...]*  
'There occurred a light swelling of the right upper side of the face.'  
→ anticausative reflexive: the face got swollen (by itself)

Martin 2008b mentions further properties in which *-age* and *-ment* differ such as the ontological domains to which an eventive chain pertains or the different "relation between a denoted event and its theme" (p. 159). The main and predominant distinction, however, is made in the length of the "eventive chain" of *-age* and *-ment*. There are many instances in which the aspectual opposition of *-ment/-tion* vs. *-age* can be observed with high frequency nominals, because the general event interpretation is the predominant one and the one we are interested in here for the purposes of the aspect compositional analysis. Some pairs from the mentioned doublet list are given below, as well as pairs from Martin 2008b.

- (105)
- a. *arrosage* vs. *arrosement* (arroser – 'to water')
  - b. *égouttage* vs. *égouttement* (égoutter – 'to (let sth.) drain')
  - c. *empilage* vs. *empilement* (empiler – 'to pile (up)')
  - d. *forage* vs. *forement* (forer – 'to bore')
  - e. *frottage* vs. *frottement* (frotter – 'to rub, to grip')
  - f. *gonflage* vs. *gonflement* (gonfler – 'to inflate')
  - g. *lavage* vs. *lavement* (laver – 'to wash')
  - h. *retournage* vs. *retournement* (retourner – 'to turn (around)')
  - i. *secouage* vs. *secouement* (secouer – 'to shake, to rattle')

As *-age* and *-ment/-tion* have more than one semantic task to fulfil with high frequency nominals, the differentiation in aspect is often difficult to show. We have already experienced these problems with the neologisms in chapter 3, although there, no other than event interpretations had been developed yet. The nominals in (105), however, can be opposed in the aspectuality of their events as well. Either we oppose them in the aspectuality tests in the style of Martin (cf. Chapter 2 and 3), or



we add aspectual modifiers as *pendant des heures* ('for hours') or try the plurality/eventive-chain test. Thus, we observe again that *-age* cannot be made terminative that easily, even if its semantic qualities are multi-layered and not only restricted to an eventive reading.

(106)

- a. *Le gonflage du pneu a abouti à son gonflement.*  
'The inflating of the tire has ended up in its inflation.'
- b. *#Le gonflement du pneu a abouti à son gonflage.*  
'The inflation of the tire ended up in its inflating.'
- c. *Le gonflement du pneu ?dans une minute/#pendant plusieurs minutes*  
'The inflation of the tire ?in a minute/#for several minutes<sup>79</sup>'
- d. *Le gonflage du pneu \*dans une minute/pendant plusieurs minutes*  
'The inflating of the tire \*in a minute/for several minutes.'

This means that besides all the other semantic functions that *-age*, *-ment* and *-(t)ion* take, the aspectual distinction is the most basic one.

This is also confirmed by the most recent literature on French nominalisations by Ferret et al. 2010. They try to disambiguate the event interpretations of *-age* in comparison to *-ée*-nominals by help of the aspectuality tests introduced by Haas et al. 2008. One very useful test from this work is the “filmer/photographier”-test. In the examples below from Ferret et al. 2010 we can see that when *-age*-events are embedded into a sentence containing the verbs *to film* or *to take a photo of*, we get the impression that only a short extract of a process is shown, not the entire event from its beginning to its end.

(107)

- a. *J'ai filmé le pesage du bébé*  
'I have filmed the weighing of the baby.'  
→ how the weighing is taking place, one sub-sequence of the weighing
- b. *J'ai filmé la pesée du bébé*  
'I have filmed the baby-weighing-event.'  
→ the entire weighing: beginning, middle, end

This test can also be applied on the *-ment/-age* doublets.

<sup>79</sup> With this sentence French speakers note that they do not obtain a durative event but a durative state interpretation as *gonflement* is ambiguous between the state of being inflated and the event of becoming inflated.

(108)

- a. *J'ai filmé le nettoyage de la rue.*  
'I filmed the cleaning of the street.'  
→ how the cleaning is taking place
- b. *J'ai filmé le nettoyage de la rue.*  
'I filmed the cleaning of the street.'  
→ the entire cleaning: beginning, middle, end

Another interesting particularity of *-age* that Ferret et al. 2010 mention and that also came up in Uth 2008 is the fact that *-age* does not seem to be as fixed in its durative event interpretations as English *-ing* and the German nominalised infinitives are. Consider the example below.

(109)

- a. *Le passage de la haie dans deux secondes/ pendant plusieurs secondes*  
'The passing of the hedge in two seconds / for several seconds.'
- b. *J'ai filmé le passage de la haie.*  
'I filmed the passing of the hedge.'  
→ ambiguous between terminative and durative interpretation

Whereas the previously mentioned *-age*-examples could be clearly identified as durative in aspect by help of the modifier or *film*-test, *passage* in the example above seems to be ambiguous between the terminative and the durative interpretation. Uth 2008 derives this property from *-age*'s historic role: in Old French it was not only able to denote group terms, but also the single members of the group (for a more detailed discussion see section 1 of this chapter). If this is true, why should it not be able to express "single instances" (Uth 2008) of or - in our terminology - terminative events? The data in (109) seems to underline this assumption. Also Ferret et al. attest exceptions to the durative interpretation of *-age* and link these to the unaccusativity of the base verb, which seems to make sense. In many cases unaccusative verbs can be classified among the achievement situation type in their temporal development (*arrive*, *die*, *pass*, *fade*, etc.). When we recall Smith's 1991 analysis of achievements discussed in chapter 3, we will find that they do not have a temporal extension. It seems difficult to look at a sub-unit of an event that actually does only consist of beginning and endpoint. Even if Ferret et al.'s explanation for these aspectual exceptions might be reasonable, I will provide another analysis of this phenomenon in what follows. The reasons I will give here should not be understood as contradiction to Ferret et al.'s analysis, but rather as an additional factor that has to be taken into account, when we deal with the semantics of *-age*-nominals.

#### 4 What are the Aspectual Features of *-age*, *-ment* and *-(t)ion*?

In this section I would like to take a look at the French event-NP in the way I have done for German and English in the previous chapter. I assume the same tasks for the three aspectual units of which the NP consists in French. In table 21 we see an aspect compositional analysis of *-age* and *-ment* nominals.

| Verb              | Suffix           | Complement       | Sum   | Modification            | Grammaticality |
|-------------------|------------------|------------------|-------|-------------------------|----------------|
| [+ ADD TO] gonfl- | -age [-ADD TO]   | Du pneu [+ SQA]  | [- T] | En dix minutes [+T]     | *              |
|                   |                  |                  |       | Pendant des heures [-T] | OK             |
| [+ ADD TO] gonfl- | -age [-ADD TO]   | De pneus [- SQA] | [-T]  | En dix minutes [+T]     | *              |
|                   |                  |                  |       | Pendant des heures [-T] | OK             |
| [+ ADD TO] gonfl- | -ement [+ADD TO] | Du pneu [+ SQA]  | [+T]  | En dix minutes [+T]     | <b>OK</b>      |
|                   |                  |                  |       | Pendant des heures [-T] | *              |
| [+ ADD TO] gonfl- | -ement [+ADD TO] | De pneus [- SQA] | [-T]  | En dix minutes [+T]     | *              |
|                   |                  |                  |       | Pendant des heures [-T] | OK             |

Table 22: Aspect Compositional Analysis of Competing French Nominalisations

Also in the table above, Verkuyl's Plus Principle is applied. This means that as soon as one negative value is brought into the construction, the entire NP will become durative. In the beginning I assume [-ADD TO] for *-age* and [+ADD TO] for *-ment/-(t)ion* for the reasons discussed above and in the previous chapters. As we can see in table 21, *gonflement* is not able to develop a durative interpretation on its own. Only when a negative [SQA] value is induced by the internal argument a non-terminative interpretation is possible. All NPs containing a negative feature, either introduced by *-age* or, in the case of *-ment* by the complement, are compatible with durative modifications. In this example – as in most of the others we have seen so far – *-age* can be considered as a bearer of a [-ADD TO] feature as it can cause durative interpretations. So far this leads me to the conclusion that the French suffixes have the same role to play in aspectual compositions of event-NPs as the English and German ones have.

But how we are going to analyse their other non eventive interpretations? And how are we going to take into consideration the obvious weakness of *-age*'s aspectual

feature? These issues will be addressed in the following section. However let us first sum up what was found out so far in the inter- and intra-linguistic comparison of the suffixes.

The data we have seen in chapter 3 and above, cover many areas of vocabulary: I have analysed neologisms, established and listed words; we have taken a look at nominalisations in larger natural contexts of corpora and in constructed contexts that were supposed to show aspectual differences. From all of this, we can come to the following conclusions: 1. The French *-age* derivation serves to express durative aspect opposed to *-(t)ion* and *-ment* nominals, which denote terminative events. 2. Unlike English *-ing* or the German nominalised infinitives, the aspectual properties are not the only semantic particularities that *-age* is able to express. It can denote objects, instruments or results and is able to add a negative bias to events. Moreover, agentivity differences between *-age* and *-ment* nominals were observed in many cases. 3. Another, morphological, quality that distinguishes *-age* from its English and German equivalents is the fact that it has no role to play in the verbal domain on sentence level, where the aspectual meaning of English inflectional *-ing* and German *-en* usually comes into play, too. 4. If *-age* denotes events, they are not durative in 100 per cent of the cases. There are examples for terminative interpretations.

In the next section, I will try to show the difference in aspectuality that *-age* opposed to *-ing/-en* is able to induce into a nominal construction by help of slight modifications of the aspectual features.

#### **4.1 Pluralisation? Collectivisation? Unboundedness? Or [-ADD TO] ?**

As proposed in chapter 4, aspectual nominalisation suffixes, like English *-ing* and German *-en*, have the main task to induce duration into an NP that contains deverbal nominalisations. The feature that represents this aspectual status is [-ADD TO]. By insertion of this negative feature, the suffixes are able to change the inner aspect of the NP construction in question, according to Verkuyl's Plus Principle, which dictates that terminative aspect can only be construed of nothing, but positive features on the temporal, as well as on the atemporal level. I am going to argue that from an aspectual point of view, French *-age* has exactly the same properties: it is

responsible for durative aspect. The particularity of *-age* is, however, that it has also other semantic roles to play than the one of aspect induction. This was shown in the previous sections. Moreover, it has also been largely applied in the denominal domain during its historical development. The important point is: what all of the interpretations, that *-age* can be made responsible for, have in common is that they designate a larger, unspecified number of several sub-units of the object or event described by the base. The durative event reading is only one of its possible forms. This has already been represented in previous sections for Old French *porcage* ('herd of pigs') and *miaulage* ('meowing'). I will illustrate this here once again in a general picture.

(110)

$$x \quad + \quad \text{-age} \quad \rightarrow \quad \boxed{x1 \quad x2 \quad x3 \quad \dots \quad \dots \quad xn}$$

In (110), *x* is a base of verbal or nominal origin. By addition of *-age*, the *x*, be it event, individual or property, is multiplied (Uth 2008) and summed up, or “collectivized” into a group with members of unknown number. What the new, derived word, the *-age* nominalisation denotes in the end, is originally determined by the base and the context. This means that from a (verbal) base, that expresses an event, we will obtain an event nominalisation. Due to the nominal's expression of an unknown number of sub-events, we get the impression of an unbounded event reading. Take again the example *miaulage*: at first *-age* pluralises the meow-cries, then it collectivises these cries, thus we can have a nominal that is singular on the surface and designates a durative process.

