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1. Introduction

[I]n English, as in many other languages, we can often convert a word, that is, to make it into another part of speech without any modification or addition, except of course, the necessary change of inflection, etc. (Sweet 1891: 38)

It is doubtful that Henry Sweet, who reportedly coined the term ‘conversion’ in the late nineteenth century, would have guessed that more than a hundred years later, linguists would still be fascinated by this interesting and vastly productive word-formation process. Conversion¹(or zero-derivation), i.e. the existence of formally indistinguishable lexical pairs, bearing a certain semantic relation, however, appertaining to contrasting word classes, e.g. *kiss*_(N) and *kiss*_(V), (Balteiro 2007b: 15) or form classes, e.g. *Run the water!* (Bauer 1983: 32), has not only caused interest but also numerous controversies among linguists. Due to its high productivity, especially in English, and its perception as a slightly mystical phenomenon, conversion continues to be the source of long debates, especially concerning its nature and corresponding characteristics.

The aims of this diploma thesis are manifold. The first part of the diploma thesis seeks to arrive at a definition for conversion that is appropriate for the current state of research. Therefore, it is necessary to isolate its application from other linguistic phenomena, which are wrongfully subsumed under this heading, and to carefully examine conversions between different word classes. Furthermore, this word formation process is analyzed within the theoretical framework of natural morphology and compared to conversion in another language, namely German. The second major aim of this section is to shed light on the controversial issue of directionality. To this end, several different criteria to establish directionality are analyzed. Initially, Marchand’s (1964) directionality criteria are presented and critically reflected upon, before alternative and supporting criteria are introduced.

¹ For reasons of readability and preference on a theoretical level, the term conversion (rather than zero-derivation) will be used throughout this diploma thesis, unless theoretical differences between the concepts of zero-derivation and conversion require otherwise.

In order to allow for a nuanced discussion of the aforementioned issues, chapter two is structured as follows: First, the theoretical concepts of conversion versus zero-derivation will be contrasted. Subsequently, categorizations of conversions will be introduced and different types of conversion will be described. In subchapter three, conversions will be contrasted to nonce-formations before in the following subchapter conversion will be analyzed in the linguistic framework of natural morphology. Subsequently, conversions in another language, namely German, will be presented before finally, the controversial subject of directionality is discussed in the sixth subchapter.

The third part of this diploma thesis aims at briefly introducing the research methodology used for the following empirical analysis, namely corpus linguistics. To this end, subchapter 3.1. first provides a brief definition of the key features of a linguistic corpus: representativeness and sampling, finite size, machine-readability and its use as a standard reference (McEnery & Wilson 2001: 29). Additionally to these four criteria, the concept of authentic language in regards to corpora (Tognini-Bonelli 2001: 55) is briefly introduced before the discussion moves to the complex field of annotation and related difficulties. In the following subchapter (3.3), the difference between quantitative and qualitative corpus analyses is presented and a combination of these two research strands is suggested. Finally, thoughts on the future of corpus linguistics are provided in subchapter 3.4..

Having established a firm theoretical foundation, the fourth section of this diploma thesis will move to the empirical analysis. The investigation seeks to establish directionality of recent American English conversion pairs and to systematically investigate them. To this end, the empirical section is structured as follows: Initially, the relevant criteria for the data collection, as well as the corpus utilized in this study, will be introduced before the reasons for focusing on recent conversions between nouns and verbs in American English will be outlined. Secondly, the research steps will be listed and some complications thereof will be presented, in particular focusing on difficulties encountered while working with the COHA corpus. Having reached a representative conversion data set, subchapter 4.3. will move to the rather difficult task of establishing

directionality of the 252 apparent conversion pairs. Strongly based on Balteiro's (2007b) directionality analysis, this chapter will subsequently introduce several directionality criteria, and methodological considerations will be outlined. The findings of the individual directionality criteria will then be presented (subchapter 4.3.2.) and set into relation to each other. Finally, the results will be contrasted with Balteiro's (2007b) study on directionality, and will be critically discussed.

Having established directionality for the data set of 252 apparent conversions, the same conversion data set will be systematically analyzed in subchapter 4.4. To this end, both the nominal and the verbal conversion pairs will be investigated and structured according to several categories. Initially, the nominal conversion counterparts will be grouped based on their features as proper vs. common nouns, count vs. mass nouns and abstract vs. concrete nouns. Then, the verbal classification will focus on the three categories of transitivity, dynamism and telicity. Furthermore, additional observations concerning the conversion data set will be outlined.

Finally, this diploma thesis' contents will be summarized and concluding thoughts will be presented. Hereby, particularly interesting findings will be highlighted and relevant conclusions will be drawn based on the theoretical findings, as well as on the empirical research. Furthermore, the limitations of this diploma thesis will be critically evaluated before further research strands will be suggested.

2. Conversion

No matter how easily one might be misled into believing that a conversion relationship, i.e. the relationship between “formally identical word pairs belonging to different word classes like *paper* (n) and *paper* (v), or *dry* (adj) and *dry* (v)” (Balteiro 2007b: 15), is simple and straight-forward, reviewing the literature proves otherwise. It is this seeming simplicity which causes this linguistic field to be characterized by disagreements and controversies both in terms of a concrete definition and in terms of criteria to establish directionality.

In order to allow for a more nuanced discussion of the aforementioned issues, chapter two is structured as follows: Subchapter 2.1. deals with the nature of conversion, juxtaposing some relatively rare opinions with the two dominant, opposing theories in conversion research, namely those of zero-derivation and conversion. Arguing in line with the assumption that this phenomenon should be understood as conversion, it will then move on to delimit the scope of conversion by examining different kinds of conversions in English and by analyzing the major word classes affected by it. Subsequently, subchapter 2.3. will refine the definition of English conversion by demarcating it to nonce-formations and introducing various stages conversions have to undergo in order to become fully acknowledged in a language. Subchapter 2.4. will then try to place conversion in the field of natural morphology before turning to a brief discussion of conversion in another language, namely in German. In subchapter 2.6., the most common criteria for the establishment of directionality will be introduced and some major difficulties in this regard will be explored.

2.1. Conversion vs. Zero-Derivation

This introductory chapter seeks to briefly outline some relatively rare opinions on the relation of conversion pair members, before moving to the most dominant view in the field, which perceives conversion as a derivational process.

2.1.1. Rare Views

Throughout the body of literature on conversion, very rarely is it claimed that no relationship between conversion items can be established at all because both items exist independently of each other (Green 1972). Other linguists, e.g. Farrell (2001), argue that in the most common type of conversion, namely conversions between nouns and verbs, the lexical units are “semantically underspecified with respect to the noun/verb distinction“ (Balteiro 2007b: 22), meaning that the conversion items are neither verbs nor nouns and can therefore bear both a thing and a process meaning, depending on their syntactic position (ibid). If this opinion is acknowledged, it could be pursued even further, perceiving the whole linguistic system as consisting of “closed sets such as pronouns and a single open set of lexical items that can be used as required“ (Velasco 2009: 1170). In this case, no word formation process between conversion pairs would be assumed.

Slightly more often than conversion being reduced to semantic underspecification, it is considered as a syntactic phenomenon, namely as multifunctionality. In this perspective, conversion pairs are reduced to the existence of a single element, which, appertaining to different word classes at the same time, can perform different functions (Balteiro 2007b: 23). Laurie Bauer (1983: 227), for instance, claims that this point of view seems particularly reasonable when “the change of form class is not a major one [...] but a change from one type of noun to another or one type of verb to another“ (ibid).

These concisely introduced approaches only display marginal opinions in the field of conversion. Nevertheless, this brief overview has shown that none of these perspectives acknowledge a derivational relationship between conversion pairs. However, since the majority of authors stress that derivation is indeed involved in the conversion process, this point of view will be advocated in the following chapters.

2.1.2. Dominant Opinions of Conversion as a Derivational Phenomenon

Even though there is a wide acceptance of the assumption that derivational operations are involved in conversion, opinions differ on the question of how these derivational

processes should be defined. The two major oppositional trends are the following: either a covert affixation is assumed or no affixation at all is acknowledged.

2.1.2.1. Covert Affixation (Zero-Derivation)

Supporters of covert affixation (or zero-derivation) theory assume that a “phonologically empty and therefore unpronounceable ‘zero suffix’” (Carstairs-McCarthy 2002: 48) is added to a lexical base, thereby creating a new lexical item. This addition of a zero-suffix is assumed to cause the word to change its word class or form class (Marchand 1969: 359f). In order to properly account for this position, it is useful to briefly sketch the history of zero morphemes in linguistics.

Originally, zero morphemes have found their greatest appreciation in inflectional morphology and structuralism and were not applied in the field of derivational morphology. Ferdinand de Saussure (1916 [1959]: 86f) considerably influenced the understanding of signs, stating that no material sign is required to express an idea since the contraposition of nothing and something is sufficient. Another ‘founder’ of zero-elements appears to be Leonard Bloomfield (1935: 215), who classifies zero-elements as alternates, “in which a constituent is entirely lacking”.

One of the first researchers applying the concept of zero morphemes to derivational morphology was Hans Marchand (1969: 359ff). Marchand justifies the zero-affixation by stating that conversion cases like *dirty*_(Adj) → *dirty*_(V) should be conceived as parallel to ‘regular’ derivational patterns such as *national*_(Adj) → *nationalize*_(V). Marchand speaks of zero-morphemes only in complementary distribution with overt signs (*dirty*-Ø_(N) vs. *national-ize*_(V)) and supports this idea with a semantic analysis. While *national-ize* means ‘render/make national’, *dirty*-Ø_(V) means ‘render/make dirty’. The underlying semantic pattern hereby becomes particularly obvious (ibid).

Dieter Kastovsky (2005: 33ff) additionally supports the application of zero morphemes in the field of derivational morphology with historical evidence. The possibility to reconstruct older derivational patterns with explicit derivational suffixes, which were

only later lost as a result of sound changes, seems to suggest that nowadays zero-morphemes exist instead.

Although there are several advocates of a zero-derivation theory, an even more significant number of opponents can be found. Henry Gleason (1969: 76), for example, states that zero-morphemes are “quite unnecessary and [...] lead to increased complexity“ and Esko Pennanen (1982: 248f) additionally stresses that zero elements do not belong to derivational morphology. He views adding a zero element as rather artificial since “the process of conversion [...] can be considered the primary stage, and the introduction of the zero-morpheme as a secondary procedure“ (Pennanen 1971: 35). He further raises the question of whether different zero-morphemes should be assumed or whether all conversion categories share the same type of zero-suffix. This question seems particularly relevant when several different word classes undergo conversion, as in the case of *round*.

[I]n a synchronic view awkward questions are likely to arise. Which item is to be regarded as the base, as there must be a base to which the zero-morpheme can be attached? How many different zeros can be suffixed to it successively, or does the process of zero-derivation begin from the ‘base’ in each case or from a zero-derived form with deletion of preceding zeros? (Pennanen 1982: 249)

Since all these doubts and objections of the zero-derivation theory seem reasonable and no sufficient solutions have been found so far, this diploma thesis will rather support the following perspective, which conceives conversion as a derivational process without any form of affixation.

2.1.2.2. Derivation without Affixation (Conversion)

Linguists, who treat formally identical word pairs which belong to different word classes as conversion, assume that there is a derivational relation between conversion pairs, which is, however, not caused by affixation. Conversion is rather seen as a word formation process, which “establishes conditions for the multiplication of English vocabulary by, as it were, ‘switching over’ to a different word-class“ (Štekauer 1996: 11).

Although supporters of this line of argumentation agree that conversion is caused by derivation without affixation, there are significant controversies concerning its key features. Sweet (1891), for instance, defines the change of lexical category as the fundamental characteristic of conversion. Therefore, he only considers the conversion process to be complete if the word acquires all formal characteristics (e.g. inflections) of the new lexical category. Contrarily, Etsko Kruisinga (1925) claims that not only should partial conversions like *the poor* be subsumed under the term conversion but additionally, conversion within a given word class should be included. Finally, Miloš Dokulil (1968: 215), categorizes the semantic change (or the need thereof) as the first steps and determining factor of every conversion process and argues that syntactic and morphological modifications are only its necessary consequences.

Since there is no generally accepted definition for conversion or its key features, I consider it important to clarify the understanding of the concept of conversion in this diploma thesis. From this point onwards, conversion is understood as adhering to these four principles, as determined by Isabel Balteiro (2007b: 34ff):

1. Syntactically – and this is essential – conversion enables a lexical unit to function “beyond the limits of its word-class, which also involves change of word class“ (Balteiro 2007b: 34).
2. On a morphological level, the original lexical unit is not formally modified. However, cases of slight alterations, such as shift of stress or vowel reduction are treated as a subtype of conversion (Balteiro 2007b: 35).
3. Semantically, a change from one conversion element to the other has to be observable (ibid).
4. The derived word has to aim at filling a lexical gap in the target language and at reaching a “status equal to that of those made by other derivational patterns“ (Duszak 1980: 69 in Balteiro 2007: 36). Therefore, conversions have to exceed the level and status of occasionalisms, which only serve an immediate purpose.

2.1.2.3. Intermediate Position

Very rarely, an intermediate concept between zero-derivation and conversion, predominantly supported by Jan Don (1993), can be found in the literature. Advocates of this theory make the assertion that conversion is a word formation process

in which the semantic/morphosemantic process is left phonologically unexpressed. In this sense, the explanation is close to conversion. However, Don also analyses the process as a result of affixation at the morphosyntactic or morphosemantic level but with no realisation at the morphophonological level. Hence, in this sense, it is similar to zero-derivation (Balteiro 2007b: 21).

2.1.2.4. Chapter Summary

Summing up this section, it can be said that the phenomenon of conversion (or zero-derivation) accounts for many controversies among linguists. Whereas some scholars do not see a relationship between the involved lexical items at all, others claim that it is a semantic or syntactic phenomenon rather than a derivational process. The majority of scholars, however, agree that conversion should be understood as belonging to derivational morphology. Yet, even within the derivational framework, the discussion continues as the linguistic community is in disagreement over whether or not one should treat this word formation phenomenon as zero-derivation or conversion.

In my opinion, many scholars convincingly argue against a zero-morpheme in derivational morphology. Therefore, this paper classifies this linguistic phenomenon as conversion and views semantic and syntactic alterations without morphological modifications of the base as its key features. Having established a theoretical framework allows to now focus on different types of conversions and to delineate conversion further, demarcating it from other related phenomena.

2.2. Different Types of Conversion

This chapter seeks to analyze different phenomena which are sometimes (wrongfully) treated as instances of conversions. In order to acquire the necessary tools to analyze different types of conversions, this section will first explain the concepts of total and

partial conversion. Subsequently, conversions between different word classes and marginal cases of conversion will be examined.

2.2.1. Conversion to a Different Word Class

Within conversion to a different word class, the two categories ‘partial conversion’ and ‘total conversions’ can be distinguished. The former is used to describe instances where a lexical unit

acquires functions prototypical of another word class [...] but this is not accompanied by a change in its morphological characteristics. [...] [T]he word presents syntactic characteristics typical of *one* word-class while, morphologically and semantically, its features are prototypical of *another* part of speech (Balteiro 2007b: 40).

The core category of this type are conversions from adjectives to nouns.