When we take a base that designates an object, such as *plume* ('feather'), the same process takes place. The first step is the multiplication, then the collectivisation. The outcome is *plumage*, the feathering of a bird - or all the many feathers that a bird has. This means that the feature English *-ing* and the German nominalised infinitives have, is not exactly the same as the one displayed by *-age*<sup>80</sup>. The feature the English and German suffixes contain, really relates to temporal units. This property can be used on sentence as well as on NP-level, in inflectional as well

80 The few non-eventive forms that English *-ing* has derived, such a *walling* or *timbering* can, however, be compared to the denominal *-age* forms in their interpretations.

as in derivational morphology in order to introduce the aspectual particularities of an event.

The feature that *-age* adds is originally not of temporal nature. This suffix has always been used for derivation and never played a role in the verbal domain or on the sentence level in general. It has developed from an adjectivisation to a nominalisation suffix (Uth 2008, Fleischmann 1990). We could say that *-age* adds an internal plural (see also Uth 2008), which causes the same interpretation in verbal surroundings as the aspectual feature [-ADD TO] of *-ing* and *-en*: durative aspect of events. This is what we have seen for most of the neologisms that were analysed in chapter 3. For nominalisations that persist longer in the speaker community, other meanings can be developed. The general pattern that was illustrated in (110), however, seems to be maintained also in other interpretations than the eventive one. Such is the case with the examples in (109). The first interpretation of *passage* is genuinely eventive. This is expressed by the realisation of the argument, which also contributes to the construction of the aspect of the NP. In the second reading, the surroundings of the nominal hint to the fact that we are no longer in the eventive domain. There are no realised arguments and *passage* is specified by a direction (*vers la Seine*). In this case it is not the event 'x passe y' that is derived by *-age*, but rather the object or place that makes the passing possible.

With these observations in mind, I suggest the following properties for French *-age*:

1. *-Age* derives durative, unbounded events by default.
2. Its aspectual quality is not of genuinely temporal origin, but is caused by the pluralisation and collectivisation properties that *-age* exhibits with all kinds of bases.
3. This is the reason why *-age* is not as fixed for eventive interpretations as its German and English equivalents, but can derive all kinds of secondary meanings, such as instruments, objects, places, etc.
4. A property that *-age*, *-ing* and *-en* have in common is their status in the aspect composition of NPs containing derived nominals. All three contribute a negative value to the entire construction. As we have seen in chapter 4, this negative value of *-ing* and *-en* refers to the feature [ADD TO]. What kind of feature *-age* contains and what kind of status it has in the compositional structure will be the subject of the next part.

## 4.2 The Feature [ $\pm$ add to]

In this section, we will only deal with eventive interpretations of *-age*, which are, as I am arguing, the default interpretation. The question is: what feature in *-age* is responsible for the durative reading from an aspect compositional point of view? As we have said in the previous section: it is unlikely to be exactly the same that *-ing* and *-en* contain, because it is “weaker” than the real [ADD TO] feature and can be used more easily for the derivation of other interpretations. Moreover, we obtain terminative interpretations with some examples. I propose a feature [-add to] for *-age*. It also expresses duration or unboundedness, but is not uniquely reserved for events as the capital [-ADD TO]. We could also say that it is more flexible or weaker. *-Age*'s pluralisation and collectivisation property is primarily applied to events, but not exclusively. The direct surroundings in the NP and the larger context can determine, which interpretation it will be. Below, I have listed *-age*'s compatibility with different kinds of base verbs in a table (as we have seen it for the German and English suffixes in chapter 4).

| <b>-AGE [-add to]</b>   |  |          |
|-------------------------|--|----------|
| Modals [-ADD TO]        | *voulage, *dev(r)age, *poupage   | Not OK   |
| Statives [-ADD TO]      | *savage/saurage, *détestage, *aimage, *étrage, *espérage, *craignage, *comprepage, *possédage  | Not OK   |
| Unergatives [+ADD TO]   | <sup>81</sup> ?Travaillage, chantage ('blackmail', not: 'singing'), courage ('courage', not: 'running'), ?buvage, martelage, ?écrivage, mangeage, ?marchage (sur talon), toussage  | OK       |
| Unaccusatives [+ADD TO] | Arrivage, ?mourrage, ?tombage, ?fondage, ?grandissage, ?augmentage, ?noyage, étouffage (always in the context of bees), passage  | OK       |
| Transitives [+ADD TO]   | *Destructage de la ville, ?activation des dossiers cachés, *constructage du pont, ?écrivage de la lettre, ?examenage de col, *abstractage du réel, mangeage de frites, lavage du visage, nettoyage de la rue, ?buvage de bières, pesage du bébé, ?vérifiage de la commande, le collage du paquet | $\pm$ OK |

Table 23: French Verb Types under *-age*-derivation

81 The question marks in this table mean that these words do not surface in dictionaries, but were found quite frequently on the internet.

Here, it becomes obvious that the [-add to] feature, which *-age* adds, is not as overpowering as *-ing* and *-en*. Whereas the two last ones can derive nominals from all sorts of bases, *-age* does not go along with [-ADD TO] nominals. This is surprising from an aspectual point of view: as a suffix with minus value, *-age* could play its role as inducer of duration with all sorts of bases, especially with bases, which already carry a negative feature. A reason for this could be that statives as well as modals do not have an inherent beginning or endpoint and thus show no temporal development. When we recall that *-age*'s actual property is pluralisation and collectivisation, it is difficult to see how it is possible to form a plural from a non-count entity, such as states.

For the unergative and unaccusative class we find grammatical *-age*-examples, which is not that easily possible for *-ment* and *-(t)ion*, as we will see below in table 23 and table 24. The question marks in the unergative and unaccusative box are supposed to indicate that these nominals are not mentioned in the dictionaries, but are quite frequently used on the internet. This could be a hint that *-age* is in an important stage of development at the moment. It seems to be very popular among French speakers and is applied to various bases. When we look at the internet data, it seems that this suffix becomes more and more productive, especially in the spoken and sub-standard language. From the aspectual point of view, it seems to develop further into the direction of *-ing* and *-en*, when we consider the aspectual bases it is compatible with.

With transitive base verbs, there seem to be morphological restrictions. Latinate base verbs in *-ire*, such as *détruire*, *construire*, *abstraire*, etc. seem to be still reserved for the derivation by *-(t)ion*.

| -(T)ION [+ADD TO]       |   |               |
|-------------------------|---|---------------|
| Modals [-ADD TO]        | *voulition, *peuvetion, *doivation/devation   | Not OK        |
| Statives [-ADD TO]      | *savation, *aimation, *étration, *craigni/ation, *comprendration, *espération, *possédation   | Not OK        |
| Unergatives [+ADD TO]   | *travaillation, *chantation, *couration, *riation, *buvation, *écriture, *mangeation, *martellation, *miaulation  | Not OK        |
| Unaccusatives [+ADD TO] | *arrivation, *mouuration, *tombation, fondation (meaning 'foundation', not 'melting'), augmentation, *grandition, *noyation, *étouffation                                   | Mostly Not OK |
| Transitives [+ADD TO]   | Destruction d'une ville, examination d'un étudiant, activation des dossiers, abstraction du réel, construction d'un pont, *écriture d'une lettre, *mangeation d'un sandwich | Mostly OK     |

Table 24: French Verb Types under *-(t)ion*-derivation



| <b>-MENT [+ADD TO]</b>  |   |        |
|-------------------------|---|--------|
| Modals [-ADD TO]        | *voulement, *pouvement/peusement, *doivement  | Not OK |
| Statives [-ADD TO]      | *Savement, ?détestement, *aimement, *êtlement, *craignement, *comprendement (ofr.), *esperement, *possèdement   | Not OK |
| Unergatives [+ADD TO]   | *travaillement, *chantement <sup>82</sup> , *courement, *riement, *boivement/buvement, ?écrivement, ?mangement, martellement, miaulement  | ± OK   |
| Unaccusatives [+ADD TO] | ?arrivement, *mourrement, *tombement, *fondement (only possible in the meaning of 'foundation'), grandissement, *augmentement, *noyement, étouffement                                   | ± OK   |
| Transitives [+ADD TO]   | *Destructement d'une ville, *examenement d'un étudiant, *activement des dossiers, *abstractement du réel, *constructement d'un pont, *écrivement d'une lettre, *mangement d'un sandwich | Not OK |

Table 25: French Verb Types under *-ment*-derivation

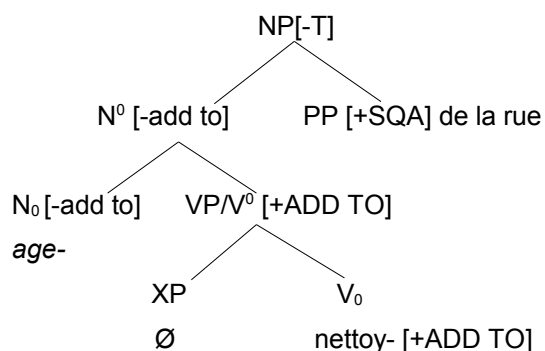
When we look at the base verbs of different aspectual status, which *-ment* and *-(t)ion* combine with, we observe a similar pattern as for German *-ung* and English *-ation*. They display the classical [+ADD TO] suffix behaviour. As their plus feature is not strong enough to overcome minus features, which are induced by other elements of the NP, they do not attach to [-ADD TO] bases. The same is more or less true for types of verbs, which will introduce a negative feature via their internal object, such as unergatives. The reasons for *-ment*'s and *-(t)ion*'s combination with transitive base verbs, however, seem to be of other than aspectual origin. All together it became visible that the [-add to] feature, which *-age* contains is not that strong in the eventive domain as the one of *-ing* and *-en*. The important point is that its feature is nevertheless of negative value. Its apparent “weakness” is not to be found in the value (as it is the case with *-ment* and *-(t)ion*), but in the nature of the feature, which – in my opinion – can be linked to *-age*'s diachronic development. The “weakness” of *-ment* and *-(t)ion*, on the other hand, is due to the rules of the Plus Principle. Therefore, I suppose that they carry the same feature as their English and German equivalents, *-ation* and *-ung*, [+ADD TO].

From the point of view of aspect composition, the structure for eventive *-age* looks exactly the same as the one for *-ing* and *-en*. Temporal and atemporal, structural and

82 Exists in the TLF, marked as 'probably occitanism'

lexical level interact in order to establish one larger aspectual unit. This is shown in (111).

(111)



Again, a verbal base with positive [ADD TO] value and a suffix with a negative [-add to] value are combined on the lexical level. We obtain a lexical unit with unbounded event character [-add to]. On the structural level, we add the internal argument, *de la rue*, which is positively quantified, but cannot change the aspect of the entire structure, as, according to the Plus Principle, one negative value suffices, in order to render the composition durative. For the structure in (111) the same rules apply as for the structures of *-ing* and *-en*. There is, however, one difference: the interpretation of the entire construction as event depends a lot on the realisation of the PP that contains the internal argument and on the surrounding context, as in *Le passage de la haie*. Another prerequisite for a durative eventive interpretation is the presence of a verbal base, which itself contains an [ADD TO] feature.

In other interpretations, as in *Le passage vers la Seine*, there are several hints in the context that the NP is not supposed to express an event. The important point is that the flexibility or weakness, not the value of the [add to]-feature of *-age* is responsible for the difference in meaning. In a non-eventive interpretation, the feature keeps its basic function, namely the pluralisation and collectivisation, but can no longer be considered as really aspectual, because we no longer deal with a temporal structure. The object, place or instrument, described by the *-age*-nominal, still has its [-add to] feature, which is, however, no longer linked to aspectual properties, but is used to express that *passage* is an entity composed of several smaller units, such as walls, the floor, the ceiling and so on, that serve the purpose expressed by the verb. To sum up we can say that from an aspect compositional point of view, *-age* is not as

stable in its eventive meaning as English *-ing* or the German nominalised infinitives. The reason for this can be found in a more flexible or weak<sup>83</sup> [-add to] feature that can also interact with bases that are not specified for a temporal interpretation, as we find them with events. The property that *-age* shares with its English and German equivalents is the minus value that causes the unbounded event reading, when temporal structure is present, and a collectivizing reading of individuals or properties in the other case.