In the case of ‘total conversion’ *all* the functions typical for the new word class are acquired and therefore the morphological marks are also adapted to the new word class. The major types of total conversion are the following: $N \rightarrow V$; $V \rightarrow N$ and $Adj \rightarrow V$ (Balteiro 2007b: 47f). However, there are also minor types of total conversions such as adverb to noun (e.g. *ups and downs*), particle to noun (e.g. *buts*), phrase/sentence to noun (e.g. “*I don’t knows*”), adverb to verb (e.g. *near, down*), preposition to verb (e.g. *up, off*), interjection to verb (e.g. *wow*), phrase/sentence to verb (e.g. “*What’s your job*“-*ing*), or verb to adjective (e.g. *fallen*²) (Balteiro 2007a: 107ff).

2.2.1.1. Adjective $\rightarrow$ Noun³

Adjective to noun conversions in English can be divided into two categories. The first group is dominated by examples like *the wealthy* or *the poor*; the second by cases like *facial* or *musical* (Balteiro 2007b: 41ff).

² Whether or not this category should be included as total conversion remains questionable as this type of conversion significantly differs from core cases of conversions as in this case, an inflected form of the verb, rather than its base, is converted to an adjective (Bauer & Huddleston 2002: 1644). However, there seems to be semantic and syntactic evidence to support its inclusion in the field of conversion (Balteiro 2007a: 107ff).

³ For the time being, the stated directionality of these conversion examples remains unquestioned. A detailed investigation on how to establish directionality follows in subchapter 6.

In the former category, the adjectives are syntactically in a position which is usually reserved for nouns. Nevertheless, the adjectives do not take noun inflections (**the wealthies*, **wealthy's*) and show characteristics typical for adjectives, such as gradation (e.g. *the wealthier*, *the wealthiest*) (Quirk et al. 1985: 1559) or the possibility to be modified by adverbs (*the comparatively poor*) (Balteiro 2007b: 42).

As this kind of conversion fulfills some, but not all the conversion criteria, it is usually considered as partial conversion. Quirk et al. (1985: 1559), however, stress that these cases should not be considered as conversions at all but should be treated “in purely syntactic terms, as ‘adjective functioning as head of noun phrase’” (ibid). Furthermore, Balteiro (2007b: 41f) claims that not the process of conversion causes these phenomenon, but the elision of the head noun. Therefore, she argues that cases like these should be classified as instances of ellipses rather than as conversions (ibid).

In the second adjective to noun category e.g. (a) *facial* (operation); (a) *musical* (comedy), the adjectives can appear with nominal inflections (*facials*, *musical's*) and lose their characteristics as adjectives, i.e. no gradation or modifications with adverbs are possible any longer (Balteiro 2007b: 43f). The resulting nouns of this word formation process frequently denote persons (*local*, *royal*), colors (*a dark shade of brown*) or specialized meanings (*white*: ‘white part of an egg’, ‘person with white skin’, etc.). Usually, the omitted nouns are further understood in the interpretation of the words, making it relatively easy to predict their meaning. However, this kind of conversion can sometimes also cause ambiguity (e.g. *comic*: *comic book* or *comedian?*, *regular*: *customer* or *soldier?*) (Bauer & Huddleston 2002: 1642).

Whereas many scholars consider these and similar examples as total conversion cases, Balteiro (2007b: 43) argues that this category should not be categorized as belonging to conversion as it only illustrates the phenomenon of shortening. Nevertheless, she admits that “it is sometimes quite difficult to determine where the process of ellipsis or shortening ends and that of conversion begins” (2007b: 44).

2.2.1.2. Noun → Adjective

Throughout the history of the English language, one can sometimes encounter genuine instances of denominal adjective conversions such as *rose* or *orange*. However, this pattern is hardly productive (Bauer & Huddleston 2002: 1644). Whereas these rare examples seem to be true conversion cases, another kind of noun to adjective conversion, such as the first elements in *door handle* or *stone wall*, exists. In these cases, nouns are found in a position typical for adjectives, i.e. they are modifying other nouns. To account for these occurrences, there are various different explanations in the literature (Balteiro: 2007b: 44). *Webster's New International Dictionary*, for instance, categorizes these cases as “n(oun) often attrib(utive)” and Bauer (1983: 228) states that whether or not they should be considered as conversions depends heavily on one’s definition of adjectives as “[f]or some scholars it appears to be the case that the use of an element in attributive position is sufficient for that element to be classified as an adjective” (ibid).

Since there seem to be different definitions for the word class of adjectives, some linguists have defined criteria to examine whether a denominal adjective conversion has taken place. Bauer and Huddleston (2002: 1643), for instance, suggest that conversion can only be assumed if it is possible to show that the derived adjective “has become gradable and takes the distinctive degree modifiers that are found with adjectives but not nouns, notably *very* and *too*” (ibid). Therefore, this analysis suggests including cases like *fun* (e.g. *a very fun person*) or *Oxbridge* (e.g. *Her accent was very Oxbridge, too*) as conversions but excluding cases like *stone wall* (e.g. **a very stone wall*) or *door handle* (e.g. **The handle is very door, too*). The fact that many examples of apparent noun to adjective conversions should be excluded from the category of conversion is further supported by Adams (2001: 20), who uses synonymous examples like *coast road* - *coastal road* or *herb tea* - *herbal tea* to substantiate this claim.

2.2.1.3. Noun → Verb

Denominal verb conversions such as *air*_(N) → *air*_(V) or *message*_(N) → *message*_(V) are generally recognized as conversions as they fulfill the following criteria: Morphologically, inflectional properties indicate that a complete shift has taken place.

Syntactically, syntagmatic and paradigmatic dimensions of the converted unit are impacted and semantically, the meaning of the resulting verb is strongly linked to its base noun (Balteiro 2007b: 48).

The majority of denominal verbs are derived from simple bases, however some examples with derivative bases can be found as well (e.g. *action*, *stretcher*). Furthermore, the fairly big number of compound nouns converted to compound verbs (e.g. *blacklist*, *network*) account for a large part of all compound verbs in the English language (Bauer & Huddleston 2002: 1642).

The main sources for denominal verbs are instrumental nouns (*knife*, *hammer*), body parts (*elbow*, *knee*), or individuals (*butcher*, *father*) but also base nouns for the corresponding verb meanings of ‘applying something’ (*grease*, *sugar*) or ‘removing something’ (*shell*, *skin*) can be found (Bauer & Huddleston 2002: 1642). Additionally, sometimes denominal verb conversions can bear different meanings in varying contexts. For instance, *dusting the cake pan* means adding (flour) dust to the baking utensil, while *dusting the shelves* requires the dust to be removed (Buck 1997: 4).

Finally, diverse bases for denominal verbs are frequently encountered in the English language. Common nouns (e.g. *to X-ray*), names of persons (e.g. *to lord*), and names of animals (e.g. *to kitten*) are particularly common (Zandvoort 1957: 267), but also compound elements (e.g. *teapot*) (Preuss 1962: 100 in Balteiro 2007b: 48) or acronyms (e.g. *to KO*) (Rodrigues Gonzáles in 1987: Balteiro 2007b: 48) can serve as conversion bases.

2.2.1.4. Verb → Noun

Another frequent type of conversions are deverbal nominalizations such as $go_{(V)} \rightarrow go_{(N)}$ or $laugh_{(V)} \rightarrow laugh_{(N)}$. Although this category is widely accepted among linguists, there are some instances where verb to noun conversions seem incomplete. For instance, some deverbal nouns can only be used to express singulars (*a quiet read*, *go for a spin*) (Zandvoort 1957: 266). Furthermore, some structures require the addition of a

semantically empty verb (*take a walk, have a swim*) and no passivization is possible (**A walk will be taken. *A swim is had.*) (Taylor 1989: 212).

Although limitations like these exist, the majority of verb to noun conversions fulfill the conversion criteria and should therefore clearly be subsumed under conversion: Syntactically, verb to noun conversions influence both the syntagmatic and paradigmatic levels (e.g. *Today, I've had two showers*). On a semantic level, meaning alterations between the verb and noun are observable (e.g. *He drank my milk.* vs. *He had a drink of my milk.*) and morphologically, there is no alteration between the base and the derivative (Balteiro 2007b: 49f).

Theoretically, any type of verb can undergo conversion (simple, derived or compound verbs) (Balteiro 2007b: 50). The majority of resulting nouns can be assigned to one of the following categories (Quirk et al. 1985: 1560):

- 1) state (state of mind or of sensation), e.g. *taste, dismay*
- 2) activity or event e.g. *release, laugh*
- 3) object of the verb, e.g. *bet, find*
- 4) subject of the verb, e.g. *cheat, coach*
- 5) instrument of the verb, e.g. *wrench, wrap*
- 6) manner of verbing, e.g. *through, walk*
- 7) place of verb e.g. *turn, retreat.*

2.2.1.5. Adjective → Verb

Adjective to verb conversions tend to be relatively productive and form a generally acknowledged category in linguistics. This is due to the fact that converted verbs can be used in the gerund (*rounding*) and in the past or past participle (*dried*), therefore displaying sufficient verbal characteristics to be categorized as verbs (Balteiro 2007b: 51).

Deadjectival verbs usually either mean 'making adjective' (*muddy*) or 'becoming adjective' (*free*). Sometimes, however, deadjectival verbs also denote that something is done in a specific way described by the corresponding adjective. For instance, *to savage*

someone means ‘to attack them in a savage way’; *to brave the storm* means ‘to endure it bravely’ (Bauer & Huddleston 2002: 1643).

Although these one-word examples are generally accepted as conversions in the literature, it is still questionable if phrasal verbs such as *smooth out* or *calm down*, “derived from an adjective by the addition of a particle“, (Balteiro 2007b: 51) should also be termed conversions (ibid).

2.2.2. Marginal Cases of Conversion

Besides conversion among different word classes, there are also conversion categories, which do not fulfill all key features usually ascribed to the process of conversion. First, there are conversions within a given word class or ‘change of secondary word class’, i.e. cases where a lexical item undergoes “syntactic or semantic alternations [...] but it does not change its lexical category“ (Velasco 2009: 1167) and secondly, there are cases where slight phonological alterations between the conversion input and output take place.

2.2.2.1. Conversions Within the Same Word Class

The core classes of conversions within the same word class are nouns, verbs, and adjectives. Static, dynamic, common, proper, countable and uncountable nouns, for example, can be converted into their respective counterparts (e.g. *small kindnesses*, *a Jeremiah*, *two coffees*), transitive verbs can become intransitive and vice versa (e.g. *We have eaten already*. *March the prisoners!*), non-gradable adjectives can become gradable (e.g. *He is more English than the English*) and finally, static adjectives can become dynamic (*She is being awkward about it*) (Quirk et al. 1985: 1563ff).

Whether or not cases like these are considered as conversions depends on whether a “word-class shift [is viewed] as the essence of the process“ (Velasco 2009: 1167). Since the change of word class is usually considered one of the key features of conversion, a great number of authors exclude conversions within a given word class from the scientific field of conversion, or at the most treat them as a marginal sub-category. To

me this seems reasonable, considering the fact that Bauer (1983: 229) correctly points out that, “given a suitable context, it is possible to use almost any noun in either way“ e.g. *Which John do you mean?* (ibid).

2.2.2.2. Conversions with Slightly Different Pronunciations and/or Stress Patterns

Another fairly small percentage of conversions only partly fulfills the criteria of conversions in terms of the phonological realization, the base and the derivative differ slightly in these cases, either in terms of pronunciation and/or stress patterns. Minor sound changes mostly occur in adjective to verb conversions (e.g. *frequent, moderate, perfect*) and stress changes most frequently in disyllabic N→V or V→N conversions (e.g. *abstract, discount, import*). According to Pavol Štekauer this conversion pattern should be classified as a subgroup of conversion as it is highly unpredictable and its examples therefore have to be added to the dictionary (1996: 55ff; 73ff).

Unlike Štekauer, however, Arun Behera and Bipin Tripathy (2010: 206f) consider such instances as clear examples of conversion and would not segregate these examples from others. Furthermore, Bauer (1983: 229) stresses that in some English varieties the differentiations in terms of stress patterns and/or pronunciation are not being consistently drawn any longer, which evidences that at least in these regions, these cases would become clearer conversions.

Having distinguished the different kinds of conversions (partial vs. total conversion) and the different word classes (and form classes) affected by it, it is now worth turning to the question how conversions enter a language and how widely accepted conversions can be distinguished from so-called nonce-formations.

2.3. Conversion and Nonce-Formation

Although all coinages enter a language as innovations, it is important to acknowledge a difference between conversions and nonce-formations (or occasionalisms). Conversions, on the one hand, are the results of new discoveries, developments, inventions or other aspects of the extra-linguistic reality, and serve to increase the lexical resources of the

language. The fact that they fill a lexical gap ensures their incorporation into and permanent existence in a language (e.g. *facebook*, *google*). Nonce-formations, on the other hand, are coined spontaneously for immediate needs of language users. Unless a real linguistic need is met with the creation of the new words, their existence is usually fairly limited and their usage does not spread beyond the use of a few situations (usually poetry or advertisements) or a small language group (Štekauer 1996: 97f).

Eve Clark and Herbert Clark stress that almost all denominal verbs, which were originally introduced into English as innovations, undergo a “complex historical process we will call idiomatization“ (1979: 804). According to their present-day stages, converted denominal verbs can be placed on the idiomatization scale: What Štekauer calls ‘nonce-formations’, such as *to Wayne* or *to pie* are called ‘Complete Innovations’ in this theory and mark the one end on such a scale, whereas ‘Opaque Idioms’, such as *to boycott* or *to fudge*, mark the other. ‘Near Innovations’ (*to houseguest*, *to chopstick*) ‘Half-Assimilated Transparent Idioms’ (*to key in*, *to satellite*), ‘Assimilated Transparent Idioms’ (*to bicycle*, *to truck*) and ‘Partly Specialized Idioms’ (*to smoke a pipe*, *to park a car*) denote the stepping stones in between (Clark & Clark 1979: 805).

Naturally, not all innovations pass all stages on this scale, however, many denominal verbs such as *land on a lake* or *park in a garage* have undergone this process to an extent where, like “most [other] common denominal verbs [which] seem to be full or partial idioms“ (Clark & Clark 1979:781), their meaning in relation to the base is not self-explanatory anymore and is therefore hardly predictable (ibid).

Although this classification scale proves to be helpful to evaluate conversion stages in general, researchers such as Štekauer (1996: 99) doubt that denominal verbs are mostly used idiomatically:

If the idiomatization means the loss of semantic connections between the motivating and the motivated units, then the position of Clark-Clark is untenable: there are hundreds of common denominal verbs in English which maintain their close semantic connection to their motivating noun (ibid).

Moreover, Štekauer (1996: 99) highlights that there are specific linguistic processes which cause semantic links to fade, however, converted units do not seem more susceptible to these processes than other derived lexical units. Nevertheless, he also admits that one area of denominal verbs is more prone to change over time, namely denominal verbs resulting from proper names. Meaning alterations of such denominal verbs usually happen fairly quickly as the specific knowledge about a person is “usually confined to a limited number of those in the know, or in the case of widely known personalities, to a limited time span“ (ibid).

2.4. Natural Morphology

Having established many key features of conversion, this section now aims at placing conversion in the framework of natural morphology. It will therefore focus on the first sub-theory of natural morphology, namely on universal preferences and in particular on its subsections of transparency, iconicity and productivity.