In cases like *passage*, where we can also find a terminative interpretation, we could argue on the one hand, that base verbs which are ambiguous in their temporal development and able to denote an event where beginning and endpoint fall together in one moment cannot be classified as durative under any circumstance (as there is not really a duration). When we look at the examples of *passage* below on the other hand, we could also come to the conclusion that the interpretation of either durative or terminative is exclusively determined by the context and the sentence in which the nominal is embedded.

(112)

- a. *Pendant le passage de la haie, Jean a sifflé une chanson.*  
'During the passing of the hedge, John was whistling a song.'
- b. *Pendant le siffilage de la chanson, Jean a passé la haie.*  
'During the whistling of the song, John was passing the hedge.'
- c. *Il a demandé le passage de la haie.*  
'He asked for the (right of the) passing of the hedge.'
- d. *J'ai filmé son passage de la haie pendant plusieurs minutes.*  
'I filmed his passing of the hedge for several minutes.'

In the examples (a) and (b) it is only the way in which the events are presented that evokes a durative or a terminative interpretation. In this case, however, we are talking about outer aspect, in my opinion. The durative viewpoint is caused by *pendant*. We could say that the *passage*-event is presented in an “open domain” (Verkuly 2005b) in (a) and in a “closed domain” in (b). Also in (c) and (d) it is mostly the context that determines about the aspectual interpretation of *-age*: if someone asks for a *passage*, then it is probable that he means the entire event and not parts of it. On the other hand, if we imagine a hedge that is very long, we could also imagine to film

83 I would rather like to avoid the terms “strong” and “weak”, when talking about the aspectual features, because it could easily be confounded with what these terms mean in minimalism. There, a strong feature “must be checked prior to the point at which a derivation splits into separate LF and PF branches. Weak features, in contrast, can be discharged at LF” (Hornstein 2001: 8). In my case “weak” just means that a feature is not inclusively used in an eventive reading and is easier to coerce. Perhaps the term “flexible” is more appropriate in this context.

only several sub-stages of this passing-event. All in all it seems to me that *-age*'s weak [-add to] feature is more dependent on other aspectual influences from the context than *-ing* and *-en* are. In general, the embedding of nominalisations as aspectual units in sentences as other aspectual units has not yet been paid enough attention to. This is, however, not a problem that I would like to solve here. It has become obvious, however, from the examples we have seen throughout this work that there are several layers of nominal and verbal, inner and outer aspect that are not easy to keep apart from each other. It would be interesting to investigate this subject further in future work as this seems to be a problem that differentiates nominal from verbal aspect.

To sum up, we can conclude that there are several types of aspectual properties that deverbal nominalisation suffixes across languages induce. One class of suffixes has the only task to derive durative event readings. Those suffixes carry a “strong” [-ADD TO] feature. This strong feature means that such suffixes absolutely need a verbal base as well as a context that expresses an event situation. The base must carry an [±ADD TO] feature that can decide on the dynamics of the situation. Such processes can be observed with the English *-ing* derivation and the German nominalised infinitives, which have equivalents in inflectional morphology that fulfil similar aspectual functions, although I associate inflection with outer, derivation with inner aspect.

The second class of derivation processes is the one that derives ambiguous interpretations, among which also (predominantly) event readings. This ambiguity, however, can have two different reasons. On the one hand, it can simply be caused by the rules of the Plus Principle, which dictates that minus values are able to overrule plus values. Such is the case with English *-ation*, German *-ung* and French *-ment* and *-(t)ion*, which carry a [+ADD TO] feature. If such nominals express events, these are terminative in aspect. If context does not provide eventive surroundings, the meanings of such nominals can also take other interpretations such as results or objects. On the other hand, there is *-age*, a suffix that amalgamates properties of the two previous classes. Aspectually, it is responsible for durative interpretations, like *-ing* and *-en*, it can, however, also derive other non-eventive meanings, like *-ation* and *-ung*. This is the reason why I assume a more flexible [-add to] feature for this third class of suffixation.

To sum up, I give an overview on the suffix situation in German, English and French with special consideration of the different aspectual features and their values in the table below.

|         | Suffixes | ADD TO | add to |
|---------|----------|--------|--------|
| English | -ing     | -      |        |
|         | -ation   | +      |        |
| German  | -en      | -      |        |
|         | -ung     | +      |        |
| French  | -age     |        | -      |
|         | -ment    | +      |        |
|         | -(t)ion  | +      |        |

Table 26: Aspectual Features of English, German & French Suffixes - Part II

The reasons for the distribution displayed in the table above can, in my opinion, be found in the diachronic semantic and morphological development of the suffixes. As deverbal derivation suffixes, English *-ing* and German *-en* have traditionally served to express events in nominal form (cf. Demske 1999), which could explain their fixation in this interpretation. Moreover, they exhibit the same aspectual interpretation as inflectional *-ing* and *-en* and thus seem to be even more closely linked to the verbal domain. Both in their inflectional as well as in their derivational forms, they are extremely productive. The French suffixation system does not have a productive derivation pattern that can also be found in a similar form in inflectional morphology and is “stable” in its semantic properties. *-Age*'s aspectual properties have not been derived from a function in the deverbal or in the inflectional domain, as it is the case with *-ing* and *-en*, but it has been a genuine derivational suffix in Old French already. Its eventive interpretation as a default meaning is rather new, too (Uth 2008). This could be a reason why *-age*'s [ $\pm$ add to] feature is (still) quite flexible and can derive other than event interpretations in different contexts.

By an aspectual system as the one introduced in this chapter, which takes into account the entire NP and all of its aspectual sub-units, the difficulties of the French suffix landscape can be overcome. Not only have I found a way to cope with ambiguities (that are often context dependent), but the historical background of the different suffixes also provides interesting reasons for why they behave in exactly the way they do nowadays. It will be an interesting task to watch the further development of

-age in the next few years and to observe how far it will be able to approach the functions of *-ing* and *-en*.

In the discussion on nominalisations, another type of derivation that blurs the picture, is constantly mentioned. Up to now, we have dealt with different kinds of suffixation, but the so-called zero derivation or conversion has not been mentioned yet. In the next section, I will shortly comment on this group of nominals, just in order to complete the picture. In French there is no productive conversion pattern that deals with event derivation.

## 5 A Word on Zero-derivation/Conversion and Stem-derivation

In nominalisation theories across frameworks, English zero-derivation is attributed a special status. In the Grimshaw vocabulary such derivatives are considered to express nothing but *Simple Events* and *Results* and have no argument structure. As the distinction between *Simple* and *Complex Event* nominals falls to pieces in my analysis, it is interesting to see how zero-derivations can be analysed in Verkuyl's system. The question is: is there an entity, like a zero-affix, that can induce aspect, and if so, what kind of aspect are we talking about? Note that nominalised infinitives, that are sometimes considered as (syntactic) conversions<sup>84</sup> in German do have a suffix in my analysis. It is the suffix of the verbal infinitive, *-en*. So, in these cases, we definitely have a bearer of aspectual information, which is in my approach a derivational suffix *-en* that has developed from the inflectional morpheme. However in the English examples in (113) which are considered to be conversions, too, aspectual units cannot be detected on the surface. An additional problem with conversions is that they do not designate events in most cases, but rather results or objects (*exam, drink, address, mail, form, dress, argument, object, party*, etc.). The examples in (113) are the rare exceptions. A third particularity with deverbal zero-nominalisations or conversions is, that most of their bases are not derivable by *-ation*, the main [+ADD TO]-inducing suffix in English.

---

84 Eisenberg 1998.

(113) *talk/\*talkation, walk/\*walkation, sleep/\*sleepation, call/\*callation, attack/\*attackation, visit/visitation, practise/\*practication, run/\*runation, etc.*

So, if we assume that there is something like a zero suffix (as it is the case in many works that are based on Grimshaw 1990), in English it can sometimes derive events – among many other readings. The eventive reading, however, does not seem to be that frequent. Moreover, if there is an event interpretation, as in the examples in (113), it seems that the zero-derived form exists, because there is no derivation by an *-ation*-suffix from that base. In such rare cases we could say that the zero-derivation replaces the *-ation* process. In this case, a possible zero suffix would have the same feature as the English *-ation* nominals, [+ADD TO], that can also be used in non-eventive surroundings. This conclusion would also fit into the Grimshaw analysis, in which *-ation* nominals and zero-derivations are similar in their event interpretations.

In this chapter, I have proposed a way to use Verkuyl's Plus Principle for the composition of aspect in deverbal event nominalisations. We have seen that in the nominal, unlike in the verbal domain, the (derivation) suffixes play an important role in the construction of inner aspect. The ambiguity common to some nominalisation processes, can be explained insofar as only in one precise interpretation – that of an event – the verbal and aspectual properties come into play. The contextual surroundings and the intention of the speaker to use one or the other interpretation of a nominal, can influence the behaviour of the proposed [-add to]-feature that *-age* carries. The very strong [-ADD TO] feature, common to English *-ing* and the German nominalised infinitives, can exclusively be used in eventive contexts.

In the next chapter I will discuss not only a grammatical, but also a sociolinguistic matter. I would like to consider what happens, if deverbal nominalisations surface in large numbers in a foreign language as borrowed words. We will take a look at *-ing*-nominals that have been borrowed into French and German. The most interesting aspect of this chapter is that we will see which morphological patterns are about to develop at the moment. In the comparison of French and German we will try to find out why morphological processes take on certain meanings in one case and do not do so in another.





## CHAPTER 6 – THE *-ING*-SUFFIX ACROSS LANGUAGES

In the following, I will deal with a phenomenon that caught my attention during the corpus study, executed originally in order to gain data for the support of my thesis on the aspect composition. One of the first claims made in the present work, in chapter 2, was that the English *-ing* suffix had the same aspectual properties as German *-en*, and French *-age*. However while looking at the corpus data, it became obvious that German, as well as French, make use of the English *-ing* suffix, too. It occurs quite frequently and mostly in loaned words in both languages. The questions that occurred to me were the following: 1. If a foreign suffix exists in both languages that originally serves exactly the same purposes as a native one, why is it taken over? 2. Is it possible that the *-ing*-suffix in German and French expresses something different to its original meaning, and, if so, what?, 3. Does the *-ing*-suffix just appear in loan words or is it a productive process that has been taken over in any of the two languages in order to derive new words? The answers to these questions have already been published in Heinold 2009. However, I would like to reconsider them from the perspective and in the vocabulary of Verkuyl's approach, which has not yet been done entirely at the time. In what follows, I would like to shortly sum up the findings from Heinold 2009 and present them afterwards in terms of Verkuyl's aspectual framework.

### 1 English *-ing*-loans in French

#### 1.1 What Is their Aspectuality?

In this section, I would like to deal with *-ing*-nominals in French and the contexts they appear in. Farge 2004 notices that there are different sorts of *-ing*-loans that are simply adopted and kept in their original (English) form: most of them figure in a construction with the support verb *faire* ('do'). In such a construction they can be either included as count (114a) or mass nouns (114b) or both (114c). There are only

a few *-ing*-nominals that can appear on their own (114d)<sup>85</sup>.