Stela Manova and Wolfgang U. Dressler (2005: 71f) claim that conversion should be seen as a “morphological technique parallel to affixation“ (2005: 71). Unlike more natural patterns of affixation, however, in conversion, the base remains unaltered morphotactically, although morphosemantically, additional aspects of meaning are added to the resulting lexical item. The fact that this morphosemantic change is not accompanied by a morphotactic change causes conversions to be less natural than other word formation processes. Accordingly, it is not surprising that “[n]o instantiation of iconicity is left in the case of conversion“ (Dressler 1987: 103). On a naturalness scale, non-iconic conversions are thus usually placed between the most natural affixations and the least natural anti-iconic subtractions (1987: 104).

Another important parameter of natural morphology is the productivity of word formation processes. Conversion is considerably productive in English due to the fact that there are seemingly no morphological rules restricting specific forms from undergoing conversion (Bauer 1983: 226). The only constraint to the process of conversion that has (so far) been acknowledged arises due to blocking. Derived nouns, for instance, will hardly serve as bases for conversions, in particular to verbs, as the

derivative would have the same meaning as the already existing verbs. For instance, the nouns *arrival* or *improvement* are blocked from noun to verb conversions as the verbs *arrive* or *improve* already exist (Marchand 1969: 372f). However, whenever blocking is not relevant, even derived nouns can serve as input for the conversion process, as is illustrated in the following example: $sign_{(N)} \rightarrow sign_{(V)} \rightarrow signal_{(N)} \rightarrow signal_{(V)}$ (Bauer 1983: 226f).

The fact that conversion is so productive in English is remarkable, since usually, “more natural WFRs [i.e. word formation rules] should be more productive than less natural WFRs” (Dressler 1987: 108). Although, the theory of natural morphology cannot sufficiently account for the considerable productivity of this linguistic phenomenon in English, it has to be noted that conversions are not as common in other languages and therefore, English can merely be seen as an exception to the rule in this respect (Dressler 1987: 105).

Another language in which conversion proves to be a relatively productive word formation process is German (Boase-Beier & Lodge 2003: 71). The following chapter will therefore briefly discuss some of the key features of this phenomenon in the German language.

2.5. German Conversion

In the scientific literature, conversion in German accounts for almost as many controversies as conversion in English. Debates start with similar questions of whether this process should be defined as zero-derivation or conversion and end at various different definitions, stressing varying key features and disagreeing on how to establish the directionality of the conversion process. Nevertheless, most scholars agree that at least nominalizations and verbalizations can be counted as conversions in German (Wiese 2002: 48).

2.5.1. Nominalization

In German, nominalizations are by far most important and most productive kind of conversion. Nominalizations can result from several different word classes as bases, the most common being verbal. Some of the numerous examples that exist for deverbal nouns are *kochen* → *das Kochen*, or *schießen* → *das Schießen*. Nominalization can, however, also have adjectival bases such as *klug* → *der/die/das Kluge*, *jugendlich* → *der/die/das Jugendliche* or *blau* → *das Blau*. Interestingly, deverbal nouns exist in all three genders (i.e. masculine, feminine and neuter) in German, whereas adjectives can only serve as bases for derived nouns in the neuter gender (Wiese 2002: 48f). Some minor bases for nominalization are pronouns (*das Wir*), adverbs (*das Danach*), prepositions (*mein Gegenüber*), numerals (*die Dreizehn*) or interjections (*das Pfui*) (Lohde 2006: 45ff).

Similarly to English, German also comprises a marginal subtype of conversion, which is frequently called ‘transposition’ or ‘syntactic conversion’. Accounting for endless examples, this subtype is usually examined independently from regular conversions, since in this case, entire word classes rather than individual words change their category (e.g. *schauen* → *das Schauen* or *gut* → *der/die/das Gute*). For this reason, it is also mostly seen as a syntactic rather than a morphological process (Wiese 2002: 49f).

2.5.2. Verbalization

Verbalizations in German are almost as productive as nominalizations, with usually nouns or adjectives serving as the input categories. Some of the numerous examples are the following noun to verb and adjective to verb conversions, respectively: *der Hagel* → *hageln*, *die Bremse* → *bremsen* (Lohde 2006: 48) and *grün* → *grün(en)*, *weit* → *weit(en)* (Wiese 2002: 48).

Moreover, the most common denominal verbs belong to one of the following categories: verbs with a strong relation to their base (*hamstern*), actions that use the object described in the base (*angeln*), actions in a certain role mentioned in the base (*schreinern*), and verbs relating to a specific object (*zahnen*, *erden*) (Eichinger 2000: 171).

Generally, it can thus be stated that parallel to English conversions, nominalizations and verbalizations are the most productive and therefore also most widely accepted types of conversions in German. Although there are other, less productive types of conversion in German, like their English counterparts, their nature seems rather controversial (Eichinger 2000: 167).

In all previous chapters, examples were provided with the assumption that the directionality of the conversion pairs could easily be established, i.e. that it was simple to determine which of the conversion pair members was the base and which the derivative. Furthermore, all examples were assumed to have derived in the process of conversions. However, the fact that establishing a direction can be an elaborate and difficult process and furthermore, that not all seemingly converted items actually came into being through the process of conversion, will be exemplified in the following chapter.

2.6. Directionality of Conversions

Although some scholars, such as Štekauer (1996: 127) or Quirk et al. (1985: 1558), do not consider the establishing of directionality, i.e. the investigation of which of the two conversion pair members is the base and which the derivative, to be crucial to this linguistic field, most linguists agree that it is possible and scientifically valuable to establish directionality of conversion items (Balteiro 2007b: 89). However, the question of which criteria can most accurately account for the derivational relationship between the base and the derivative remains unsolved. The proposed sets of criteria can be divided into two categories: synchronic criteria, on the one hand, diachronic criteria on the other (ibid).

One of the best-known of these sets of principles was proposed by Marchand (1964) in his article *A Set of Criteria for the Establishing of Derivational Relationship between Words Unmarked by Derivational Morphemes*. Therefore, these criteria will be presented and examined before other well-known directionality scales are introduced.

2.6.1. Marchand's Criteria for Establishing Directionality

Marchand (1964: 10-19) defines a set of criteria for synchronically establishing directionality of conversion pairs. He divides his criteria into two categories: criteria of content and criteria related to the lexical item's external form.

2.6.1.1. Content Criteria

Marchand (1964: 12-16) distinguishes between the following four content-related criteria: semantic dependence, restriction of usage, semantic pattern and external form.

a) Semantic dependence: "The word that for its analysis is dependent on the content of the other pair member is necessarily the derivative" (Marchand 1964: 12). Marchand uses the examples of *saw*_(N/V) and *whistle*_(N/V) to exemplify this criterion. He claims that one needs a saw in order to be able to cut something with a saw, therefore *saw*_(N) must be the base and *saw*_(V) the derivative. Using another example, he argues that it is possible to whistle without the instrument of a whistle, as our body parts allow us to do so. Therefore, according to Marchand, *whistle*_(V) must be the base, and *whistle*_(N) the derivative (ibid).

b) Restriction of Usage: "If one word has a smaller range of usage than its pair member, it must be considered a derivative" (Marchand 1964: 13). This criterion illustrates that the base of conversion pairs is always the word which is more widely accepted (*author*_(N) → *author*_(V)), more frequent (*father*_(N) → *father*_(V)), less restricted (*neighbor*_(N) → *neighbor*_(V)), more colloquial (*hunger*_(N) → *hunger*_(V)) or not only used as "a half serious word" (ibid).

c) Semantic range: "Of two homophonous words exhibiting similar sets of semantic features the one with the smaller field of reference is the derivative, [...] the more specific word is the derivative" (Marchand 1964: 14). Since, for example, *butcher*_(V) has a more narrow meaning than *butcher*_(N), the verb must be seen as the derivative and the noun as the base (ibid).

d) Semantic pattern: “Certain words have characteristic meanings which mark them as derivatives“ (Marchand 1964: 15). This criterion can be seen as strongly linked to the criteria semantic dependence and semantic range. Relying on their conversion counterparts for their definition, *baby*_(V) and *cheat*_(N), for instance, carry such ‘characteristic meanings’ and therefore they must be derivatives (ibid).

Before moving to Marchand’s (1964) external form-related criteria, it is worth pointing out some difficulties of these content criteria. According to Štekauer (1996: 128-130), the criteria semantic dependence and semantic pattern both focus on extralinguistic reality and could therefore be subsumed under a “criterion of extralinguistic subsequence“ (ibid), meaning that the conversion pair member which is secondary to the other has to be considered as the derivative (ibid).

Furthermore, Marchand’s criterion of semantic range does not account for the fact that the semantic aspects of the derivative do not necessarily have to be more restricted than those of the base but that the conversion process might also add additional senses to it. If this criterion were strictly followed, instrumental verbs, for instance, would contradict the first, and for Marchand most important, criterion of semantic dependence (Štekauer 1996: 130).

An additional point of criticism lies in the fact that these criteria convey apparently clear relations where there are none. In cases like *program*_(N/V) or *link*_(N/V), for example, one could easily argue for both directions and even the analysis of his own example of *saw*_(N/V) is not as obvious as projected. Furthermore, the criterion of restriction of usage and its sub-criteria can be considered as relatively vague. Finally, their dependence on various factors seems to “make them very doubtful, or better, inapplicable criteria“ (Štekauer 1996: 129).

2.6.1.2. External Form-Related Criteria

Besides content criteria, Marchand (1964: 15-18) also formulates three external form-related criteria: phonetic shape, morphologic type and stress.

a) Phonetic shape: “A certain phonetic shape may put a word in a definite word class“ (Marchand 1964: 16). Words endings in *-ation -action -ension -ition* or *-otion*, when pronounced as [ʃən], as well as, *-[mənt]*, *-[tʃə(r)]* or *-[tʃu(r)]* and *-ade [ed]*, indicate a membership in the noun category. Therefore, verbs with these phonetic endings can be categorized as derived from nouns (e.g. *station_(N) → station_(V)* or *audition_(N) → audition_(V)*) (ibid).

b) Morphologic type: “Morphologic type is indicative of the primary or derived character of composite words“ (Marchand 1964: 16). By examining the morphological structure of a lexical item, one can thus sometimes identify the derivational patterns (e.g. *blacklist_(N) → blacklist_(V)*; *sideslip_(N) → sideslip_(V)*) (ibid).

c) Stress: “With composites, stress is sometimes indicative of [the] derivational relationship between a substantive and a verb“ (Marchand 1964: 17). The stress patterns of lexical items can thus help to establish directionality, however, they have to be neglected in those cases where “content criteria preclude such an analysis“ (ibid).

The biggest difficulty of the criteria of external form appears to be their limited applicability. For the criterion of phonetic shape, Marchand (1964: 16) only lists some of the common substantive endings, however, neglects others like *-age*. Furthermore, he only focuses on denominal verbs, while not considering typical verb endings. Thus, Marchand completely disregards both deverbal nouns as well as other conversion bases (Balteiro 2007b: 156). Further, the criteria of morphological type can only be applied when composites, “understood as compounds“, (Balteiro 2007b: 159) are concerned.

Finally, the application of the criterion of stress is first only an indication and second only applicable unless content criteria account for a different analysis (Štekauer 1996: 132). Therefore, the utility of this criterion in the analysis is rather doubtful.

2.6.2. Another Commonly Used Synchronic Criterion

2.6.2.1. Criterion of Relative Markedness

Apart from Marchand's criteria, there is another synchronic criterion which is frequently used to establish directionality of conversion pairs. This principle of relative markedness states that "a typologically marked function of a word would always be taken to be derived from the corresponding unmarked function of that word" (Sanders 1988: 172). In the example of the English conversion pair *bottle*_(NV), this analysis would suggest that the verb is more marked than its nominal counterpart, as most languages have a corresponding word for the noun but none for the verb. Therefore, the verb *bottle* must be derived from the base noun (ibid).

2.6.3. Diachronic Criteria

Besides this additional synchronic criterion, some scholars further advise the use of diachronic data. This does not seem surprising, considering the rather striking number of problems of Marchand's merely synchronic criteria. Štekauer (1996: 133) argues that

diachronic data [...] are conclusive for the determination of the direction of conversion and [...] for acknowledging the conversion nature [...] of homonymous pairs of naming units.

Balteiro (2007b: 98; 105) also proposes using diachronic data, namely the date of first record of the individual conversion pair members, as well as the analysis of etymological data.

The criterion of date of first record seems rather striking in some cases, such as *go*_(V), which was first recorded in 825, whereas the nominal counterpart was only recorded about nine hundred years later. However, recorded dates can sometimes also be fairly close (*attempt*_(V), recorded in 1513, *attempt*_(N) in 1534) or even identical (*water*_(NV), recorded in 897). Additionally, dates might have been wrongly recorded or some words could have existed long before their first records, which makes this parameter only partly reliable (Balteiro 2007b: 107, 205ff).

The analysis of etymological data is given particular importance in Balteiro's (2007b: 98) analysis, as she claims that it is this criterion which is "fundamental for the

identification of conversion“ (ibid). Only if this criterion is applied, one can exclude apparent present-day conversions, which resulted from other linguistic processes, such as borrowing or shortening. The so-called ‘diachronic filter’ is therefore necessary in the beginning of the analysis, as it indicates which examples should be analyzed under the heading of true conversion and which ones need to be excluded from this category (Balteiro 2007b: 66f; 206).

In apparent conversion cases like *love*_(NV), for instance, the “identical orthography of the pairs [...] resulted from a historical convergence of two, originally independent, forms“ (Štekauer 1996: 93). Cases like these cannot be considered as conversions since, “as the word conversion itself indicates, [...] a turn/change/transformation or reorganisation of something into something else“ (Balteiro 2007b: 84), is an absolutely fundamental characteristic for the recognition as conversion (ibid).

2.7. Summary Conversion

Summing up, this section of this diploma thesis aimed at reaching two main objectives: First, it sought to establish an ample definition for this complex word formation process known as conversion or zero-derivation and second, it attempted to find criteria for the establishment of directionality.

In order to achieve the first aim, an overview of the current state of research was provided, especially focusing on a brief introduction of some marginal opinions before the dominant understanding of conversion as a derivational process was examined. A detailed analysis revealed that within derivational morphology, the opinions vary as well, mostly between those who view this word formation process as covert affixation with a zero-morpheme and those who argue against any kind of affixation. Due to numerous currently unresolvable difficulties for a zero-derivational reading, I chose to argue in line with the derivation without affixation theory.

Subsequently, different types of conversion were examined and conversions between different word classes and different form classes were analyzed, with due regard to the previously established theoretical framework. This detailed examination revealed that it

is often doubtful if certain phenomena should be considered as (marginal cases of) conversions or if they should not be subsumed under the heading of conversion at all. Thereafter, the processes and possible stages of development of conversions were contrasted with those of nonce-formations and rounding up the definition of conversion, the linguistic phenomenon was analyzed in the context of natural morphology before briefly introducing conversion in German.

The second part of this section focused on finding suitable criteria to establish directionality of conversion pairs, which proved to be a considerably difficult task. First, the probably best-known synchronic criteria for establishing directionality by Marchand's (1964) were introduced before they were critically examined and additional synchronic, as well as diachronic, criteria were proposed.

In the fourth part of this diploma thesis an empirical study will be conducted, focusing on two different areas: First, the directionality criteria as introduced in the theoretical part of this diploma thesis will be applied to a dataset of recent conversions between nouns and verbs in American English, before systematically analyzing the same data set. In order to pursue this corpus-based analysis, however, it seems necessary to provide a brief description of relevant considerations in this regard. Therefore, the third part of this diploma thesis briefly introduces the scientific field of corpus linguistics.

3. Corpus Linguistics

While the second part of this diploma thesis has established a framework for the investigation of the linguistic phenomenon of conversion, this chapter will focus on the methodological approach that will be applied in the empirical analysis, namely corpus linguistics. Therefore, it seems necessary to first define the concept of a corpus and establish its key features before the process of annotation, as well as qualitative and quantitative research strands, will be introduced. Finally, a brief overview of the potential development of this linguistic field will be provided.

3.1. What is a Corpus?

“A corpus is a collection of naturally-occurring language text, chosen to characterize a state or variety of a language“ (Sinclair 1991:171).

“On the face of it, a computer corpus is an unexciting phenomenon: a helluva lot of text, stored on a computer“ (Leech 1992: 106).

“Corpus (plural: corpora) – a collection of texts designed for linguistic analysis, normally held in electronic form. [...] Corpora are often designed to be representative of a language or genre“ (Anderson & Corbett 2009: 194).

These different definitions make apparent the continuing disagreement among researchers about a common definition of corpora and their key features. Nevertheless, in the field of corpus linguistics, scholars typically agree upon the following essential aspects in the construction of linguistic corpora:

- “sampling and representativeness
- finite size
- machine-readable form
- a standard reference“ (McEnery & Wilson 2001: 29)

3.1.1. Sampling and Representativeness

Rather than analyzing individual texts, linguists usually aim at examining whole language varieties. To this end, two possible paths can be pursued: either, all utterances in a language variety can be gathered or sample data can be collected. Since the first option seems to be impossible – at least for living languages – typically the construction

of databases, which contain samples of the examined language variety, is necessary (McEnery & Wilson 2001: 29f).

Research interests are usually not limited to the data set of the corpus but aim at allowing for generalizations to be made concerning the whole language variety under examination. Therefore, it is crucial for a corpus to be sampled as representatively as possible, including different genres, text types, authors, etc. of the language variety (Anderson & Corbett 2009: 5f). Such representative sampling ensures that the corpus can accurately portray a language variety, its tendencies and proportions (McEnery & Wilson 2001: 30).

To ensure representativeness of a language variety, corpora should “cover proportionally both written and spoken language“ (Xiao 2008). However, due to additional financial and temporal efforts in the collection of spoken data, “most existing national corpora and those under construction consist only of written data“ (ibid). Thus, many corpora – in particular electronic ones – are only representative of the written language rather than the language variety as a whole.

3.1.2. Finite Size

Additionally to the criterion of representativeness, the corpus is usually characterized by having a finite size. Although there are a number of monitor corpora, i.e. corpora which are specifically designed to include up-to-date language and therefore frequently add to their language samples, the majority of linguistic corpora consist of several thousand to million words and are closed to additional sources. While monitor corpora allow for the investigation of very recent language changes, one of the main advantages of relying on a finite corpus lies in its better applicability for quantitative analyses (McEnery & Wilson 2001: 30f).

3.1.3. Machine-Readability

Nowadays, conducting research in the field of corpus linguistics typically implies working with a corpus which is machine-readable (McEnery & Wilson 2001: 31). The use of computers has become commonplace in this research field, although this was not

self-evident in previous decades. The analysis of textual corpora “is as old as linguistic enquiry” (Tognini-Bonelli 2001: 50), the utilization of computers in the field, however, constitutes a relatively recent phenomenon.

With several considerable advantages to manually analyzing textual data, it is not surprising that working with computers has become the standard. The most obvious advantages are the expedited search speed, the enlarged storage capacity as well as the increased reliability of the analysis. Extensive computer searches can now be conducted in a fraction of the time a similar manual investigations would have taken half a century ago (Leech 1992: 106). Computers further allow for the storage and analysis of far larger compilations of data than would have been possible manually, facilitating the pursuit of large-scale studies which would have been “unfeasible using traditional analytical approaches” (Reppen, Fitzmaurice & Biber 2002: VIII). Finally, technological advancements can further assist reliable and consistent corpus investigations as they “don’t change their mind or become tired during an analysis” (Biber, Conrad & Reppen 1998: 4).

Although computers have clearly made the corpus linguists’ lives easier in these regards, they have also increased the pressure on both corpus researchers as well as the whole linguistic discipline. The raised expectations concerning the findings of corpus studies can be problematic since they delude the researcher into overgeneralizing their findings “if only to fulfill the expectations for what is ‘now possible’ with these vast amounts of searchable text” (Curzan & Palmer 2006: 17).

3.1.4. Standard Reference

Besides the utilization of computers in the field of corpus linguistics, another often assumed characteristic feature of corpora is their utilization as standard references for the represented language varieties. Whenever a linguistic corpus serves as a standard reference, they become “a yardstick by which successive studies may be measured” (McEnery & Wilson 2001: 32), presupposing that similar methodologies are applied and that the corpora are accessible to other researchers (ibid.).

3.1.5. Authenticity

Although McEnery and Wilson do not list this component as a key feature of corpora, many researchers agree that corpora should additionally aim at being authentic. Therefore, all data in a corpus should be “taken from genuine communications of people going about their normal business” (Tognini-Bonelli 2001: 55), unless the description of a specific corpus suggests otherwise. In other words, corpus texts “should be selected as the sorts of documents that people are writing and reading, and the sorts of conversations they are having” (Sinclair 2005).

Nevertheless, even when authentic texts are chosen, one cannot disregard that the collected texts lack their original context and lose part of their authenticity as they

become part of one indistinguishable whole. What was a blaring 72-point font newspaper headline appears in the same size and typeface as a medicine instructions leaflet; a memo that was originally typed, and advertisement copy that was designed to appear in an arty, colourful font, are now indistinguishable. And more importantly, words spoken from the mouth of a feisty London hairdresser are identical in appearance with words from a dull legal document (Mishan 2004: 220).

Furthermore, another difficulty arises concerning the authenticity of corpus data. If large corpora, such as the Internet, are investigated, “we usually do not know much about the authors’ age, social class or gender; most of the time we do not even know if they are native speakers” (Lindquist 2009: 190) of a certain language variety. This seems to be a problem particularly concerning English corpora as in this language variety “the number of non-native speakers exceeds the number of native speakers” (Acar 2006: 499), making it likely even for so-called native speaker corpora to include texts of non-native speakers.

Finally, different ways of delimiting texts and text units have to be taken into consideration. While some corpora such as the *Brown Corpus* indicate “definite and specific delimitation of the language texts included, so that scholars in using the Corpus may have a precise notion of the composition of the material” (Kučera & Francis 1967: xvii), other corpora lack this feature, making it difficult to receive information of this kind.

3.2. Annotation

Besides the above mentioned key characteristics of corpora, another essential distinction in corpus designs needs to be considered. Essentially, there are two kinds of corpora: unannotated ones, “i.e. in their existing raw states of plain text“ (McEnery & Wilson 2001: 32) and annotated ones, i.e. corpora “enhanced with various types of linguistic information“ (ibid.). Annotated corpora explicitly state linguistic information which is only implicitly contained in unannotated texts, thereby making the corpus searches considerably faster, yet also dependent on accurate annotation processes (McEnery & Wilson 2001: 32f).

Annotations may provide textual information (text type, date or year of publication, language variety, etc.), information within the text (e.g. orthographical information) and linguistic information, usually also known as ‘tags’ (McEnery & Wilson 2001: 39; 42; 46). Among linguistic tags, the most common type is Part-of-speech (POS) tagging, in which a POS-code is allocated to every lexical unit in the corpus. In the linguistic field of conversions, POS tags are particularly important as they allow for the disambiguation of homographic word pairs, such as *kiss*_(V) and *kiss*_(N), and make it possible to filter conversion pairs from a corpus (McEnery & Wilson 2001: 46).

The popularity of POS tags partially lies in the fact that computers can carry out these annotations highly accurately. If linguistic information about the language variety, such as typical suffixes for different parts of speech or characteristic syntax information, is encoded, POS software can correctly predict the correct part of speech in most cases (McEnery & Wilson 2001: 50).

Although tagging software has become increasingly accurate, it must be taken into account that a 100% success rate has not been achieved yet. Due to the intricacy of natural languages, an absolute accuracy of tags seems unobtainable. Therefore, being aware of annotation errors, as well as correcting mislabeled tags, remains essential (Biber et al. 1998: 262). After all, annotating a corpus means “adding interpretative linguistic information to a corpus“ (Leech 2005), be it via computer or manually.

3.3. Quantitative and Qualitative Analyses

In principle, there are two strands of corpus research: quantitative analysis and qualitative analysis. While the former aims at quantifying linguistic phenomena and constructing statistical analyses, the latter pursues the goal of interpreting corpus data, identifying slight variations, as well as similarities, of language patterns, and providing examples of and explanations for linguistic phenomena (McEnery & Wilson 2001: 76).

Quantitative analyses are often valuable and necessary for the examination of the frequency of language patterns. In addition, quantitative analyses allow the researcher to discern patterns which might have been added to the corpus by chance. To this end, typically, frequency lists of the corpora are constructed. Nevertheless, corpus linguistics aims not only at providing numerical data but also at explaining why some linguistic patterns are more frequent than others (McEnery & Wilson 2001: 77). In other words,

[i]f something is recurrent in texts, it is there for a reason. However, it cannot be expected that the reason may be discovered in a simple calculation. The distribution of words in texts is far more complex than a mathematical formula can perceive (Danielsson 2003: 114).

Therefore, it should be acknowledged that quantitative and qualitative analyses can be seen as complementary rather than preclusive methods, which can provide their best, most reliable results if they are combined in empirical studies (McEnery & Wilson 2001: 77).

Regardless of which research strand is pursued, however, it needs to be taken into account that linguistic analyses are always, to a certain degree, influenced by the subjective perspective of the researcher. While it is undisputed that qualitative analyses of corpus data at least partly rely on researchers' intuitions, it is far less acknowledged that collecting corpus data, constructing searches, as well as quantitative analyses, are also intertwined with the linguist's intuitions and interpretations. Computer-based findings, for instance, typically have to be manually examined and sorted, particularly in the field of historical linguistics, as computer-generated outcomes tend not to be perfectly reliable (yet). Through hand-sorting the corpus results, possible 'outliers', as

well as other corpus difficulties (such as incorrect annotations), can be detected, and quantity counts have to be adjusted accordingly (Curzan & Palmer 2006: 21-24).

Additionally, the common distinction between metalinguistic data versus mostly linguistic data of corpora as sources for linguistic analysis should be rejected and replaced by the assumption that these two areas support each other. Both data types are crucial for language investigations; nevertheless, both are also partly unreliable. Therefore, metalinguistic data should be carefully examined and potentially falsified through corpus data analysis and, similarly, corpus data sources should be considered with caution (Algeo 2006: 2f).

3.4. The Future of Corpus Linguistics

Since technology constantly changes and new research questions can be investigated through advanced software and research strategies, it is plausible that corpus linguistics will continue to undergo fundamental transformations in the following decades. Most likely, corpus linguistics will account for many surprises and groundbreaking discoveries in the future and “in doing so, it [will change] our view of what we should do when using language data to explore linguistic hypotheses“ (McEnery & Wilson 2001: 195).

3.5. Summary Corpus Linguistics

Summing up, this chapter has introduced five key features of linguistic corpora: sampling and representativeness, finite size, machine-readability, applicability as a standard reference (McEnery & Wilson 2001: 29), and authenticity (Tognini-Bonelli 2001: 55). Additionally, this section has discussed the notions of annotated vs. unannotated corpora and has further highlighted the ideal combination of quantitative and qualitative analyses. Finally, potential difficulties in this linguistic field and the necessity of treating corpus data with caution have been introduced before providing a short prediction of the future of corpus linguistics.

4. Empirical Research

4.1. Introduction

Having provided a theoretical background of the process of conversions in English, as well as a broad description of the methodological framework of corpus linguistics, this diploma thesis will now engage in the empirical analysis of this linguistic phenomenon. This fourth part aims at establishing directionality for recent conversion pairs in English as well as systematically investigating them. To this end, several research steps will have to be employed.

This chapter is thus structured as follows: First, criteria for the limitation of the empirical data set, as well as the corpus used for the present study, will be described. Next, the necessary research steps for gathering the conversion data will be introduced before problems thereof and accompanying reductions of the data set will be presented. After excluding marginal cases of conversions, the resulting data set will be used for the two major parts of the investigation: the establishing of directionality, as well as the systematic analysis of the conversions pairs. Finally, the findings will be critically discussed.

4.2. Research steps

4.2.1. Defining a Data Set

The linguistic word formation process of conversion is highly productive, particularly in English (Bauer 1983: 226). Therefore, a systematic investigation of all conversions present in the English language was not feasible. For the purpose of this diploma thesis, it was thus necessary to limit the data set under investigation in three ways: in terms of conversion type, linguistic region, as well as timeframe.

There are several categories of conversions in English, however, the majority of conversion types are highly controversial and classified as subtypes of conversion or excluded completely from this linguistic field. Nevertheless, there is strong agreement among linguists that the derivational relationship between noun and verb conversions should be acknowledged. As this conversion category not only constitutes the most

widely accepted but also the most common type of conversion in English (Balteiro 2007b: 48; 50), it was chosen for the present study.

Concerning the English language variety to be investigated, American English was selected. American English has reached the status of “the dominant world variety” (Graddol 1997: 7f), constitutes the largest number of English native speakers, and has established itself as the standard in “non-native countries other perhaps than those of Western Europe” (Algeo 2006: 1). Furthermore, especially in American English, the linguistic process of conversion is highly productive (Soudek 1967: 131-141), supporting the decision of choosing this particular language variety over others.

Additionally to focusing on a specific type of conversion, as well as a specific language variety, the potential data set was limited to recent conversions in English. For the purpose of this analysis, ‘recent’ was defined as during or after World War II, i.e. from the 1940s onwards. This historic event was chosen as it accounted for several global transformations and thereby considerably influenced languages as well.

For these reasons, the data set for the empirical research conducted in this diploma thesis was limited in three ways: Conversions between nouns and verbs in American English were investigated if one or both conversion pair member(s) entered this language variety in the 1940s or later.

4.2.2. Choosing a Corpus

Having decided on a particular data set to form the base of the investigation, an appropriate corpus had to be selected. A suitable corpus for the present study had to fulfill certain criteria:

- 1) It had to be sampled representatively of a language variety,
- 2) contain authentic language,
- 3) allow the selection of all conversion pairs between nouns and verbs
- 4) be POS-tagged.

Finding a corpus, which fulfilled all these criteria proved to be a difficult task. While carefully examining several online corpora, small, usually correctly tagged corpora had to be weighed against bigger corpora, containing considerably more lexical items but at the same time being prone to corpus errors, such as wrong tags.

Biber et al. (1998: 41) stress “the importance of large representative corpora for lexicographic work“. Additionally, this study aims at extracting as many recent conversion pairs as possible from a corpus in order to systematically examine their directionality, as well as their linguistic features. Therefore, the COHA, short for Corpus of Historical American English, (Davies 2010–), i.e. a large and representative, yet not completely reliable corpus proved to be the best choice for this investigation.