- (114)
- a. faire un ('do a'): *briefing, meeting, listing, brainstorming, brushing, lifting, peeling, piercing*
  - b. faire du ('do'): *caravaning, camping, bodybuilding, canyoning, rafting, shopping*
  - c. faire du/un: *jogging, bowling, footing, mailing*
  - d. *kidnapping, outing, zapping, parking*

The nominals in (114a) express terminative event units or bounded events, whereas those in (114b) are considered to describe activities with no explicit endpoint (Heinold 2009). The nominals in (114c) can denote either terminative or durative events, depending on the determiner with which they surface. *Du jogging* is an activity, whereas *un jogging* describes a certain, measured *jogging*-unit, which, for instance, begins at the house of the person who undertakes the action and ends there as well. This circular Path could be considered the odometer in the sense of Verkuyl that tells us when the event starts and when it ends. In Farge 2004 both, the terminative and the durative events, are judged to be of durative nature. In my opinion this “durative aspectuality” that Farge attests is caused by the presence of the support verb *faire*. In each case, the duration that Farge evokes does not seem to be the same as in Verkuyl's system, where it is opposed to terminativity. If we use the nominals in (114a) in constructions with other verbs, the durative character is gone and the *-ing*-noun suddenly expresses an object.

- (115) *acheter un piercing* ('buy a piercing'), *copier un listing* ('copy a listing'), *créer un briefing* ('sketch a briefing'), etc.

When we leave out the support verb with unbounded eventive *-ing*-nominals, they keep their activity-reading and designate a kind of hobby or sports. So what are the similarities between the French *-ing*-loans and the French *-age*-nominalisations? We have seen in previous chapters that *-age* mostly derives unbounded events as well. It seems that the *-ing*-nominalisations that are taken over from English, mostly need the support verb in order to express dynamicity. The entire construction *faire un piercing* is a dynamic, terminative event. Without the verb support, we are left with an object (*piercing*) that designates the endpoint in the complex construction. The *-ing*-

<sup>85</sup> All examples by Farge 2004.

nominals that appear with non-count determiner, do not need the verb in order to express dynamicity. Obviously the nature of the determiner (*du* – non-count, *un* - count) has a lot to do with the interpretation of the nominal. The question, however, is, if we can apply Verkuyl's Plus Principle also in the cases of the loaned nominalisations. Up to here, we do not know yet how far these nominals are really transparent for French speakers and therefore really composed aspectual units. It is also possible that with the *-ing*-phenomenon in other languages, such as French and German, we witness just a large borrowing process in which speakers do not analyse the words in question, but just save them in their lexicon as one entity with a certain meaning. In the following, I would like to find out if the *-ing*-process is transparent and maybe even productive in French and how we can find proof for this. In the next section I will compare French *-age* to French *-ing*-nominals and see if we find semantic differences between the two processes.

## 1.2 Other Semantic Properties

As shown in the previous chapter, nominals with the native suffix *-age* are aspectual units that are composed from the properties of their base verbs, the properties of the suffix and the properties of a realised or not realised internal argument. Unlike French *-ing*-nominals, they do not need the support of a verb, like *faire*, in order to express dynamics. The [ADD TO]-feature is either brought in by the base verb or not. This suggests that from an aspectual point of view, *-age* resembles a lot more the English *-ing* suffix than the French one. A fact that supports this line of reasoning is that the *-ing*-suffix from originally English words is often replaced by *-age* later on. In the neologism data base *FranceTerme* (formerly *CRITER*), such replacement processes can be observed in many cases. In this scientific data base, French terms for new concepts and inventions are looked for in order to replace the English originals. Here, we observe an almost systematic substitution of English *-ing* by French *-age*. *Doping/dopage*, *monitoring/monitorage*, *lifting/liftage*, *zapping/zappage* are only a few examples. Often, we even find the fitting (adapted) base verbs for these nominals, such as *doper*, *monitorer*, *lifter* and *zapper*. In table I have listed the distribution of original English *-ing*-nouns that have been replaced by originally French suffixes. The data is taken from Heinold 2009 and has been extracted from

## CRITER.

| <i>-ing-based terms</i> | <i>-age</i> | <i>-(t)ion</i> | <i>-ment</i> | <i>others</i> |
|-------------------------|-------------|----------------|--------------|---------------|
|                         | 171         | 97             | 69           | 66            |

Table 27: *Ing-derived Neologisms Extracted from the CRITER Data Base and their Replacement by Native French Suffixes*

It seems that in most of the cases, *-age* is used to replace *-ing* in new borrowing or loan translation processes from English into French. The reason for this could be that the original English *-ing*-suffix shares many properties with French *-age*, such as their high productivity and their unbounded aspectuality. The adopted French *-ing*-nominals that are kept in the language in their original form, on the other hand, show different aspectual properties, as mentioned above.

In many cases of this adaptation or replacement process from English *-ing* to French *-age*, the English and the French form co-exist for a while. However more often than not, one of the forms disappears. The reasons for this could lie in *-age*'s property to express a certain aspect. However as already indicated in chapter 2, the French nominalisation system is very complex and many different functions of suffixes overlap. Farge 2004 for instance notices that one further semantic quality of *-age* is, that it is able to add a negative bias to the action denoted by the nominal. *Dopage* and *craquage*, for example, of which English *-ing*-forms co-existed for some time, have imposed themselves in the speech community, because the *-age*-suffixation better expresses such negatively connoted processes than *-ing*. The English suffix, on the other hand, is kept, according to Farge, when the speaker enjoys the activity denoted by the verb. This is the case with all these hobby-like actions, such as *canyoning*, *caravanning*, *shopping*, *trekking*, *bodybuilding*, etc. If such a distinction can be made for all of the cases, in which *-age* finally replaces *-ing*, is doubtful, but it is nevertheless an interesting question where the negative bias of *-age* comes from. In my opinion, this phenomenon can closely be linked to *-age*'s aspectual properties, the fact that it expresses duration. In the *miaulage* examples in chapter 2 (repeated here as (116)), which are originally used to show the differences in aspect between *-age* and *-ment*, native speakers often notice this negative nuance of the *-age* nominal.

(116)

- a. *Plusieurs miaulements font ensemble un miaulage.*  
'Several meows make a meowing.'
- b. *\*Plusieurs miaulages font ensemble un miaulement.*  
'Several meowings make a meow.'
- c. *Le chat a poussé un miaulement/#miaulage.*  
'The cat uttered a meow/#meowing.'

A similar phenomenon can be observed for German. The *Ge*-prefixation<sup>86</sup> is well-known (Heinold 2008, 2009) for two properties: unboundedness or duration, and a negative or ironic note. Consider the examples below, which are also taken from Heinold 2009.

(117)

- a. *das Gebrüll, das Geschrei, das Gehupe, das Gekratze*  
'the roaring', 'the screaming', 'the honking', 'the scratching'
- b. *das Gelache, das Getanze, das Gesinge*  
'the laughing', 'the dancing', 'the singing'

Base verbs that already denote an unpleasant activity, such as the ones in (117a), increase their negative reading by addition of *Ge*-, because the suffix seems to multiply or prolong the action. Positive base verbs (117b) obtain an ironic touch by addition of *Ge*-. *Getanze*, for instance, does not only denote a dancing action, but a ridiculous, inappropriate or annoying way of doing so.

All in all, there are two reasons for a speaker to choose the *-age* over the *-ing* nominal when two such forms of the same base verb co-exist in French. Firstly, it seems again that the question of aspect is of relevance. Whereas *-age* nominals can express unbounded dynamic actions on their own (dynamicity being, however, linked to the properties of the base verb), *-ing*-nominals often need the support of verb when they want to denote this (*faire*). A decisive factor for unboundedness with *-ing*-nominals seems to be their quantification in *faire*-constructions. *Ing*-nominals with mass quantification express regular activities or hobbies, whereas *-ing*-nouns with count quantification specify a certain unit of an action (*faire du jogging* vs. *faire un jogging*). Secondly, the duration interpretation that *-age* brings about, also seems to be of

---

86 For a differentiation between *Ge*- and *Ge-e*, see chapter 2 or Eisenberg 1998, Neef 1996, Olsen 1990.

rather negative nature. Whereas *-ing*-nominalisations often refer to enjoyable, hobby-like events, *-age* is used to express annoyance or disapproval.

The fact that a French speaker chooses between two patterns, because of semantic factors, seems to indicate that also the *-ing*-suffixation is perceived as derivation with a certain purpose. The *-ing*-suffix might have come into the French language via a large borrowing process. Nowadays, however, it seems to have established a somehow regular though ambiguous semantics that contrasts with the rival *-age* process. French speakers do analyse *-ing*-nominalisations as complex words; they derive the according base verbs (*doping* – *doper*) and actively interchange the foreign suffix with native *-age*, depending on the interpretation they look for. The *-ing* suffix is, though, not yet productive with French bases. Pulvermüller 2008 and Martinet 1988 certify some French-based *-ing* derivatives, such as *bronzing* (bronzer – to tan), *flouting* (flouter – arg. to blur), *frotting* (frotter – arg. to dance), *ramping* (ramper – to crawl), etc., which can, however, be considered as rare exceptions and all belong to a sub-standard variety of French.

From a language contact point of view the development of the French *-ing*-suffixation can be considered to be presently situated somewhere in an intermediate stage between lexical and structural borrowing (Heinold 2009) where language change can be looked at in real time. Firstly, *-ing*-nominals were borrowed from English mostly with their original reading (for instance, *canyoning*, *camping*, etc.). Then speakers became aware of the semantic particularities of these nominals and started to perceive *-ing* as a suffix with certain qualities, that could also be replaced by a native suffix, *-age* with a slightly different interpretation. A final step in the development of French *-ing*, and towards a real structural borrowing (Matras 2008, King 2000) would be the productive derivation of French bases, which is at the moment not yet taking place.

From the point of view of aspect composition in derivation, there is the question from which point on, we can talk of composed events at all. When do speakers perceive the aspect of an event, expressed by a nominal, as composed form of several sub-elements? In the case of the French *-ing*-nominals, we can certainly say that from the moment, when the originally composed *ing*-derivatives are decomposed again in their new language, and productions of other words with a certain base start taking place, there is an awareness about the function that a certain suffix, in this

case English *-ing*, is able to take over. If a real aspectual composition, similar to those that I propose for native French or English suffixes, takes place at all is difficult to say. As soon as speakers start actively creating new words by means of the *-ing* process also with Romance bases, and especially as a contrast to an already existing *-age* form, it could be an indicator that a new pattern emerges that is marked for a certain aspect. In the next section, I would like to take a look at the situation of the *-ing*-suffix in German.

## 2 English *-ing*-loans in German

### 2.1 Possible Interpretations

In German, similar to French, the English *-ing*-loans are adopted into the language and kept in their original form. Unlike French, we find a nominalised infinitive rival for almost every English *-ing*-nominal.

- (118)
- a. *Styling, Ranking, Branding, Sponsoring, Outing, Rafting, Mobbing, Freeclimbing*
  - b. *Stylen, Ranken, Branden, Sponsern, Outen, Raften, Mobben, Freeclimben*

The only reasons that can prevent a nominalised infinitive form are of phonological or prosodic nature.