The COHA is one of the largest corpora of historical American English, containing about “400 million words of text in more than 100,000 individual texts“ (COHA: Composition of the Corpus). Furthermore, it is well balanced in terms of genre, equally representing fiction, magazine, newspaper and non-fiction categories, as well as in terms of decades, from the 1810s until the 2000s (ibid). Another reason for choosing the COHA corpus over even bigger corpora such as the Internet, was the fact that the COHA consists of texts produced by American English native speakers while other sources often include a high degree of non-native speaker utterances as well (COHA: FAQ/questions).

While the COHA was a suitable corpus for the present study, unfortunately, like other corpora of this size, it could not guarantee absolute accuracy in all regards. The COHA creators point to difficulties in the corpus such as “typos (SO (=50), tlus (=thus), sometimes, etc), words that are incorrectly fused together (whois, cansay), and other problems“ (COHA: N-grams data). Nevertheless, the texts are said to be “on average about 99.85% accurate, resulting in one error about every 500-1000 words“ (ibid).

Another difficulty connected to the usage of the COHA corpus lay in the corpus’ restriction to written English. As “the spoken vocabulary of a language is likely to contain both new words and new senses of old words that are not present in the written

vocabulary“ (Chafe & Danielewicz 1987: 92), the conclusions drawn for written English texts might not hold true for the language as a whole. While these difficulties seemed to be outweighed by the advantages of using this large, representative corpus, they had to be kept in mind during the investigation.

4.2.3. Using a Frequency List

Like the majority of bigger corpora, the COHA did not allow the original texts to be downloaded, due to copyright restrictions. Furthermore, it was impossible to filter N/V conversion pairs through its online mask. Therefore, the downloadable POS-tagged frequency list (Davies 2011) based on the COHA corpus was utilized.

The COHA corpus offered the option of freely downloading case or non-case sensitive, 1-, 2- and 3-n-gram files for academic research. For the purpose of this diploma thesis, the *1-gram non-case sensitive academic COHA word frequency list* (Davies 2011) was downloaded from the COHA homepage. The downloaded frequency list included all individual lexical items which occur at least three times in the COHA corpus. As figure 1 illustrates, the list furthermore provided the lexical items' parts of speech (PoS), and the frequency of occurrences in the decades between 1810 and 2009 (coded 1=1810-1819; 2=1820-1829; 20=2000-2009 etc.).

Figure 1: excerpt of the academic COHA word-frequency list

freq	word-cs	PoS	decade
1	windex	nn1	16
1	windex	nn1	17
2	windex	nn1	18
2	windex	nn1	19
8	windex	nn1	20
2	windex	np1	17
1	windex	np1	18
3	windex	np1	19
7	windex	np1	20
1	windex	vv0	14
3	windex	vv0	20

As previously stated, the present study was interested in recent conversion pairs between nouns and verbs in American English, which first entered this language variety during or after the Second World War. Therefore, all homographic N/V pairs, displaying no or only an insignificant orthographic difference (hyphen or no hyphen) were filtered from the vast data source, if one or both of the conversion pair members first appeared in the corpus between stage 14 (1940-1949) and stage 20 (2000-2009). Accordingly, 3677 potential conversion pairs were filtered from the COHA corpus frequency list.

4.2.4. Cross-Checking the Data Using the Online Mask

The COHA academic frequency list is based on the COHA corpus, which has been classified as not perfectly accurate by the corpus creators (COHA: Composition of the Corpus). Therefore, the 3677 potential conversion pairs, received from the frequency list, were entered into the online mask of the COHA corpus. Thereby, the Key-Word-In-Context (KWIC) search provided context information (e.g. year of appearance, genre etc.), as well as the sentence or text passage for each token.

For each of the 3677 conversion pairs, the verb (e.g. *windex*[v*]*), as well as the noun (e.g. *windex*[n*]*), had to be entered individually, and every token had to be manually screened for tagging or other corpus difficulties. All conversion cases in which the conversion relationship was found to only be a result of wrong tags or other corpus difficulties were excluded from further analysis.

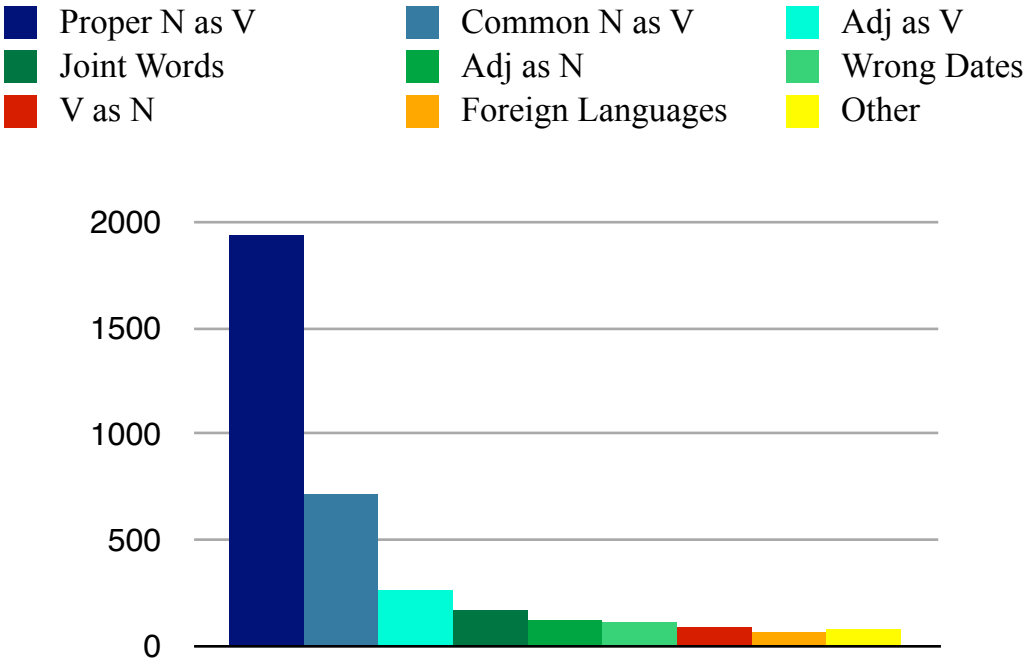
When entering the 3677 potential conversion pairs in the online mask of the COHA corpus, it soon became apparent that the frequency list and the COHA corpus itself were not particularly reliable. While the frequency list had accounted for 3677 conversion pairs, this number shrank drastically due to several corpus difficulties.

4.2.4.1. Corpus Difficulties

Among the various kinds of problems of the COHA frequency list, the most common ones were erroneous tags as results of incorrect tagging in the corpus. These errors

could be detected by analyzing the sentence position of the lexical items, their inflections and additional linguistic information.

Figure 2: tagging problems and other difficulties of the COHA corpus frequency list⁴



As figure two illustrates, the most frequent type of tagging error was rooted in proper nouns being mistakenly tagged as verbs (e.g. *Batz*, *Cousineart*, *Darfur*, etc.). This category primarily included surnames but also trademarks and place names. Of the potential data set of 3677 conversions more than half of the apparent conversion pairs (1937 instances) displayed this type of error. Besides proper nouns, common nouns, mistakenly tagged as verbs, occurred in the corpus. With 716 potential conversion instances (e.g. *armoire* or *astronaut*) this category was the second biggest.

Adjectives erroneously tagged as verbs, (e.g. *decaf* and *downbeat*) constituted the third largest error class with 263 cases. Besides adjectives mistakenly tagged as verbs, they

⁴ The errors mentioned in this section, only refer to those conversion items, which were excluded from the analysis.

were further sometimes mistagged as nouns, which occurred in 122 cases, forming the fifth largest difficulty category in this investigation.

While nouns mistakenly tagged as verbs constituted a significant problem in this frequency list, in comparison, a fairly small number of verbs was tagged as nouns (89 instances), resulting in this category being the 7th most common type of difficulties in the corpora.

Besides tagging difficulties, some lexical items were joint together or displayed similar problems (*aweek* instead of *a week*⁵, *boll* instead of *boil*). This error occurred relatively frequently, accounting for 169 instances in this analysis. Furthermore, for some conversion pairs, the dates of first appearance in the COHA corpus did not correspond to those in the frequency list. While this was not problematic in some cases, for 114 conversion pairs, this difference resulted in their exclusion from the data set, as the criterion of recency was not met anymore. Finally, in 67 apparent conversion cases, the lexical items were part of whole passages in foreign languages. As this diploma thesis focuses on conversions in English, these foreign language samples were excluded from the data set as well.

In general, the percentage of mistagged conversion pair members in the corpus seemed extremely high. This might be due to the fact that the COHA, like other corpora of this size, relies on automatic tagging, as it would be unfeasible to tag a corpus of more than 400 million words by hand. Besides the fact that automatic tagging is never completely reliable, the high frequency of mistagged conversion pair members could further be a result of the idiosyncrasy of conversion. Automatic taggers often rely partially on prototypical suffixes for the categorization of lexical items into different word classes (McEnery & Wilson 2001: 50). Nevertheless, in the case of conversions, there are no specific endings for automatic taggers to rely on. This might be part of the reason for such a high error rate.

⁵ Only those cases where the corpus problems were not obvious are included in this sample. Examples where these mistakes were rather straight-forward, such as *hesaid* etc., were excluded from the analysis in the beginning to avoid an unreasonable extra effort.

Besides the fact that the data set shrank by more than 90 per cent, from 3677 to 292 conversion pairs due to corpus difficulties, the high percentage of errors in the COHA frequency list accounts for an additional problem. While potential conversion pairs, which were wrongfully assumed to belong to this category, could be excluded from the data set, the opposite scenario also has to be considered. Additionally to having to exclude apparent conversion pairs from the analysis, the problem of the corpus potentially containing more conversion pairs, which cannot be systematically filtered due to wrong tags, cannot be solved as easily. A solution to overcome this difficulty remains to be found.

4.2.5. Excluding marginal cases of conversion

Although at this point, the number of conversion pairs contained in the data set had shrunk significantly to 292 conversion pairs, two other steps of exclusion seemed necessary.

4.2.5.1. Conversions with Different Stress Patterns

As has been stressed in the theoretical part on conversion in this diploma thesis, (section 2.3.2.2.) not all conversion pairs are identical, as some bi- or monosyllabic conversion pairs differ in terms of their stress patterns. While these differences are considered meaningless by some scholars, others claim that this asymmetry causes the homonymous word pairs to be easily distinguishable from each other and should thus result in the exclusion of these word pairs from the linguistic field of conversions. Marchand (1964:11), for instance, points out that

many words are marked with regard to the class of words to which they belong, as is evident from the stress distinguished type *cónflict* sb from *conflict* vb.

Additionally, Štekauer (1996: 94) and Bauer and Huddleston (2002: 1642) claim that conversions with different stress patterns should be classified only as a subtype of conversion. This diploma thesis agrees with these definitions and thus, conversion pairs displaying different stress-patterns were excluded from the data set. To this end, the two dictionaries, the *American Heritage Online Dictionary* (henceforth AH), as well as the

Unabridged Merriam Webster Online Dictionary (in short MW), were consulted to investigate the stress patterns of all bi- and multisyllabic conversion pairs.

Besides the fact that the investigated conversion pairs are recent and sometimes relatively rare in the English language, the AH dictionary⁶ offered entries for the nominal and verbal counterpart of 128 conversion pairs. Thereof, 16 conversion pairs displayed different stress patterns (*curate*, *detox*, *guesstimate*, *impound*, *interface*, *outwork*, *overkill*, *overnight*, *oversell*, *presoak*, *recharge*, *remix*, *rethink*, *rewind*, *rework* and *update*). Further, the MW dictionary provided transcriptions including stress patterns for 91 conversion pairs. Additionally to agreeing with the AH dictionary that *curate*, *guesstimate*, *impound*, *interface*, and *remix* demonstrate different stress patterns, it further listed different stress patterns for the conversion pair members *recontrol*_(N/V).

Besides the agreement in the aforementioned cases, AH and MW differed as to the possibility to distinguish the conversion pairs *overnight* and *recharge* through their stress patterns. The fact that one dictionary lists opposing stress patterns whereas the other offers identical ones might be indicative of an ongoing change of these two conversion pairs. Bauer (1983: 229), for instance, claims that in some English varieties conversion pair members are in the process of losing their distinctive stress patterns. The loss of distinguishability might also occur in these two cases. Nevertheless, whether or not a language change is in the process of occurring, the rivaling conversion form with no variation in stress pattern seems to be in existence. Thus, the two conversions with uncertain stress patterns, along with those 70 conversion pairs for which neither dictionary could provide a transcription for both items, were kept in the analysis.

4.2.5.2. Conversions with No Semantic Overlaps

Finally, some conversion pairs were excluded from the analysis, due to a lack of semantic relatedness between the conversion pair members, which typically characterizes conversions. Marchand (1964: 11) argues that there is no “derivational

⁶ In four cases the lexical items could only be found in the dictionary, spelled in a slightly different way: *boogey* - *boogie*; *filet* - *fillet*; *godamn* - *goddamn*; *harumph* - *harrumph*.

connection between words if the words have no semantic features in common“. Additionally, Balteiro (2007b: 48; 50) states that the meaning of converted items is usually connected to the semantic features of their bases. Thus, all potential conversion cases with no semantic overlap between the nominal and verbal counterpart (e.g. *demille* or *arap*) were perceived as being coincidentally homonymous and thus excluded from the data set. Hereby, the data set decreased by another 25 conversion pairs.

Having reduced the data set of 292 potential conversion pairs by those 15 conversions, which displayed different stress patterns for their conversion pair members, as well as those 25 cases with no semantic overlap, the final conversion data set consisted of 252 conversion pairs.

The following table thus presents all 252 conversion pairs between nouns and verbs, with one or both conversion pair members entering the COHA corpus between the 1940s and the 2000s. The lexical items in this table formed the basis for the following directionality analysis as well as the systematic analysis of conversion pairs.

Table 1: conversion data set

autoclave	crossfade	geek	leaflet	premix	swoosh
backdrop	crosshatch	gesso	lens	prep	synapse
backlash	crud	giftwrap	licker	presort	synch
backpack	crutch	gimmick	mainstream	priss	tailgate
backspace	deaccession	glop	mammogram	proctor	tarot
badmouth	deadend	godamn	mastermind	proofread	teargas
bebop	deadpan	golk	max	prototype	telecast
birddog	debrief	grabass	medevac	punk	telegram
blindsides	debut	graffiti	mentor	quarterback	telemark
blitz	decoupage	greenlight	messenger	re-release	teleport
blitzkrieg	deejay	gridlock	microwave	reboot	telex
blog	defocus	gronk	misquote	recharge	tentacle
bloop	defrost	guilt	moonwalk	refocus	thumbnail
blowtorch	dehorn	handcraft	mothball	rehab	thwap
blueprint	demagogue	harrumph	mousse	relaunch	toke
boing	dick	harumph	mouthwash	renege	torque
bonefish	dive-bomb	hassle	napalm	retrofit	transition
boogey	dogleg	heehaw	narrowcast	revamp	triage
bookend	dollop	helicopter	nightclub	rollerblade	undock
bookmark	doppler	henna	nosh	scaloppine	upload

bootstrap	doubleclick	hijink	oink	scapegoat	vaseline
brad	doubletalk	hologram	orgasm	schuss	vector
brainwash	downshift	homer	outcross	sealift	video
breaststroke	dude	homeschool	outperform	sequence	videotape
broadside	duplex	hostess	overdub	shirttail	vroom
brunch	eagle	hotdog	overnight	shortlist	wallboard
buddy	electroshock	hotel	overplay	shotgun	waterski
bullshit	emcee	humph	overspeed	showcase	whomp
cannonball	emfol	hydroplane	overstay	shrinkwrap	whump
carpool	encode	hype	oversteer	skateboard	windex
catnap	eyeball	increment	pancake	slalom	wisk
chickenshit	fedex	jeep	paperclip	slapstick	wonk
chomp	fiberglass	juice	parasail	sleaze	x-ray
chopper	filet	juke	photocopy	sleepwalk	yack
co-anchor	firebomb	jumpstart	piggyback	smog	zap
co-sponsor	firewall	kayak	plexiglass	snippet	zombie
cochair	fishtail	kayo	pogo	snorkel	zoop
cohost	flambe	keyboard	pooch	snowmobile	
collage	flipflop	keypunch	pork	spaz	
cornrow	frenchkiss	klutz	pothole	spiderweb	
counterpoint	futz	kvetch	potshot	spritz	
counterpunch	gaggle	lactate	pratfall	stoat	
crosscheck	galumph	laser	preload	straitjacket	

4.3. Establishing Directionality

Having determined 252 apparent conversion pairs as a final data set, the analysis now focuses on the directionality of these conversion items. Establishing directionality has been one of the major foci for the linguistic field of conversion, primarily, as it allows for the classification of different kinds of conversions and therefore makes possible a more specific linguistic description of this phenomenon (Balteiro 2007b: 55f; 89).