- (119) ?*Sightsee(e)n, \*Happenen, \*Canyonen*

From an aspectual point of view the distribution in German is a lot clearer. The nominalised infinitives of English bases have the same aspectual particularities as they have with native German base verbs. They produce durative actions from English [ $\pm$  ADD TO] verbs. The *-ing*-nominals, on the other hand, denote mostly resultant states. *Stylen* is what you do and a *Styling* is what you obtain in the end after having completed the action. The same is true for *Branden/Branding, Ranken/Ranking, Sponsern/Sponsoring, Outen/Outing*, etc. (cf. Heinold 2009). Nominals that designate hobbies or sports, like *Freeclimbing* or *Rafting*, need, as in French, a support verb (*machen, gehen*) in order to express real activities. Then they have the same aspectual status as infinitives of that verb and denote unbounded activities.

- (120)
- a. *Ich freeclimbe/rafte.*
  - b. *Ich mache Freeclimbing/Rafting.*

Heinold 2009 gives an overview on the interpretations that were found with German *-ing*-nominals in the FAZ<sup>87</sup>-Corpus. They are listed below.

| <b>Interpretation</b>  |    |
|------------------------|----|
| Bounded event          | 12 |
| 'Kind of...' - reading | 16 |
| Resultant State        | 4  |
| Object                 | 6  |

Table 28: Interpretations of German *-ing*-nominalisations Extracted from the FAZ Corpus

Concerning events, German *-ing*-nouns, adopted from English, mainly express boundedness. This contains examples like *Shooting* below.

- (121)
- a. *Vor etwa einem Jahr ist ja bereits Pro 7 in meinem Studio gewesen und hat ein Shooting gedreht.*  
'About one year ago, Pro 7 was in my studio already and did a shooting there.'
  - b. *Er zeichnet verantwortlich für das Shooting der Anzeigenkampagne.*  
'He is responsible for the shooting of the advertising campaign.'

Here, *Shooting* designates a certain time unit where photos were taken with beginning and endpoint. The examples are taken from Heinold 2009. Another frequent reading for German *-ing*-nominals is, what is called "kind of"-interpretation in the table above. Among this label count nouns like *Canyoning*, *Bodybuilding*, *Bowling*, *Carving*, *Jogging*, *Camping*, *Franchising*, *Leasing*, etc., which all designate sub-types of an action or a technique. *Canyoning* is a kind of sports, whereas *Leasing* is a kind of financing and *Camping* a kind of living or making holidays. This sounds similar to what we have heard for *-age* in Old French or *-aticu* in Latin (chapter 4, Uth 2008), which also served to designate certain groups from a larger mass, such as *canis venaticus* ('stag hound', kind of dog), *porcus silvaticus* ('wild pig', kind of pig), *passage* ('right to pass', kind of right).

87 *Frankfurter Allgemeine Zeitung* 1999 (komplett) Dem Romanischen Seminar der Universität zu Köln zur Verfügung gestellt am 11.4.2000 Kontaktperson: Gasterich, Franz-Josef, insgesamt 48.771.236 Wörter aufbereitet von Achim Stein 1.5.2000 (TreeTagger mit grossem deutschem IMS-Tagset).



Other interpretations of German *-ing*-loans are resultant states and objects. Examples are given below.

(122)

- a. *Sonst hätte ich ja das Listing nicht.*  
'I wouldn't have the listing in that case.'
- b. *Wie erstelle ich ein Briefing?*  
'How do I compile a briefing?'
- c. *Der Club ist vom feinsten [...], das Catering schmeckt lecker.*  
'The club is killer [...], the catering tastes delicious.'

All in all we can say that from an aspectual point of view German *-ing* and the nominalised infinitives do not overlap. There is a similar opposition as the one of French *-ing* and French *-age*, although *-age* itself is not unambiguous in its interpretations. There are, however, also differences among the situation of *-ing* loans in German and in French. I will discuss them in the next section.

## 2.2 French vs. German *-ing*

The difference between French and German *-ing* is not so much a semantic issue, as a morphological one. Before, I have mentioned that *-ing* in French can not only be replaced by *-age* (although this is the most frequent solution), but also by *-ment*, *-(t)ion* and other suffixes. This is not possible in German. The only process of which doublets with English *-ing*-nouns exists is, as already mentioned, the nominalised infinitives. The *-ung*-nominalisation, very productive for German bases, does not overlap at all. Consider the examples below.

- (123) \**Stylung*, \**Outung*, \**Sponserung*, \**Mobbung*, \**Peelung*, \**Coachung*, \**Dribblung*, \**Liftung*, \**Piercing*, \**Roamung*, \**Castung*, \**Recyclung*, etc.

This might be due to the history that English *-ing* and German *-ung* share, and at the beginning of which there were no semantic differences between them (Demske 1999). In Old English derivation took place, according to the inflection class of the verb, either by *-ing* or by *-ung*. During the development of the English language, the suffix *-ing* took over the entire job, whereas in German, *-ung* won the competition (Demske 1999, Alexiadou 2001b). This is the reason why it makes sense that Eng-

lish bases are blocked with German *-ung* and the other way round. This means that from a semantic point of view, German *-ing-nominals* come close to German *-ung* nouns. Both are ambiguous between eventive, resultative and stative meanings, but when it comes to events, both of them are not able to derive the durative aspect that is common for the nominalised infinitives. The question is again, if the German *-ing* forms can be considered to be composed at all, or, if they are analysed as such by the speakers. In contrast to French, the German *-ing*-process does not seem that far developed that it could be considered a structural borrowing (Heinold 2009). No *-ing*-derivations with native German bases are observed. It seems that in such cases the rival *-ung* would be the chosen suffix. Moreover, no derivations of the English bases of any other kind, besides the (verbal and nominal) infinitive formation, are attested. From this point of view, it does not seem as if German speakers really analyse the forms and are aware of any semantic or aspectual properties of *-ing* loans. The interesting point is, however, that the aspectual, durative properties of the original English *-ing*-derivatives are systematically lost in German. So it seems that the German *-ing*-process is still in a phase of lexical borrowing (King 2000), but definitely has the potential to develop semantic (and aspectual) regularities of which speakers could make use of in future. However, the necessity for productivity of such a pattern in German is not given when we consider the role of the native *-ung* and its historical background.

To sum up the aspectual situation in French and German, with special regard to the *-ing*-suffix, Heinold 2009 offers the following overview.

| <b>Semantics</b>       | <b>Eng. -ing</b> | <b>Fr. -ing</b>     | <b>Ger. -ing</b>     |
|------------------------|------------------|---------------------|----------------------|
| Terminative Events     | -                | ±                   | +                    |
| Resultant State/Object | -                | +                   | +                    |
| Durative Events        | +                | + with <i>faire</i> | + with <i>machen</i> |

Table 29: Interpretations of *-ing*-derivatives across Languages

Here, the aspectual shift of *-ing*-derivatives in English and German becomes obvious. Only by verbal support, the loaned forms are able to express durative aspect. In all other cases we obtain terminative event readings or event shifts to resultant states. In German, the complementary aspectuality is covered entirely by the nominalised infinitives, which can be also formed from English bases. Therefore, it is not astonishing that *-ing* is not “needed” to cover such an interpretation and the system-

atic aspect shift would be explained. In French, durative aspect interpretation is in many cases taken over by *-age*, but the distribution is not that clear cut, because *-age* covers as well other semantic properties. All in all, it is very difficult to judge from which point on speakers do recognise or analyse the sub-units of composed loans that were taken over as one word forms into their language.

## CHAPTER 7 - CONCLUSION & OUTLOOK

This dissertation addresses – as the title already suggests – the question which original properties of verbs are still “alive” in deverbal nominalisations. As such nominals are derived from verbal bases, various works have suggested that their status can be considered as “cross-categorical” (Alexiadou 2001b). Many of these works, especially those in the Grimshaw 1990 tradition, have dealt with the central question, which syntactic and semantic properties deverbal nominalisations have. My work has focused on the semantic, especially on the event semantic viewpoint of these verbal properties. I have not discussed so much how the different aspectualities of events expressed by nominals manifest themselves on the surface, such as in syntactic configurations, but rather how aspect of event nouns is created at all. For this purpose, I started my investigations in the verbal domain, in which events are most commonly expressed. Here, I came across Verkuyl's 1972, 1993, 2005a theory on the composition of the aspects. This framework seemed of interest to me, because it deals with a question that is also vividly discussed in the works on nominalisations: which part of a phrase – not only of a lexical item - is responsible for a certain aspectual behaviour? For nominalisations, approaches could not diverge more on this point. Some attribute most of the aspectual power to the class of the base verb and locate to construction of the meaning of nominalisations entirely in the lexicon; some claim that affixes play a central role for the distinction of events and reject a lexical level altogether; again others look at the nominalisation as a lexical unit in context and try to determine their aspectuality in this way. Aspectual composition, on the other hand, is a theory that takes into consideration all of the parts that form together one larger phrasal unit. Both, a lexical and a syntactic level for event interpretation are acknowledged. The differentiation between these two domains can, in my opinion, also help to come closer to a differentiation between derivational and inflectional morphology, which often causes problems for nominalisation theory. Thus, derivation can be attributed to the lexicon and to semantic compositional processes in which new lexical items are formed. Inflection, on the other hand, is located in the syntax and deals with functional categories that

are applied to ready-made lexical items which were extracted from the lexicon. The reason why nominalisations have been considered as problematic up to now for the differentiation between these two types of morphology, lies in the fact that they describe events – which are complex and not simple units of meaning. In order to cope with the semantic (and syntactic) complexity of such units we have to leave the domain of the lexicon at some point and include the syntax into our interpretation. In my opinion, it is impossible to make a statement about the semantics of nominalisations, when we stick to the lexicon only and simply consider the construction of words.

In this work, I have tried to illustrate this for German, English and French nominalisations and the (closer and larger) contexts they can surface in. Especially the French nominalisation system is not easy to describe, due to its many ambiguities in meaning and overlaps of derivation patterns. In chapter 2 and 3, I have shown that the three classes of suffixation patterns that Grimshaw 1990 proposes, could not be applied for the description of French. My work mostly focused on the aspectual differences between *-age* and *-ment/-tion*. As already much recent research has shown, the main difference between derivatives of this kind seems to be that *-age* derives so-called “longer eventive chains” (Martin 2007) or durative aspect, whereas *-ment* and *-(t)ion* are responsible for the expression of terminative events. I have proposed here, that the reason for this behaviour are the features [-add to] and [+ADD TO], which these suffixes introduce into an aspectual unit, such as the eventive NP, via derivation.

Unlike inflectional morphology in the verbal domain, derivational morphology in the nominal domain is one of the sub-units that help to construe inner aspect. It is able to induce an aspectual [ $\pm A$ /add T/to] feature on the lexical level and form one new eventive unit together with the base verb, to which it attaches. The system, which dictates the rules for this compositional process of deverbal nominalisations, is Verkuyl's Plus Principle. In its original form it was developed for the aspectual composition in the VP, but its main rule can also be applied in the NP, as I have shown by help of examples from English, German and French in the chapters 4 and 5. This rule dictates that as soon as one minus value on one of the features that have aspectual properties – [ $\pm$ ADD TO] and [ $\pm$ SQA] – is included into the construction, the overall aspect is non-terminative. This means that for eventive NPs,

the aspectual nature of the suffix is of major importance. English *-ing*, German *-en* and French *-age* were shown to be responsible for the minus value and therefore durative aspect; English *-ation*, German *-ung* and French *-ment/-tion* cause positive values and thus – if no other compositional sub-unit of the NP intervenes – terminative aspect.

Another major difference between the mentioned suffixes, besides the different aspectualities they induce, was the flexibility and origin of their features. This is the reason why I distinguish between the features [ADD TO] and [add to]. [-ADD TO] is the feature that English *-ing* and German *-en* carry. It is a temporal property of genuine event-NPs. A suffix with this feature derives nothing but events with a durative aspect. The [-add to] feature on the other hand, is the one *-age* contains, which can derive events, but is not reduced to this function alone. This is the reason why I call [add to] a flexible feature. In its primary environment, events, it certainly is responsible – together with the other elements of the NP – for durative aspect. In other surroundings, however, more precisely, in situations where we do not want to derive an event, for instance, if the base is of nominal origin, the [add to]-properties can also be used to influence the nature of objects, properties or individuals, as it is the case with *plumage*, which designates the uncounted numbers of feathers that a bird possesses. This means that when we leave apart the event readings, we can also account for secondary interpretations with such an analysis. All in all, Verkuyl's aspect composition is applicable for events expressed in NPs. The Plus Principle holds there, too, although the aspectual value of the suffixes is a different one than in the verbal domain.

A final chapter offers also the chance to bring up topics that have not been addressed so far. There are some points, that I have not mentioned or commented on, because they were – in my opinion - either not that important for the discussion or they constituted quite complex problems that would have needed a more explicit treatment than just a side-comment. Problems of the last type cannot be discussed here either, I just would like to mention them with respect to future research.

In my propositions for the aspectual composition of the NP, I have almost entirely neglected a discussion on the external argument, although it is also part of an event, even in the nominal domain. There are several reasons for this. Firstly, the more important participant in events, according to the composition of aspects, is the one ex-

pressed by the internal argument. It is its function to specify a Path, along which the action develops and thus make an event complete. In the nominal domain this can also be seen in the way the two kinds of argument are realised. There is only one place in the NP for the realisation of two arguments, but it is the internal argument which is realised in this position (with transitive verbs). The external argument, on the other hand, must be realised in an optional *by*-phrase and can be left out more easily. In the cases in which we realise the external argument with nominalisations, however, there is no reason why the Plus Principle should not hold as well. In such situations we would have to consider the quantification of the argument in question and judge whether it influences the already composed aspectual structure (minus value) or not (plus value). So secondly, there should be no problems in the application of the compositional system that I have proposed.

A second reason why I have avoided the discussion on the external argument is that there already exists a lot of literature that takes this aspect into consideration, such as Grimshaw 1990, Alexiadou 2001a, Alexiadou/Grimshaw 2008 and many others. The problem that often appears with nominalisation approaches that focus on the external argument is that they mix concepts like agentivity into their analyses. Verkuyl, however, stresses explicitly that agentivity should not be involved in an aspect compositional analysis and has to be discussed separately. This position is also realised by Tenny 1994, who offers us aspectual roles in order to express a Path and thus different types of aspect on the one hand, and the traditional thematic roles, which include agent and patient, on the other hand.

An issue that concerns aspect composition and that I have only mentioned in passing, is the influence of outer aspect that exists in the sentence in which a nominalisation can be embedded. I would like to stress that, what I have proposed in the chapters 4 and 5, does only concern the construction of the event-NP and the aspects that we find there. It is clear that there can be other, outer aspect on sentence level, which puts the event in the NP into a different light or embeds the NP event in another, larger one as in (124).

(124) [<sub>Event 2</sub> [<sub>Event1</sub> *The destroying of the city*] was described in the report].

These overlaps of many different aspectual layers cannot be coped with in one or two sentences. This goes beyond the questions I wanted to look at in this work. The major topic here was to describe how aspect in event nominals could be composed and illustrated. This is also the reason why I mostly neglected the so-called “other” interpretations of deverbal nominalisations (Brandtner 2008). There are, however, many interesting recent works, which deal with these questions in detail, such as Melloni 2007, and bring up readings such as state, value, container, medium or location.

Another issue that I would like to address here concerns the French suffixes. Throughout the entire work, I have tacitly and naturally classified the suffixes *-ment* and *-(t)ion* together as aspectual opponents of *-age*. There are again several reasons for this. My interest in these three French suffixes already persisted before the work on this thesis. Already Heinold 2005 dealt with this subject and there, I also found out that these three suffixes for the formation of action nominals seemed to be far more productive than others. This meant for me that they were in a special concurrence situation. So, I went on in this work with the aspectual analysis of all three of them, although the overlaps of *-age* and *-ment* were by far more significant than the other constellations. The major point for maintaining all three suffixes in this analysis was, that the entire work had *-age* in its centre and therefore, everything that was not *-age*, could be treated in the same way, which were the two left over suffixes, *-ment* and *-(t)ion*. In works such as Martin 2007, 2008a, there was no distinction made in the aspectual opposition of these last two suffixes as well. I would like to mention, however, that there are many semantic and morphological differences between *-(t)ion* and *-ment*, in comparison with each other and the role they play in the French suffix landscape. One of the works that deals with their different semantic and morphological properties and their status in the vocabulary is Heinold 2005. Also traditional works, such as Dubois 1962, Lüdtke 1978, Dubois/Dubois-Charlier 1999 and others have shed light on different qualities of all three suffixes. A work that also discusses the opposition of *-(t)ion* and *-ment* – at least shortly - from an aspectual perspective is Martin 2008b. In her analysis, however, causation seems to be a major factor. As I have already mentioned several times before, the French deverbal nominalisation system is far more complex than what we know from English and German. The semantic, morphological and syntactic properties overlap a lot. My en-



tire analysis here just picked out one very small point where overlaps (or oppositions) can be observed and I tried to give an analysis that could also work with – perhaps not so complex – suffixation systems of other languages, when they try to express aspect. All the larger side topics that I mentioned in this last chapter, must be left open for future research.



## LITERATURE

- Abney, Steven. 1987. *The English Noun Phrase in its Sentential Aspect*. Cambridge: PhD thesis.
- Abraham, Werner & Theo Janssen (eds.). 1989. *Tempus, Modus, Aspekt*. Tübingen: Niemeyer.
- Alexiadou, Artemis. 2009. "On the Role of Syntactic Locality in Morphological Processes: the Case of (Greek) Derived Nominals." In: Anastasia Giannakidou & Monika Rathert (eds.): *Quantification, Definiteness and Nominalization*. Oxford: Oxford University Press, 253-280.
- Alexiadou, Artemis. 2008. "Nominal Structure and Aspect." Talk at Brussels: Center for Research in Syntax, Semantics and Phonology.
- Alexiadou, Artemis. 2001a. *Functional Structure in Nominals*. Amsterdam: John Benjamins.
- Alexiadou, Artemis. 2001b. "Nominal vs. Verbal -ing Constructions and the Development of the English Progressive." University of Potsdam: Draft.
- Alexiadou, Artemis & Jane Grimshaw. 2008. "Verbs, Nouns and Affixation." In: *Working Papers of the SFB 'Incremental Specification in Context'*. Stuttgart: Universität Stuttgart, 1-16.
- Alexiadou, Artemis, Liliane Haegeman, Melita Stavrou. 2007. *Noun Phrase in the Generative Perspective*. Berlin: Mouton de Gruyter.
- Alexiadou, Artemis, Gianina Iordăchioaia & Elena Soare. 2009. "Plural Marking in Argument Supporting Nominals." In: Patricia Cabredo-Hofherr & Brenda Laca (eds.): *Layers of Aspect*. Stanford: CSLI Publications, 1-22.
- Anderson, Stephen R. 1982. "Where's Morphology?" In: *Linguistic Inquiry* 13. Cambridge: MIT Press, 571-612.
- Aronoff, Mark. 1976. *Word Formation in Generative Grammar*. Cambridge: MIT Press.
- Baayen, Harald. 1993. "On Frequency, Transparency and Productivity." In: Booji, Geert E. & Jaap Van Marle (eds.): *Yearbook of Morphology 1992*. Dordrecht/London: Kluwer, 181-208.
- Baayen, Harald & Rochelle Lieber. 1991. "Productivity and English Word-Formation: a Corpus-Based Study." In: *Linguistics* 29, 801-291.
- Baayen, Harald & Antoinette Renouf. 1996. "Chronicling the Times: Productive Lexical Innovations in an English Newspaper." In: *Language* 72.1, 69-96.
- Barker, Chris. 1992. "Group Terms in English." In: *Journal of Semantics* 9, 69-93.
- Barque, Lucie, Richard Huyghe, Anne Jugnet & Rafael Marín. 2009. "Deux Types de Noms Déverbaux d'Activité." Paper at Lille: *Secondes Journées d'Études sur*

*les Nominalisations.*

- Bauer, Laurie. 2001. *Morphological Productivity*. Cambridge: Cambridge University Press.
- Beckmann, Frank. 1994. "Review Article on Jane Grimshaw (1990): Argument Structure." In: *Journal of Semantics*, 11, 103-131.
- Blume, Kerstin. 2004. *Nominalisierte Infinitive. Eine empirisch basierte Studie zum Deutschen*. Tübingen: Niemeyer.
- Borer, Hagit. 2005. *Structuring Sense, Vol. II. The Normal Course of Events*. New York: University Press.
- Borer, Hagit. 2003. "Exo-Skeletal vs. Endo-Skeletal Explanations: Syntactic Projections and the Lexicon." In: John Moore & Maria Polinsky (eds.): *The Nature of Explanation in Linguistic Theory*. Stanford: CSLI Publications.
- Borer, Hagit. 2001. "The Forming, the Formation, and the Form of Nominals." University of Southern California: Paper.
- Borer, Hagit. 1994. "The Projection of Arguments." In: Elena Benedicto & Jeffrey Runner (eds.): *Functional Projections. University of Massachusetts Occasional Papers* 17, GLSA. Amherst: University of Massachusetts, 19-48.
- Borer, Hagit. 1993. "Derived Nominals." University of Massachusetts: Manuscript.
- Brandtner, Regine. 2008. "Event, State and the Rest - Towards a Sub-Classification of 'Other' Readings." Paper at Stuttgart: *Semantic Features in Derivational Morphology*.
- Chomsky, Noam. 1970. "Remarks on Nominalization." In: Jacobs, Roderick A. & Peter S. Rosenbaum (eds.): *Readings in English Transformational Grammar*. Waltham: Ginn, 184-221.
- Comrie, Bernard. 1985. *Tense*. Cambridge: Cambridge University Press.
- Corbin, Danielle. 1987. *Morphologie Dérivationnelle et Structuration du Lexique*. Tübingen: Niemeyer.
- Demske, Ulrike. 2000. "Zur Geschichte der -ung-Nominalisierungen im Deutschen: Ein Wandel morphologischer Produktivität." In: *Beiträge zur Geschichte der deutschen Sprache und Literatur* 122, 365-411.
- Demske, Ulrike. 1999. "Nominalisierungen im Deutschen und Englischen. Überlegungen zu einer Theorie sprachlichen Wandels". In: Siegfried Kanngießer & Petra M. Vogel (eds.): *Elemente des sprachlichen Wandels*. Wiesbaden: Westdeutscher Verlag, 98-138.
- Dowty, David. 1991. "Thematic Proto-Roles and Argument Selection." In: *Language*, 67, 547-619.
- Dowty, David. 1972. *Studies in the Logic of Verb Aspect and Time Reference in English*. Austin: Doctoral Dissertation.
- Dubois, Jean. 1962. *Etude sur la Dérivation Suffixale en Français Moderne et Contemporain*. Paris: Larousse.
- Dubois, Jean & Françoise Dubois-Charlier. 1999. *La Dérivation Suffixale*. Paris: Éditions Nathan.