4.3.1. Methodology

The following empirical study is strongly based on Balteiro's (2007b) *Dia-Synchronic Study of the Directionality of Conversion*. Throughout her analysis, Balteiro carefully reviewed previous interpretations of the establishment of directionality and conducted a corpus-based study of 367 conversion pairs, applying a range of different directionality criteria to the data set. Besides employing two diachronic criteria (etymology and date of first record), Balteiro utilized the seven synchronic directionality criteria as proposed by Marchand (1964): semantic dependence, restriction of usage, semantic range and semantic pattern, as well as phonetic shape, morphologic type and stress. Furthermore, the synchronic criterion of relative markedness as proposed by Sanders (1988: 172) was applied to the data set.

For the purpose of this diploma thesis, Balteiro's (2007b) directionality investigation is seen as a general model, however, it will have to be adjusted in various areas. These adjustments seem necessary due to the different nature of the data set, as well as Balteiro's and Štekauer's (1996) critical objections to some of the directionality criteria. Balteiro's investigation focused on British English as opposed to US American English in this study. Therefore, sometimes equivalent sources for this language variety will have to be found. Furthermore, since the applicability of some criteria does not seem possible due to their vast under-definition or similar problems, not all criteria can be applied. This diploma thesis' methodology will thus be adapted as follows.

Balteiro's (2007b: 94) primary source for the investigation of the two diachronic criteria, etymology and date of first record, was *The Oxford English Dictionary 2*

(1992), along with *The Oxford Dictionary of English Etymology* (Onions 1966) for additional information in uncertain cases. However, for the present study, these two dictionaries will not be appropriate for two reasons: First, they are primarily British English dictionaries, which does not seem suitable for the investigation of conversions in American English. Secondly, being published in 1992 and 1966 respectively, neither dictionary is recent enough for the investigation of conversions from 1940–2009. Therefore, for the etymology criterion, the *Online Etymology Dictionary* (Harper 2001–) will be utilized. The chances of finding etymological information for the data set under investigation, which contains rare and/or recent conversions, seem relatively high in this dictionary, as it includes data of several renowned etymological dictionaries. Further, for the date of first record criterion, the *COHA* corpus will be utilized.

In order to appropriately investigate the synchronic criteria, Balteiro (2007b: 94) used a variety of additional sources. For the criterion of semantic dependence, she employed the *OED2* and *Webster's New International Dictionary*. In this empirical study, for this particular criterion the monolingual American English dictionaries *Unabridged Merriam-Webster Dictionary* (2013), and the *American Heritage Dictionary of the English Language* (2013) will be consulted.

To investigate the criterion of restriction of usage, Balteiro (2007b: 95) used the *International Corpus of English (ICE)*, whereas in the present study, the *COHA* corpus will serve as the source. Marchand (1964: 13) divides this criterion into five parts: general acceptance, resulting frequency, restricted applicability, seriousness and colloquialism. However, in this study, only the aspect of frequency will be investigated, as the formulation of the other sub-criteria is relatively vague, restricting their applicability. The sub-criteria of general acceptance and restriction of usage, for instance, rely on various factors, such as geographical variations, individual speech styles, etc. (Štekauer 1996: 129), making their application unattainable in this diploma thesis. Nonetheless, according to Marchand (1964: 13) the general acceptance is also reflected in the frequency count of the conversion pairs and will therefore be investigated indirectly. Additionally, the sub-criteria of seriousness and colloquialism cannot be filtered from the *COHA* corpus but would require a detailed semantic

investigation of all 252 apparent conversion pairs, which seems unfeasible for the purpose of this diploma thesis.

In order to examine the criterion of phonetic shape, morphologic type and semantic range, Balteiro (2007b: 96) did not use complementary sources but rather “relied upon our own linguistic knowledge“ (ibid). Furthermore, the criterion of semantic pattern was investigated by comparing the conversion pair members to a compiled list of characteristic nominal and verbal patterns (Balteiro 2007b: 94f). The investigation of these criteria will be approached in the same manner. In addition, the AH and MW dictionaries will be consulted for questionable cases.

Since the criterion of semantic range has given rise to severe criticism and “there is an urgent need for a better-defined criterion“ (Balteiro 2007b: 147), it will not be applied in the present study. Stating that the conversion pair member “with the smaller field of reference is the derivative“ (Marchand 1964: 14), the criterion accounts for a number of difficulties. First, it is unclear which conversion pair member should be considered as more restricted as lexical units often contain more than one meaning. While one conversion pair member can be more restricted in one sense, in another, the conversion counterpart might be more restricted (e.g. *view*_(N/V)) (Balteiro 2007b: 138). Furthermore, through derivation, lexical items undergo semantic changes, which extend or restrict their meaning. Thus, restriction of meaning is not necessarily indicative of a derived nature of a lexical item (Štekauer 1996: 130). Due to the severe problems of this criterion its complex application does not seem justifiable.

Balteiro (2007b: 160ff) further applied the criterion of stress to the data set. In the present study, however, this criterion will not be investigated. As conversion pairs displaying different stress patterns are not classified as core conversions but rather as a disputable subgroup thereof, these marginal cases were excluded from the data set in a previous research step (see chapter 4.2.5.1.). Thus, this synchronic directionality criterion could not be utilized.

Finally, Balteiro (2007b: 96) used monolingual Spanish and bilingual Spanish-English dictionaries, as well as the *CCELD* (1992), to investigate the relative markedness criterion. However, Balteiro (2007b: 169) points out several difficulties of this criterion, related to the idiosyncratic ways in which different languages convey meaning aspects. For instance, foreign language counterpart(s) cannot account for the same meaning range and individual lexical items sometimes cannot capture the translated meaning but phrases or constructions are required. Additionally, Balteiro stresses the intention of this criterion as complementing the overt analogue criterion (Sanders 1988: 156ff), which “has not been included in the present study for several reasons”⁷ (Balteiro 2007b: 174). As Balteiro highlights a great number of difficulties of this criterion, affecting both its applicability and validity, the criterion of relative markedness will not be applied in this diploma thesis.

Summing up, the two diachronic criteria date of first record and etymological criterion, (Balteiro 2007b: 98; 105) as well as the synchronic criteria restriction of usage, semantic dependence, semantic pattern, phonetic shape and morphological type (as defined by Marchand 1964) will be applied to the data set of 252 apparent conversion pairs in this study.

4.3.2. Findings

In this section, the findings for the individual criteria will be listed before analyzing different criteria in relation to each other and to different criteria groups. The initial focus will be on the etymological criterion as it is only through this “diachronic filter” (Balteiro 2007b: 206) that actual conversions can be separated from apparent ones. The results for both apparent and actual conversions will then be listed separately for each of the other criteria.

⁷ Among these reasons is the fact that the overt analogue criterion acknowledges zero-elements in morphology, which are neither recognized in Balteiro’s (2007b) study nor in this diploma thesis.

Additionally, the percentage⁸ of directions in relation to the whole data set, as well as to the available sources necessary for their investigation will be discussed. This measurement seems necessary, as some items are not listed in the dictionaries due to their recency and/or rareness. For instance, only for 174 of the 252 cases, i.e. 69 per cent of the total, one or both of the AH and MW dictionaries contained entries for both conversion pair members. The number of entries in the etymological dictionary was even lower. Therefore, these figures have to be considered, or else the results would be highly distorted.

4.3.2.1. Diachronic Criteria

For the purpose of this investigation, two diachronic directionality criteria will be applied to the conversion data set. First, the criterion of etymology is investigated, followed by the criterion of date of first record. Finally, the findings of the two categories will be compared.

4.3.2.1.1. Etymological Criterion

As opposed to Balteiro's (2007b) study, dealing with the most frequent conversions in English, the criterion of etymology seems only partly relevant for and applicable to recent English conversion pairs. Different endings in Old or Middle English, which were lost over time or changed, merging the two conversion pair members into identical lexical items (Štekauer 1996: 93), are not pertinent to this empirical study, since one or both of the conversion counterparts did not exist in these linguistic periods.

Nevertheless, it is crucial to consider whether two conversion pair members actually arose through the process of conversion or whether they are coincidentally cases of homonyms, clippings, shortenings or borrowings. All cases, where the conversion process was missing, were categorized as *non-conversions*, whereas the others were classified as *actual conversions* (Balteiro 2007b: 99f).

⁸ Due to rounding procedures, the percentage sums can deviate from 100 by +/- 1 per cent.

The Online Etymology Dictionary provided etymological data for the following 67 (i.e. 27 per cent) of the data set of 252 apparent conversion cases. Only the following 7 conversion pairs, equivalent to 3 per cent of the total, were classified as resulting from linguistic processes other than conversion: *blog*, *crutch*, *gaggle*, *juke*, *lactate*, *prep*, *rehab*. For the other 60 conversion pairs (i.e. 24 per cent of the total) a conversional relationship was suggested, including 46 denominal verbs (18 per cent), 11 deverbal nouns (4 per cent) and 3 unclear cases (1 per cent).

Noun → Verb

backpack	demagogue	homer	nosh	tailgate
blindsides	dollop	hydroplane	orgasm	telecast
blitz	filet	kayak	pancake	torque
bookmark	firebomb	mastermind	parasail	videotape
buddy	fishtail	medevac	pratfall	waterski
bullshit	geek	mentor	proctor	whomp
carpool	gridlock	microwave	rollerblade	
catnap	guilt	mothball	scapegoat	
cornrow	hassle	mousse	sequence	
debut	henna	napalm	shortlist	

Verb → Noun

bloop	photocopy	relaunch	showcase	whump
bootstrap	recharge	retrofit	toke	zap
kvetch				

Unclear Cases

swoosh	skateboard	vroom		
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The percentage of directions which could be established through this criterion is quite low. Nevertheless, the small number of determinable directions seems to be due to the recency and rarity of some of these conversion pairs and their resulting absence in the etymological dictionary, rather than the criterion itself.

If only the 67 cases are considered, where etymological information was available in the dictionary, the percentage of established directions increases dramatically. In this case,

the etymology criterion could classify 90 per cent as actual conversions: 46 (69 per cent) noun → verb, 11 (16 per cent) verb → noun and 3 (4 per cent) conversion processes, with unclear directions. 7 of the 67 apparent conversion pairs, equaling 10 per cent of this reduced data set, would have to be classified as non-conversions according to this analysis.

The criterion of etymology seems relatively successful if only those cases are considered where the necessary etymological data could be provided. If more etymological work is done in the future and information on the origin of certain lexical items becomes available, the criterion will be able to establish the directionality of several supplementary conversion pairs. Additionally, however, earlier or diverse etymological sources may be found, resulting in conflicting information on the directionality of the conversion pairs. Therefore, while directionality can be investigated through this criterion quite successfully, if additional contradicting sources become available, the established directions are prone to change (Balteiro 2007b: 104).

4.3.2.1.2. Dates of first record

The diachronic criterion of date of first record seeks to establish the directionality of conversions by comparing the dates in which the conversion pair members were recorded for the first time. The conversion counterpart which precedes the other is considered as the base of the conversion process, the other as the derivative (Balteiro 2007b: 105).

Although this criterion is rather straight-forward in its application, it gives rise to some difficulties, especially if dates of first records are filtered from a corpus. Corpora, like any other data base, cannot include all utterances of language and some texts might even be erroneously recorded in the wrong period of time. Therefore, these records cannot be viewed as completely reliable. Furthermore, the criterion of date of first record is underdefined in the literature as no indication is provided as to how much time should lie between the dates of first record, in order for this time span to be considered meaningful (Balteiro 2007b: 106f).

Due to the difficulties of the criterion of date of first record in particular in relation to a corpus⁹, in this study, time gaps of individual years were considered too small to be conclusive. For all cases where the two conversion pair members were recorded for the first time within ten years, the date of first record criterion was classified as unpredictable. The directions of all other cases could be determined.

The diachronic criterion of date of first record could provide directionality for 210 of the 252 apparent conversion pairs, which equals 83 per cent of the whole data set. In the corpus, the noun was recorded prior to the verb in 170 cases (67 per cent), suggesting a denominal conversion relationship. In 40 apparent conversion pairs (16 per cent of the cases), the verb was listed first. Further, 40 pairs (i.e. 16 per cent of the total) were recorded within 10 years were therefore classified as inconclusive.

N → V

autoclave	deadend	heehaw	mousse	shotgun
backdrop	deadpan	helicopter	mouthwash	showcase
backlash	debut	henna	napalm	slalom
backspace	decoupage	hijink	nightclub	slapstick
bebop	deejay	hologram	oink	smog
birddog	demagogue	homeschool	orgasm	snippet
bloop	dick	hostess	outcross	snorkel
blowtorch	dogleg	hotdog	overnight	snowmobile
blueprint	dollop	hotel	pancake	spiderweb
bonefish	doppler	humph	paperclip	spritz
boogey	downshift	hydroplane	photocopy	stoat
bookend	dude	hype	piggyback	straitjacket
bookmark	eagle	increment	plexiglass	synapse
bootstrap	electroshock	jeep	pogo	synch
brad	eyeball	juice	pooch	tailgate
breaststroke	fedex	juke	pork	tarot
broadside	fiberglass	kayak	pothole	teargas
brunch	filet	kayo	potshot	telegram
buddy	firebomb	keyboard	pratfall	telemark
bullshit	firewall	kvetch	premix	teleport

⁹ The unreliability of the dates of first record criterion also became obvious through the comparison of the dates of first record in the COHA and those provided by the etymological dictionary. For 19 conversion cases, the etymological dictionary provides dates of first record, which would place the conversion pairs outside of the investigated timeframe between 1940 and 2009. Thus, the directions provided by this criterion have to be treated with caution.

cannonball	fishtail	lactate	prep	tentacle
carpool	flambe	laser	presort	thumbnail
catnap	flipflop	leaflet	proctor	toke
chickenshit	frenchkiss	licker	prototype	torque
chopper	gaggle	mainstream	punk	transition
co-sponsor	geek	mammogram	quarterback	triage
cohost	gesso	mastermind	re-release	vaseline
collage	gimmick	max	reboot	vector
cornrow	glop	medevac	refocus	video
counterpoint	grabass	mentor	rehab	wallboard
counterpunch	graffiti	messenger	scaloppine	windex
crossfade	guilt	microwave	scapegoat	wonk
crud	handcraft	moonwalk	sequence	x-ray
crutch	harrumph	mothball	shirttail	zombie

V → N

backpack	defrost	harumph	recharge	undock
boing	dehorn	misquote	relaunch	upload
chomp	encode	outperform	renege	waterski
cochair	futz	overplay	retrofit	whomp
crosshatch	galumph	overspeed	revamp	whump
deaccession	giftwrap	overstay	sleaze	wisk
debrief	godamn	priss	sleepwalk	yack
defocus	gronk	proofread	swoosh	zoop

Further, it is interesting to only consider the actual conversion pairs and exclude those homonymous word pairs which arose through other linguistic processes. 6 of the 7 pairs which were classified as non-conversions through the etymology criterion were denominal verbs and one was inconclusive. However, even if the 7 non-conversion cases were excluded from the analysis, the percentages of the established directions would not change: the percentages of verb → noun and inconclusive conversion pairs both stay at 16 per cent, the percentage of noun → verb conversions at 67 per cent of the total.

Besides directionality, another interesting observation can be made. Considering the time spans which lie between the first occurrence of the conversion pair members, a great variation could be detected. While some conversions occur for the first time in the

same decade, some dates of first record are strikingly far apart. The largest gap between date of first occurrence of nouns and verbs can be found for the two lexical items *guilt*_(N/V) and *hotel*_(N/V). In both cases, the verbal counterparts can only be found in the last decade in the corpus (2000s) while the noun already occurs in the first (1810s). The biggest time span in the opposite direction can be observed for the conversion pairs *misquote*_(N/V) and *overstay*_(N/V). In these two cases, the verbal counterparts precede the nominal by 15 and 14 decades, respectively.

Finally, it should not be disregarded that these dates of first record were filtered from the COHA corpus, which focuses only on written English. Since it seems plausible that a large percentage of the conversions has entered the English language through the spoken medium (Chafe & Danielewicz 1987: 92), it is likely that the dates of first record would vary, if spoken English had also been considered.

4.3.2.1.3. Diachronic criteria

If both of the two diachronic criteria were applied, and only those cases considered where both criteria could establish directionality, only 32 noun → verb (13 per cent) and 4 verb → noun directions (2 per cent) could be established. For 9 pairs (4 per cent) these two criteria provided conflicting results. These percentages remain unchanged if only the actual conversion cases were considered.

N → V

bookmark	demagogue	henna	mothball	scapegoat
buddy	dollop	hydroplane	mousse	sequence
bullshit	filet	kayak	napalm	tailgate
carpool	firebomb	mastermind	orgasm	torque
catnap	fishtail	medevac	pancake	
cornrow	geek	mentor	pratfall	
debut	guilt	microwave	proctor	

V → N

recharge	relaunch	retrofit	whump
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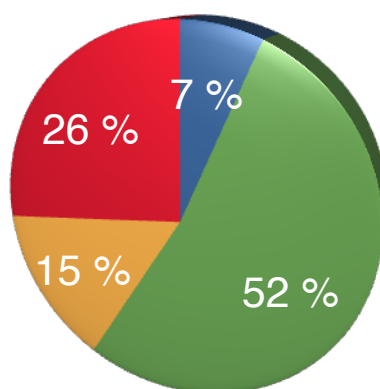
Conflicting Results

backpack	bootstrap	photocopy	toke	whomp
bloop	kvetch	showcase	waterski	

Considering, however, that for only 61 of the apparent conversion cases, historical data was available relativizes the percentages. As illustrated by figure 3, for these 61 cases, the two criteria showed 36 agreeing directions (59 per cent): 32 (52 per cent) denominal and 4 (7 per cent) deverbal ones. For 9 apparent conversions (15 per cent), the two diachronic criteria established conflicting directions and the directionality of 16 pairs (26 per cent) could not be solved by these criteria.

Figure 3: Directionality established by all diachronic criteria (data set: 61 cases listed in the Online Etymology Dictionary)

- Verb --> Noun ● Noun --> Verb ● Conflicting Results
- Impossible Cases



4.3.2.2. Synchronic criteria

Having applied the two diachronic criteria of etymology and date of first record, the investigation will now move to the synchronic criteria. First, the content criteria (restriction of usage, semantic dependence and semantic pattern) are applied, followed by the form-related criteria (phonetic shape and morphologic type).

4.3.2.2.1. Content Criteria

4.3.2.2.1.1. Restriction of usage

Regarding the criterion restriction of usage, only the sub-criterion of frequency was investigated. Hereby, the COHA served as a source, providing frequency information for both nominal as well as verbal tokens in the corpus. The one conversion pair member which was more frequent in the corpus was considered as the base, the other as the derivative¹⁰. To eliminate coincidental results, only those cases were considered conclusive where the number of occurrences of one category exceeded the other by at least 10 per cent.

The criterion of restriction of usage provided directionality for 98 per cent of the apparent conversion cases. Only in 7 (3 per cent) of the 252 pairs, an equal amount of verbal and nominal instances or only a very small difference in frequency (10 per cent or less) could be found in the corpus. In all other cases, either the noun or the verb was represented more than 10 per cent more often, mostly with a considerable difference between each other. The frequency criterion established directionality as follows: 188 (75 per cent) denominal verb and 57 (23 per cent) deverbal noun directions were found. For 7 conversion pairs (3 per cent) the difference in frequency was too small to be considered conclusive.

N → V

autoclave	decoupage	hologram	outcross	snorkel
backdrop	deejay	homer	overnight	snowmobile
backlash	debut	hijink	orgasm	smog
backpack	demagogue	hostess	overspeed	snippet
bebop	dick	hotdog	pancake	spiderweb
birddog	dogleg	hotel	paperclip	stoat
blitz	dollop	humph	parasail	straitjacket
blitzkrieg	doppler	hydroplane	photocopy	synapse
blog	doubletalk	hype	piggyback	synch
blowtorch	dude	increment	plexiglass	tailgate

¹⁰ As this is only one of several criteria to be investigated in this empirical analysis, it was unfortunately unfeasible to evaluate whether or not token differences were due to individual texts or particular genres.

blueprint	duplex	jeep	pogo	tarot
boing	eagle	juice	pooch	teargas
bonefish	electroshock	juke	pork	telecast
boogey	emcee	jumpstart	pothole	telegram
bookend	eyeball	kayak	potshot	telemark
bookmark	fedex	kayo	pratfall	telex
bootstrap	fiberglass	keyboard	preload	tentacle
brad	filet	keypunch	premix	thumbnail
breaststroke	firebomb	klutz	prep	thwap
broadside	firewall	lactate	priss	toke
brunch	fishtail	laser	proctor	torque
buddy	flambe	leaflet	prototype	transition
bullshit	flipflop	lens	punk	triage
cannonball	gaggle	licker	quarterback	vaseline
catnap	geek	mainstream	rehab	vector
chickenshit	gesso	mammogram	scaloppine	video
chopper	gimmick	max	scapegoat	videotape
co-anchor	glop	medevac	sealift	vroom
cochair	golk	mentor	sequence	wallboard
cohost	grabass	messenger	shirttail	whump
collage	graffiti	microwave	shortlist	windex
cornrow	greenlight	moonwalk	shotgun	wisk
counterpoint	gridlock	mothball	showcase	wonk
crud	guilt	mousse	shrinkwrap	x-ray
crutch	hassle	mouthwash	skateboard	yack
deaccession	heehaw	napalm	slalom	zombie
deadend	helicopter	nightclub	slapstick	
deadpan	henna	nosh	sleaze	

$V \rightarrow N$

backspace	defocus	godamn	oversteer	sleepwalk
badmouth	defrost	handcraft	presort	spritz
blindsides	dehorn	harumph	proofread	teleport
bloop	dive-bomb	homeschool	reboot	undock
brainwash	doubleclick	kvetch	recharge	upload
carpool	downshift	misquote	refocus	waterski
chomp	emfol	narrowcast	relaunch	whomp
counterpunch	encode	oink	renege	zap
crosscheck	frenchkiss	outperform	retrofit	zoop
crossfade	futz	overdub	revamp	
crosshatch	galumph	overplay	rollerblade	
debrief	giftwrap	overstay	schuss	

Furthermore, for all 7 non-conversions, the criterion of restriction of usage suggested noun → verb directions. If these cases are excluded from the analysis, the percentage of denominal verbs would slightly decrease to 74 per cent, however, the deverbal noun directions would still constitute 23 per cent of the total.

4.3.2.2.1.2. Criterion of semantic dependence

The criterion of semantic dependence establishes directionality by investigating which lexical item “is dependent on the content of the other pair member“ (Marchand 1964: 12). In my opinion, this criterion can be interpreted in two ways: a) Only those cases are considered, where the actual conversion counterpart is used in the definition, as Marchand’s examples *saw*_(N/V) or *knife*_(N/V) would suggest, or b) the criterion is applied according to the definition in which the “*content* of the other pair member“ (ibid) [emphasis added], rather than the actual word itself is indicative of directionality. Since it is not clear which interpretation was intended by Marchand, the first one, which is in accordance with the examples Marchand provides is pursued.

An additional difficulty of the criterion of semantic dependence is its high reliance on intuitions and personal choices in paraphrasing (Balteiro 2007b: 112). For the purpose of this diploma thesis, the two dictionaries AH and MW were utilized to gain a more objective perspective.

According to the first interpretation of this criterion, which only establishes directionality if the conversion counterpart is used in a lexical item’s definition, the directionality of 94 apparent conversion pairs, equaling 37 per cent of the total data set, could be established. 82 (33 per cent) of the directions were categorized as denominal, 11 directions (4 per cent) as deverbal. For one conversion case, *backspace*, the American Heritage dictionary suggested a noun → verb direction, whereas the Unabridged Merriam Webster dictionary listed the opposite. Therefore, this instance was considered as displaying a bi-directional relationship.

$N \rightarrow V$

autoclave	co-anchor	glop	microwave	snorkel
backlash	collage	guilt	moonwalk	straitjacket
backpack	counterpoint	handcraft	mousse	synapse
birddog	counterpunch	helicopter	napalm	tailgate
blindsides	crosshatch	henna	nightclub	teargas
blitz	crutch	homeschool	orgasm	telemark
blitzkrieg	debut	hostess	pancake	telex
blog	demagogue	hotel	photocopy	torque
bloop	dollop	humph	potshot	transition
blueprint	doubletalk	hydroplane	prototype	trriage
boing	eagle	jeep	quarterback	vector
bookmark	filet	juice	scapegoat	videotape
brad	firebomb	juke	schuss	whomp
broadside	firewall	kayak	sequence	x-ray
buddy	fishtail	keyboard	shotgun	
cannonball	gesso	leaflet	skateboard	
carpool	gimmick	messenger	slalom	

$V \rightarrow N$

crosscheck	oversteer	recharge	retrofit	swoosh
narrowcast	reboot	renege	revamp	upload
outcross				

$N \leftrightarrow V$

backspace

If these figures are relativized to only those 174 cases where at least one of the dictionaries listed a definition for both noun and verb, the criterion would provide directionality for 54 per cent of the apparent conversion pairs (47 per cent denominal, 6 per cent deverbal, 1 per cent bi-directional). Additionally, if the non-conversion cases would not be considered in the data set, 3 noun to verb directions would have to be excluded. Thus, the percentages of $N \rightarrow V$ conversions would slightly change to 46 per cent denominal cases.

Besides directions of conversion processes, this criterion additionally allows for another interesting observation. At least in two cases, the criterion of semantic dependence

suggests intermediate lexical items, which make the conversion relationships more complex: First, *overnight*_(N) relies in its definition on *overnight*_(Adj), *overnight*_(V), however, on *overnight*_(Adv). Secondly, *dogleg*_(V) relies on *dogleg*_(Adj), rather than *dogleg*_(N). Therefore, the possibility of conversion processes, incorporating more than two lexical items should not be overlooked.

4.3.2.2.1.3. Criterion of Semantic Pattern

The criterion of semantic pattern focuses on some lexical items' "characteristic meanings which mark them as derivatives" (Marchand 1964: 15). Unfortunately, however, Marchand does not list these "characteristic meanings" (ibid) but only provides some examples. To precisely investigate the criterion of semantic pattern, Balteiro (2007b: 94f) compiled the following list, which was also used for the application of the criterion of semantic pattern in this study:

Patterns for denominal verbs

- A. "To put in/on N"; "To place, be in, be on, go to, put in, keep in N"
- B. "To give N"; "To provide with N"; "To furnish with N"; "To cover with N"
- C. "To deprive of N" or "To remove N"
- D. "To ... with N" (to use the referent of the N as an instrument for whatever activity is particularly associated with it)
- E. "To be/act as N with respect to .."
- F. "To make/change/form .. into N"
- G. "To send/go by N"
- H. "To fasten with N"
- I. "To make use of N"
- J. "To drive or being driven in or to N"
- K. "To produce, make, emit, bring forth, exhibit, perform N"
- L. "To obtain, gather, hunt N"
- M. "The action for which the N is meant"
- N. "To have N"
- O. "To treat as N"
- P. "To take N"

Patterns for deverbal nouns

- A. "State"; "To be in a state"
- B. "Action, Activity"; "A single instance of V"; "Manner of V-ing"
- C. "Result of the action of V"
- D. "Object of V" ("that which V-s")
- E. "Subject of V" ("person who V-s")
- F. "Instrument of/for V(-ing)"; "Means by which something is V-ed"

G. “Sound or noise produced by the V“

H. “Place of V, place where V-ing“

Based on this list of semantic patterns, this criterion could establish directionality for 241 cases, (96 per cent) of the data set, while the direction of 11 pairs (4 per cent) was perceived as inconclusive. The criterion revealed 101 (40 per cent) noun → verb and 67 (27 per cent) verb → noun directions. Additionally, 73 apparent conversion pairs (29 per cent) were categorized as bi-directional. Excluding the 7 non-conversions from the data set, does not influence these percentages for this criterion.