- Ehrich, Veronika & Irene Rapp. 2000. „Sortale Bedeutung von Argumentstruktur: *ung*-Nominalisierungen im Deutschen.“ In: *Zeitschrift für Sprachwissenschaft*, 19.2, 245-303.
- Ehrich, Veronika & Heinz Vater. 1989. “Das Perfekt im Dänischen und Deutschen.” In: Abraham, Werner & Theo Janssen (eds.): *Tempus – Aspekt – Modus*. Berlin: Akademie Verlag.
- Eisenberg, Peter. 1998. *Grundriß der deutschen Grammatik. Band 1: Das Wort*. Stuttgart/Weimar: Metzler.
- Emonds, Joseph E. 1985. *A Unified Theory of Syntactic Categories*. Dordrecht: Foris.
- Erben, Johannes. 1983. *Einführung in die deutsche Wortbildungslehre*. Berlin: Schmidt.
- Erben, Johannes. 1968. *Deutsche Grammatik. Ein Leitfaden*. Frankfurt am Main: Fischer.
- Farge, Sylvain. 2004. “Contrainte et Originalité : deux Facteurs Déterminants du Devenir des Emprunts en Français.” In: Jeanne-Marie Barbéris (ed.). *Contraintes et Originalité*. Montpellier: Presses Universitaires, 83-100.
- Ferret, Karen, Elena Soare & Florence Villiong. 2010. “Noms en -age et Noms en -ée: un Autre Cas de Compétition Affixale?” Université Paris 8: Submitted Draft.
- Flämig, W. 1965. "Zur Funktion des Verbs III: Aktionsart und Aktionalität." In: *Deutsch als Fremdsprache* 2, 4-12.
- Fleischmann, Suzanne. 1990. *The French Suffix -age: its Genesis, Internal Growth, and Diffusion*. Ann Arbor: Univ. Microfilm Intern.
- García Velasco, Daniel & Carmen Portero Muñoz. 2002. “Understood Objects in Functional Grammar.” In: *Working Papers in Functional Grammar* 76. Amsterdam: University of Amsterdam, 1-24.
- van Geenhoven, Veerle. 2005. “Atelicity, Pluractionality and Adverbial Quantification”. In: Henk Verkuyl, Henriette de Swart and Angeliek van Hout (eds.): *Perspectives on Aspect*. Dordrecht: Springer, 107–125.
- Grewendorf, Günther. 1995. “Präsens und Perfekt im Deutschen.” In: *Zeitschrift für Sprachwissenschaft*, 14, 213 – 236.
- Grimshaw, Jane. 1990. *Argument Structure*. Cambridge: MIT.
- Haas, Pauline, Richard Huyghe & Rafael Marín. 2008. “Du Verbe au Nom: Calques et Décalages Aspectuels.” In: Jacques Durand, Benoît Habert & Bernard Laks (eds.): *Congrès Mondial de Linguistique Française*. Paris: Institut de Linguistique Française, 2051-2065.
- Heinold, Simone. 2009. "Derivational Morphology under the Influence of Language Contact in French and German." In: *Journal of Language Contact. Varia* 2, 68-84. <http://www.jlcjournal.org/>
- Heinold, Simone. 2008. "The French Suffix -age: an Intra- and Inter-Language Comparison". Paper at Leuven: *ICLC* 5.
- Heinold, Simone. 2007. „Argument Structure in French -age Nominals“. Poster at

Stuttgart: *Nominalizations across Languages*.

Heinold, Simone. 2005. *Nominalisierungen im heutigen Französisch auf -tion, -ment und -age*. Universität Stuttgart: Magisterarbeit.

Von Heusinger, Klaus. 2009. "Zur Bedeutung von Derivationen an der Schnittstelle von lexikalischer Semantik und konzeptueller Struktur." In: *Deutsche Sprache*, 1/09, 46-64.

Hornstein, Norbert. 2001. *A Minimalist Theory of Construal*. Oxford/Malden: Blackwell.

Huyghe, Richard & Rafael Marín. 2007. "L'Héritage Aspectuel des Noms Déverbaux en Français et en Espagnol." In: *Faits de Langues*, 30, 265-274.

lordăchioaia, Gianina. 2007. "Pluralization in Complex Event Nominals". Talk at Stuttgart: Research Seminar A. Alexiadou.

lordăchioaia, Gianina & Elena Soare. 2008. "Two Kinds of Event Plurals: Evidence from Romanian Nominalisations." In: Olivier Bonami & Patricia Cabredo Hofherr (eds.): *Empirical Issues in Syntax and Semantics 7*, 1-24.

Jackendoff, Ray. 1997. *The Architecture of the Language Faculty*. Cambridge: MIT Press.

Jackendoff, Ray. 1990. *Semantic Structures*. Cambridge: MIT Press.

Kamp, Hans & Uwe Reyle. 1993. *From Discourse to Logic. Introduction to Modeltheoretic Semantics of Natural Language, Formal Logic and Discourse Representation Theory*. Dordrecht: Kluwer.

Kamp, Hans & Antje Roßdeutscher. 2007. "From Roots to Semantic Representations of Words and Sentences." Stuttgart: Manuscript of B4, SFB 732.

Kaufmann, Ingrid. 2005. "Referential Arguments of Nouns and Verbs." In: Claudia Maienborn & Angelika Wöllstein (eds.): *Event Arguments: Foundations and Applications*. Tübingen: Niemeyer.

Kelling, Carmen. 2004. "Protolleneigenschaften von Verbargumenten." In: Rolf Kailuweit & Martin Hummel (eds.): *Semantische Rollen*. Tübingen: Narr, 341-354.

King, Ruth. 2000. *The Lexical Basis of Grammatical Borrowing. A Prince Edward Island French Case Study*. Amsterdam-Philadelphia: John Benjamins.

Krifka, Manfred. 1989. *Nominalreferenz und Zeitkonstitution. Zur Semantik von Massentermen, Pluraltermen und Aspektklassen*. München: Fink.

Krifka, Manfred, Francis Jeffrey Pelletier, Greg N. Carlson, Alice ter Meulen, Gennaro Chierchia & Godehard Link. 1995. "Genericity: An Introduction." In: Greg N. Carlson & Francis Jeffrey Pelletier (eds.): *The Generic Book*. Chicago: University of Chicago Press.

Laserson, Peter. 1995. "Plurality, Conjunction and Events." In: *Studies in Linguistics and Philosophy*, 55. Dordrecht: Kluwer.

Leumann, Manu. 1977. *Lateinische Laut- und Formenlehre*. München: C.H. Beck.

Lieber, Rochelle. 2004. *Morphology and Lexical Semantics*. Cambridge: Cambridge University Press.

- Lindstedt, Jouko. 1985. *On the Semantics of Tense and Aspect in Bulgarian*. Helsinki: Dissertation.
- Lindstedt, Jouko. 1984. "Nested Aspects." In: Casper De Groot & Hannu Tommola (eds.): *Aspect Bound. A Voyage into the Realm of Germanic, Slavonic and Finno-Ugrian Aspectology*. Dordrecht: Foris, 23-38.
- Link, Godehard. 1983. "The Logical Analysis of Plurals and Mass Terms: A Lattice Theoretical Approach". In: Godehard. Link, Rainer Bäuerle, Christoph Schwarze & Arnim von Stechow (eds.): *Meaning, Use and Interpretation of Language*. Berlin: Walter de Gruyter, 302–323.
- Lüdtke, Jens. 1978. *Prädikative Nominalisierungen mit Suffixen im Französischen, Katalanischen und Spanischen*. Tübingen: Niemeyer.
- Lutzeier, Peter Rolf. 1995. *Lexikologie. Ein Arbeitsbuch*. Tübingen: Stauffenburg.
- MacDonald, Jonathan Eric. 2006. *The Syntax of Inner Aspect*. Stony Brook University: Dissertation.
- Martin, Fabienne. 2008a. "The Semantics of the Eventive Suffixes in French." Paper at Moscow: *Formal Semantics in Moscow 4*.
- Martin, Fabienne. 2008b. "The Semantics of Eventive Suffixes in French." In: Florian Schäfer (ed.). *Working Papers of the SFB 'Incremental Specification in Context'*. Stuttgart: Universität Stuttgart, 145-171.
- Martin, Fabienne. 2007. "The Competition between the French Suffixes -ment, -ion, -age and -erie. A Semantic Analysis". Paper at Stuttgart: *Nominalizations across Languages*.
- Martinet, André. 1988. "Stabilité et Instabilité du Français." In: *Le Français Moderne* 56, 219-222.
- Matras, Yaron. 2008. "The Borrowability of Structural Categories." In: Yaron Matras & Jeanette Sakel (eds.). *Grammatical Borrowing in Cross-Linguistic Perspective*. Berlin: Mouton de Gruyter, 31-74.
- Meinschaefer, Judith. 2004. *Deverbale Nominalisierungen im Französischen und Spanischen. Ein Modell der Schnittstelle von Syntax und Semantik*. Universität Konstanz: Habilitationsschrift.
- Melloni, Chiara. 2007. *Polysemy in Word Formation: the Case of Deverbal Nominals*. University of Verona: Dissertation.
- Moens, Mark. 1987. *Tense, Aspect and Temporal Reference*. Edinburgh: University of Edinburgh.
- Motsch, Wolfgang. 2004. *Deutsche Wortbildung in Grundzügen*. Berlin: De Gruyter.
- Neef, Martin. 1996. „Worddesign: Das Lexembildungsmuster *Gehopse* und die Kopflosigkeit von <Ableitungen>.“ In: *Zeitschrift für Sprachwissenschaft* 15, 61-91.
- Neeleman, Ad. 1991. "Are there Small Clause Complements in Dutch?" Utrecht: Research Institute for Language and Speech Publication Series.
- Neeleman, Ad & Fred Weerman. 1991. "Case Theory and the Diachrony of Complex Predicates in Dutch." In: *Folia Linguistica Historica* XIII, 189-217.

- Olsen, Susan. 1990. "Ge-Präfigierung im heutigen Deutsch." In: *Beiträge zur Geschichte der deutschen Sprache und Literatur* 113, 333-366.
- Plag, Ingo. 2003. *Word Formation in English*. Cambridge: Cambridge University Press.
- Plag, Ingo. 1999. *Morphological Productivity. Structural Constraints in English Derivation*. Berlin: Mouton de Gruyter.
- Von Polenz, Peter. 1980. "Wortbildung." In: Hans Peter Althaus, Helmut Henne & Herbert Ernst Wiegand (eds.): *Lexikon der Germanistischen Linguistik 2*. Tübingen: Niemeyer, 169-180.
- Pulvermüller, Esther. 2008. *Anglizismen im heutigen Französisch unter Berücksichtigung morphologischer Aspekte*. Universität Stuttgart: Magisterarbeit.
- Pustejovsky, James. 1995. *The Generative Lexicon*. Cambridge: MIT Press.
- Pustejovsky, James. 1991. "The Syntax of Event Structure." In: *Cognition* 41, 47-81.
- Quine, Willard Van Orman. 1960. *Word and Object*. Cambridge: MIT Press.
- Quirk, Randolph & Charles L. Wrenn. 1955. *An Old English Grammar*. London: Routledge.
- Roeper, Tom. 1993. "Explicit Syntax in the Lexicon: the Representation of Nominalizations". In: Pustejovsky, James (ed.): *Semantics and the Lexicon*. Dordrecht: Kluwer, 185-220.
- Roodenburg, Jasper. 2005. "On the Existence of Plural Event Nominalizations: a View from Romance." Stuttgart: Unpublished.
- Rosdeutscher, Antje. 2007. "Syntactic and Semantic Constraints in the Formation and Interpretation of -ung-Nouns". Paper at Stuttgart: *Nominalizations across Languages*.
- Schäfer, Florian. 2008. "Event Denoting -er Nominalizations in German". In: Florian Schäfer (ed.). *Working Papers of the SFB 'Incremental Specification in Context'*. Stuttgart: Universität Stuttgart, 173-188.
- Scheffler, Tatjana. 2005. "Nominalization in German." University of Pennsylvania: Unpublished.
- Schütze, Carson T. 1996. *The Empirical Base of Linguistics: Grammaticality Judgements and Linguistic Methodology*. Chicago: Chicago University Press.
- Smith, Carlotta. 1991. *The Parameter of Aspect*. Dordrecht/Boston/London: Kluwer.
- Spranger, Kristina & Ulrich Heid. 2007. "Applying Constraints Derived from the Context in the Process of Incremental Sortal Specification." In: *Proceedings of the Workshop CSLP@Context 2007*. Roskilde.
- Steinitz, Renate. 1981. *Der Status der Kategorie "Aktionsart" in der Grammatik. (Oder: Gibt es Aktionsart im Deutschen?)*. Berlin: Akademie der Wissenschaften in der DDR.
- DeSwart, Henriette. 1998. "Aspect Shift and Coercion." In: *Natural Language and Linguistic Theory*, 16, 347-385.



- Tenny, Carol L. 1994. *Aspectual Roles and the Syntax-Semantics Interface*. Dordrecht/Boston/London: Kluwer.
- Trips, Carola. 2007. *Lexical Semantics and Diachronic Morphology: the Development of -hood, -dom and -ship in the History of English*. Tübingen: Niemeyer.
- Uth, Melanie. 2010. *Abstrakte Bedeutung und regelhafte Wortbildung. Eine synchrone und diachrone Bedeutungsanalyse der französischen Nominalisierungssuffixe -ment und -age*. Universität Stuttgart: Dissertation.
- Uth, Melanie. 2008. "The Semantic Change of the French -age-Derivation". In: Kata Balogh (ed.): *Proceedings of the 13<sup>th</sup> ESSLLI student session*, 203-212. Hamburg: [http://staff.science.uva.nl/~kbalogh/StuS13/StuS13\\_Proceedings.pdf](http://staff.science.uva.nl/~kbalogh/StuS13/StuS13_Proceedings.pdf)
- Vendler, Zeno. 1968. *Adjectives and Nominalizations*. The Hague: Mouton.
- Vendler, Zeno. 1957. "Verbs and Times." In: *The Philosophical Review* 66, 2, 143-160.
- Vergnaud, Jean-Roger & Maria Luisa Zubizarreta. 1992. "The Definite Determiner and the Inalienable Construction in French and English." In: *Linguistic Inquiry*, 595-652.
- Verkuyl, Henk. 2005a. "Aspectual Composition: Surveying the Ingredients." In: Henk Verkuyl, Henriette de Swart & Angeliek van Hout (eds.): *Perspectives on Aspect*. Dordrecht: Springer, 19-40.
- Verkuyl, Henk. 2005b. "How (In)sensitive is Tense to Aspectual Information?" In: *Cahiers Chronos* 13, 145-169.
- Verkuyl, Henk. 1999. *Aspectual Issues. Studies on Time and Quantity*. Stanford: CSLI Publications.
- Verkuyl, Henk. 1993. *A Theory of Aspectuality*. Cambridge: Cambridge University Press.
- Verkuyl, Henk. 1972. *On the Compositional Nature of the Aspects*. Dordrecht: Reidel.
- Welke, Klaus. 2005. *Tempus im Deutschen. Rekonstruktion eines semantischen Systems*. Berlin/New York: De Gruyter.
- Yoon, James Hye Suk. 1996. "Nominal Gerund Phrases in English as Zero Derivations". In: *Linguistics* 34, 2, 329-356.



## Appendix

### 1 Dictionaries and Other Reference Works for French

#### *Le Grand Robert 1986*

Le Grand Robert de la Langue Française. Dictionnaire Alphabétique et Analogique de la Langue Française 100000 words, 350000 meanings, by Alain Rey. Paris: Dictionnaires Le Robert.

#### *Le Petit Robert 1998*

Le Nouveau Petit Robert. Dictionnaire Alphabétique et Analogique de la Langue Française. 60 000 articles, by Josette Rey-Debove und Alain Rey. Paris: Dictionnaires Le Robert.

#### *Le Trésor de la Langue Française Informatisé*

Online version of TLF, Dictionnaire de la langue du 19e et 20e siècle, CNRS Gallimard, Paris, 1971 – 1994. 100000 words.  
[http://www.atilf.fr/atilf/produits/tlfi\\_preface\\_jmp.htm#Note1](http://www.atilf.fr/atilf/produits/tlfi_preface_jmp.htm#Note1), 7/6/2010.

### 2 Dictionaries and Other Reference Works for English

#### *Cambridge Online Dictionary 2005*

Cambridge Advanced Learner's Dictionary. 72500 entries. Cambridge: Cambridge University Press. <http://dictionary.cambridge.org/>, 7/6/2010.

### 3 Text Corpora and Databases

#### *FranceTerme*

FranceTerme, formerly CRITER, Neologism data base, by the Commission générale de terminologie et de néologie. <http://franceterme.culture.fr/FranceTerme/>, 7/6/2010.

#### *FAZ 1999*

Frankfurter Zeitung 1999 Corpus, 48771236 words, made available by Achim Stein, Institut für Linguistik/Romanistik, Universität Stuttgart.

#### *Frantext*

FRANTEXT, ATILF text data base (16<sup>th</sup> to 21<sup>st</sup> century). Nancy: CNRS/Université Nancy2. FRANTEXT - version catégorisé, 127000000 words.  
<http://www.atilf.fr/frantext.htm>, 17.01.2010

*Le Monde Corpora*

- Le Monde 1994: 20542986 words
- Le Monde 1997: 21437584 words
- Le Monde 1998: 25254864 words
- Le Monde 1999: 25234178 words
- Le Monde 2000: 25769763 words
- Le Monde 2001: ca. 26000000 words
- Le Monde 2002: 29761933 words

Made available by Achim Stein, Institut für Linguistik/Romanistik, Universität Stuttgart.

## **4 English and German Native Speaker Data**

There were two grammaticality judgment tasks conducted with speakers of German, French and English. Most of the participants did not have any linguistic background. There were some, though, who have studied Linguistics at one point or another in their career.

In the first task six native speakers of English and eight native speakers of German were asked to judge the expressions in the questionnaire according to their naturalness. As already mentioned: the purpose of this task was not a statistical evaluation. It was rather conducted to see my own impressions and those from the literature confirmed and if speakers were sensitive to aspect in the three sub-units of the NP at all.

### **4.1 German NPs**

AUFGABE 1: Wie finden Sie die folgenden deutschen Konstruktionen? Bitte bewerten Sie nicht anhand selbstgewählter Kriterien, sondern anhand folgender Skala:

Vollkommen natürlicher Ausdruck – akzeptabel – nicht wirklich natürlich – inakzeptabel

(wenn Sie die Bewertung 'inakzeptabel' vergeben, versuchen Sie bitte einen Grund zu nennen, was Sie daran stört).

- a. Die Zerstörung der Stadt in einer Stunde
- b. Die stundenlange Zerstörung der Stadt
- c. Die Zerstörung von Städten in einer Stunde
- d. Die stundenlange Zerstörung von Städten
- e. Das Zerstören der Stadt in einer Stunde
- f. Das stundenlange Zerstören der Stadt
- g. Das Zerstören von Städten in einer Stunde
- h. Das stundenlange Zerstören von Städten

#### AUFGABE 2:

Versuchen Sie nun die oben genannten Konstruktionen a-h in eine Hierarchie zu bringen: Welche der 8 Konstruktionen klingt für Sie am natürlichsten (bitte als erste auf die Liste stellen) bis hin zu der Konstruktion, die Sie am wenigsten natürlich finden (als letzte auf der Liste).

## 4.2 English NPs

### TASK 1

In the following task, I would like to find out about the grammatical properties of English nominals that are derived from verbs. I give you 8 nominal constructions to judge. They do not express the same. But the judgment is about grammaticality not content. So just tell me if these expressions “sound good” to your native speaker ear or if something bothers you.

Please do NOT use your own judgments, like “sounds ok”, “sometimes good” or the like, but stick to the following 4 judgments:

## 214 VERBAL PROPERTIES OF DEVERBAL NOMINALS

- completely natural English expression
- acceptable
- not really natural
- unacceptable

If you have an intuition why something sounds strange to you, please write it down.  
Here are the constructions you are supposed to judge:

- a. The destruction of the city in an hour
- b. The destruction of the city for hours
- c. The destruction of cities in an hour
- d. The destruction of cities for hours
- e. The destroying of the city in an hour
- f. The destroying of the city for hours
- g. The destroying of cities in an hour
- h. The destroying of cities for hours

## TASK 2

Try now to put the 8 expressions from above into a hierarchy from “most natural” (at the top of the list) to “least acceptable” (last on the list)

### 4.3 French Verbs and Nominals

The third grammaticality judgment task was about French nominalisations on the basis of sound emission verbs. Below you can see the questionnaire.

**Lisez UNE question et y repondez avant de lire la suivante.**

Verbes: aboyer (chien), beugler (bovin), couiner (porcelet), feuler (tigre), gazouiller (oiseau), glapisser (chien, renard), glousser (poule), grogner (sanglier), hennir (cheval), miauler (chat), meugler (bovidé), pépier (oiseau), piailler (oiseau), rugir (lion), vagir (lièvre)

1- Si vous devriez former un nom à partir de ces verbes en haut, lequel formeriez-vous?

2- Pourriez-vous former un nom qui se termine en *-age* de tous ces bruits des animaux?

3- Comment les noms en *-age* vous semblent-ils:

- mot français complètement naturel
- acceptable
- un peu bizarre
- inacceptable

(Si nécessaire distinguez parmi toutes les mots. Utilisez seulement les jugements donnés).

4- Comparez les noms que vous avez formés en *-age* avec les mots correspondants en *-ment*:

- a. Est-ce qu'il y a une différence de sens entre eux?
- b. Si oui: pourriez-vous la décrire?

#### **4.4      Extracted AGE-neologisms**

(not hapaxes)

affalage

affrétage

bagottage

bahutage

baratinage

bastonnage

biscuitage

boyautage

brocardage

bullage

cadennassage

cadençage

cajolage

castrage  
cavage  
centrifugeage  
chaloupage  
charognage  
cliquage  
clôtureage  
crapahutage  
cuidage  
éffarouchage  
émiettage  
éperonnage  
flinguage  
fouinage  
gouachage  
graffitage  
jargonage  
jargonage  
légendage  
longeage  
menottage  
merdouillage  
musclage  
palmage  
poignardage  
prototypage  
ressourçage  
rétrogradage  
ripolinage  
rubricage  
rubriquage  
somnambulage  
taggage



tapissage  
tartinage  
triplage  
troncage  
tronquage  
trouillotage  
trustage  
zappage

#### **4.5     Extracted MENT-neologisms**

affrèment  
apprêtement  
assermentement  
bidonnement  
capitonnement  
chaloupement  
embriquement  
moulinement  
parrainement

#### **4.6     Extracted (T)ION-neologisms**

accessoirisation  
angélisation  
brutalisation  
continentalisation  
crédibilisation  
économisation  
fiabilisation  
flexibilisation  
franchisation  
labélisation

218 VERBAL PROPERTIES OF DEVERBAL NOMINALS

prosaïisation

provincialisation

vampirisation

vedettarisation

Ich erkläre hiermit, dass ich unter Verwendung der im Literaturverzeichnis aufgeführten Quellen und unter fachlicher Betreuung diese Dissertation selbständig verfasst habe.

Simone Heinold

Stuttgart, 14. Januar 2011