N → V

autoclave	debut	gesso	messenger	shirttail
backpack	decoupage	gimmick	mousse	showcase
birddog	demagogue	glop	napalm	slapstick
blindsides	dick	gridlock	nightclub	sleaze
blitz	dive-bomb	guilt	nosh	smog
blitzkrieg	dogleg	helicopter	orgasm	synapse
blowtorch	dollop	henna	pancake	tailgate
bonefish	doppler	hijink	photocopy	tarot
bootstrap	dude	hologram	plexiglass	telex
broadside	duplex	hotdog	pork	thumbnail
brunch	eagle	hotel	pothole	transition
buddy	electroshock	hydroplane	potshot	upload
bullshit	emcee	jeep	pratfall	vaseline
cannonball	eyeball	juke	proctor	vector
carpool	fedex	lactate	prototype	video
chickenshit	fiberglass	leaflet	punk	wallboard
chopper	filet	lens	rollerblade	windex
crud	firebomb	licker	scaloppine	
crutch	fishtail	mainstream	scapegoat	
deaccession	flipflop	mastermind	sealift	
deadend	geek	medevac	sequence	

V → N

bebop	downshift	kayo	premix	spritz
bloop	encode	keypunch	presort	swoosh
boing	flambe	misquote	proofread	telecast
boogey	futz	moonwalk	re-release	thwap
brainwash	gaggle	narrowcast	reboot	toke

breaststroke	galumph	oink	recharge	undock
chomp	godamn	outcross	refocus	vroom
crossfade	grabass	outperform	relaunch	whomp
debrief	gronk	overdub	renege	whump
defocus	harrumph	overplay	retrofit	yack
defrost	harumph	overspeed	revamp	zooop
dehorn	heehaw	overstay	schuss	
doubleclick	humph	oversteer	slalom	
doubletalk	jumpstart	preload	sleepwalk	

N ↔ V

backlash	counterpoint	hostess	parasail	synch
backspace	counterpunch	hype	priss	teargas
badmouth	crosscheck	increment	quarterback	telegram
blog	crosshatch	juice	rehab	telemark
blueprint	deadpan	kayak	shortlist	teleport
bookend	deejay	keyboard	shotgun	tentacle
bookmark	firewall	klutz	shrinkwrap	torque
brad	frenchkiss	kvetch	skateboard	triage
catnap	giftwrap	laser	snippet	videotape
co-anchor	graffiti	mammogram	snorkel	waterski
co-sponsor	greenlight	mentor	snowmobile	x-ray
cochair	handcraft	microwave	spaz	zap
cohost	hassle	mothball	spiderweb	zombie
collage	homer	mouthwash	stoat	
cornrow	homeschool	paperclip	straitjacket	

According to Balteiro (2007b: 149) the applicability of the criterion of semantic pattern is limited, as only a “reduced number of patterns have been established so far” (ibid). Besides potentially not including all possible patterns relevant for the analysis, the opposite scenario has to be critically evaluated as well. As this criterion discerns by far the highest number of bi-directional relationships, it has to be questioned whether the patterns might have been defined too broadly or whether too many patterns could have been established, triggering the high number of bidirectional results.

4.3.2.2.1.4. All Content Criteria

If applied simultaneously, the three semantic criteria semantic dependence, semantic pattern and restriction of usage could establish directionality for 95 apparent conversion pairs (38 per cent of the whole data set). Of the 95 pairs, 43 apparent conversions (17 per cent) were denominal, 8 (3 per cent) deverbal, 26 (10 per cent) pairs showed a bidirectional relationships and 18 (7 per cent) revealed conflicting results. In the other 157 cases (62 per cent), one (or more) of the three criteria could not establish directionality, mostly due to the lack of necessary data for their application.

N → V

autoclave	debut	glop	messenger	scapegoat
backpack	demagogue	guilt	mousse	sequence
birddog	dollop	helicopter	napalm	synapse
blitz	eagle	henna	nightclub	tailgate
blitzkrieg	filet	hotel	orgasm	telex
broadside	firebomb	hydroplane	pancake	transition
buddy	fishtail	jeep	photocopy	vector
cannonball	gesso	juke	potshot	
crutch	gimmick	leaflet	prototype	

V → N

narrowcast	reboot	renege	revamp	swoosh
oversteer	recharge	retrofit		

V ↔ N

backlash	collage	kayak	snorkel	videotape
blog	counterpoint	keyboard	straitjacket	x-ray
blueprint	crosscheck	microwave	teargas	
bookmark	firewall	quarterback	telemark	
brad	hostess	shotgun	torque	
co-anchor	juice	skateboard	triage	

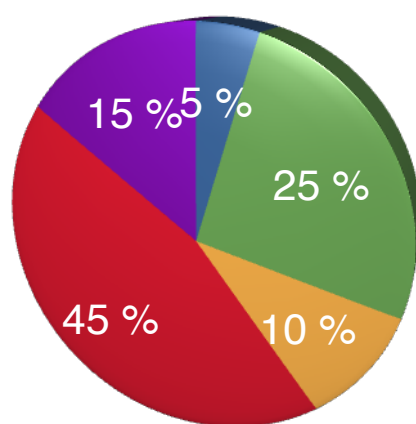
Conflicting Results

backspace	carpool	gaggle	moonwalk	upload
blindsides	counterpunch	handcraft	outcross	whomp
bloop	crosshatch	homeschool	schuss	
boing	doubletalk	humph	slalom	

Since the criterion of semantic dependence was fully and the criterion of semantic pattern partly based on the two dictionaries AH and MW, it seems necessary to limit the results to those cases where the necessary data was provided by the dictionaries. Therefore, the percentages were adjusted according to the 174 cases which were listed in the dictionaries. As illustrated in figure 4, according to this reduced data set, the provided directionality for 95 conversion pairs equals 55 per cent of the whole. Thereof, 25 per cent noun $\rightarrow$ verb, 5 per cent verb $\rightarrow$ noun conversion pairs, 15 per cent bidirectional relationships and 10 per cent conflicting results could be established. If the seven non-conversions are excluded from the data set, the N $\rightarrow$ V percentage decreases by 1 per cent, while the V $\rightarrow$ N percentage increases by 1 per cent. The other percentages remain the same.

Figure 4: Directionality established by all semantic criteria (data set: 174 conversion cases, listed in AH and/or MW)

- Verb $\rightarrow$ Noun
- Noun $\rightarrow$ Verb
- Conflicting Results
- Impossible Cases
- Noun $\leftrightarrow$ Verb



4.3.2.2.2. External Form-Related Criteria

Additionally to the three content criteria, two external form-related criteria (criteria of morphologic type and phonetic shape) will be applied to the conversion data set.

4.3.2.2.2.1. Morphologic Type

The criterion of morphologic type can be applied to establish directionality of “composites, understood as compounds, that is, as combinations of two free morphemes” (Balteiro 2007b: 159). For these compound elements, the word class of the head is investigated. Whenever a compound is headed by a noun, the whole compound must be considered a noun. Consequently, using this form in any other function “obviously necessarily indicates a converted nature of the other pair member” (Štekauer 1996: 132). Therefore, all compounds, headed by nouns, were considered as denominal conversions and all verb heads as indications of deverbal conversions.

The criterion of morphologic type cannot be applied to all conversion pairs but only to compounds. Thus, Balteiro (2007b: 159f) claims that the application of this criterion is highly limited.

However, it seems that this is not the ‘responsibility’ of the criterion itself but also, and mainly, of the very nature of conversion processes [...]. That is, words which usually undergo conversion are mainly simple bases, and, as a result, conversion processes are mainly concerned with basic (or underived) lexical units (ibid).

Contradicting Balteiro’s (2007b: 160) understanding of the conversions’ ‘very nature’, however, a remarkable number of conversions, namely 104, equivalent to 41 per cent of the total data set of 252 apparent conversion pairs, can be classified as compounds in this study.

Although the criterion of morphologic type can thus indeed be applied to more than 40 per cent of the data in the present study, another considerable difficulty arises. The majority of the 104 compound conversions (101 pairs or 97 per cent) are headed by apparent conversions¹¹. Consequently, it is necessary to investigate whether the base of the compound was the nominal or the verbal conversion pair member, before the criterion can be used to investigate directionality. Requiring this additional knowledge

¹¹ In order to investigate whether or not the compound heads are conversions or rather clippings, etc. the etymological criterion would have to be considered again.

for every conversion case before the criterion of morphologic type can be applied itself, makes its application rather impractical.

Nevertheless, the criterion of morphologic type established directionality for those conversion pairs that have heads which are no conversions. Therefore, 3 directions can be found (3 per cent of the compounds, 1 per cent of the whole data set). Of these 3 conversion pairs, 2 directions were established as denominal and 1 as deverbal.

N → V

scapegoat	snowmobile
-----------	------------

V → N

outperform

4.3.2.2.2.2. Phonetic Shape

The criterion of phonetic shape states that “[a] certain phonetic shape may put a word in a definite word class” (Marchand 1964: 16). Marchand considers the following shapes as indicative for denominal verb directions:

- a) *-ation, -action, -ension, -ition, -otion*, when pronounced as [ʃən];
- b) *-ment*, when pronounced as [mənt]
- c) *-ture* [tʃə(r)] or [tʃu(r)]
- d) *-ade* [ed] (ibid).

The phonetic shape criterion revealed only 2 directions (1 per cent of the total), namely from noun to verb in *increment* and *transition*. Although *deaccession* does not correspond to the orthographic description, it matches the pronunciation [ʃən] and should thus, in my opinion, be considered as having a characteristic phonetic shape as well. Finally, in two cases, *rollerblade* and *crossfade*, the lexical items orthographically meets the criterion, however, their pronunciation does not.

It is not particularly surprising that only a small number of directions for conversion cases could be solved through this criterion, as it displays a number of difficulties. First, Marchand (1964: 16) only mentions some of the characteristic substantive endings, while neglecting others like *-age*. Secondly, his description merely includes

characteristic substantive suffixes, however, no verbal counterparts are listed. Finally, not all lexical items “have a characteristic ending that identifies them as belonging to one or the other category” (Balteiro 2007b: 159), which further contributes to the restricted applicability of this criterion (Balteiro 2007b: 156ff).

The first difficulty can be solved through adding more suffixes to the analysis. In addition to the common noun suffixes mentioned by Marchand (1964: 16), Quirk et al. (1985: 1548-52) propose the following suffixes: *-age* when pronounced as [ɪdʒ]; *-dom*, *-ery/-ry*; *-ful* when pronounced as [fʊl]; *-hood*; *-ing*; *-ism*; *-ocracy*; *-ship*; *-eer*; *-er*; *-ess*; *-ette*; *-let*; *-ling*; *-ster*; *-ant*; *-ee*; *-or*; *-age*; *-al*; *-ation*; *-ing*; *-ment* when pronounced as [mənt]; *-ity* and *-ness*. If these suffixes are additionally applied, another 9 denominal directions can be established. Furthermore, if the common verbal suffixes *-ate* when pronounced as [eɪt]; *-en*; *-ify/fy* when pronounced as [(i)fai] and *-ize/ise* (Quirk et al. 1985: 1557f) are applied, another deverbal direction can be established.

Nevertheless, the fact that this criterion is only applicable to a limited number of conversion pairs still holds true even if additional suffixes are applied. Even then, only 13 directions (5 per cent) of the conversion pairs can be solved: 12 pairs (5 per cent) as $V \rightarrow N$ conversions and 1 pair (0,4 per cent) as a $N \rightarrow V$ conversion.

$N \rightarrow V$

chopper	deaccession	leaflet	proctor	transition
co-anchor	hostess	mentor	scapegoat	vector
co-sponsor	increment	messenger	snowmobile	

$V \rightarrow N$

lactate	outperform
---------	------------

In addition to the restricted applicability of the criterion of phonetic shape, it can further be said to be a misnomer. Since the criterion primarily focuses on suffixes typical for nouns and verbs, it should be called a morphological criterion rather than a phonetic one. Instead of a phonetic and a morphologic criterion there would then be two morphologic criteria: a) compounding and b) suffixation.

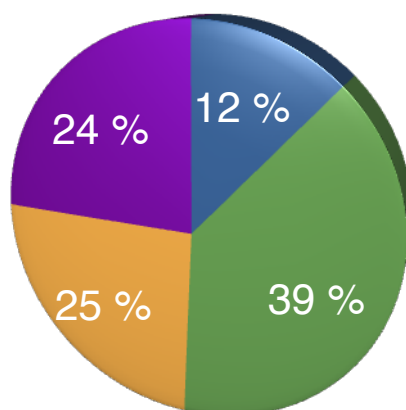
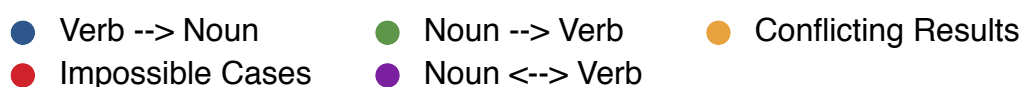
4.3.2.2.2.3. External Form–Related Criteria

Applying both external form-related criteria, morphologic type and phonetic shape, to the data set proved to be unsuccessful. No directionality could be established by both criteria due to their restricted applicability. Even if those cases were considered where either one of the criteria could establish directionality, only 16 directions (6 per cent) could be provided. Of these 16 conversion pairs, 13 directions (5 per cent) would be denominal and only 3 (1 per cent) deverbal. The 7 non-conversions as established by the etymological criterion would not overlap with these 16 conversion pairs and therefore would not influence these results.

4.3.2.3. Diachronic and Synchronic criteria

Finally, if both synchronic and diachronic criteria were applied only in those cases where the individual criteria could provide a result, and all instances where they could not render results were disregarded, the following directions could be observed.

Figure 5: Directionality established by all criteria (data set: all 252 conversion cases)



As illustrated in figure 5, in 98 conversion cases (39 per cent of the data set), the directionality was established as denominal by all criteria which could be applied. For 30 apparent conversion cases (12 per cent) the opposite direction was established.

Furthermore, 61 pairs (24 per cent) revealed bidirectionality¹². Finally, for 63 apparent conversion cases (25 per cent), the directions established by different criteria were conflicting. These percentages did not change if the 7 non-conversions (3 N→V, 2 bidirectional and 2 conflicting results) were excluded from the analysis.

N → V

autoclave	dick	golk	golk	scapegoat
backdrop	dogleg	gridlock	gridlock	sealift
birddog	dollop	guilt	guilt	sequence
blitz	doppler	helicopter	helicopter	shirttail
blitzkrieg	dude	henna	henna	slapstick
blowtorch	duplex	hijink	hijink	smog
bonefish	eagle	hologram	hologram	synapse
broadside	electroshock	hotdog	hotdog	tailgate
brunch	emcee	hotel	hotel	tarot
buddy	eyeball	hydroplane	hydroplane	telex
bullshit	fedex	jeep	jeep	thumbnail
cannonball	fiberglass	juke	juke	transition
chickenshit	filet	leaflet	leaflet	vaseline
chopper	firebomb	lens	lens	vector
crud	fishtail	licker	licker	video
crutch	flipflop	mainstream	mainstream	wallboard
deadend	geek	mastermind	mastermind	windex
debut	gesso	max	max	wonk
decoupage	gimmick	medevac	medevac	
demagogue	glop	messenger	messenger	

V → N

brainwash	doubleclick	harumph	overstay	retrofit
chomp	emfol	misquote	oversteer	revamp
debrief	encode	narrowcast	proofread	sleepwalk
defocus	futz	outperform	recharge	swoosh
defrost	galumph	overdub	relaunch	undock
dehorn	godamn	overplay	renege	zoop

¹² In all of these 57 cases the criterion of semantic pattern caused the bi-directional result.

V ↔ N

backlash	counterpoint	juice	quarterback	straitjacket
badmouth	crosscheck	kayak	rehab	synch
blog	deadpan	keyboard	shortlist	teargas
blueprint	deejay	klutz	shotgun	telegram
bookend	firewall	laser	shrinkwrap	telemark
bookmark	giftwrap	mammogram	skateboard	tentacle
brad	graffiti	mentor	snippet	torque
catnap	greenlight	microwave	snorkel	triage
co-anchor	hassle	mothball	snowmobile	videotape
co-sponsor	hostess	mouthwash	spaz	x-ray
cohost	hype	paperclip	spiderweb	zap
collage	increment	parasail	stoat	zombie
cornrow				

Conflicting Results

backpack	crosshatch	homer	preload	telecast
backspace	deaccession	homeschool	premix	teleport
bebop	dive-bomb	humph	presort	thwap
blindside	doubletalk	jumpstart	priss	toke
bloop	downshift	kayo	re-release	upload
boing	flambe	keypunch	reboot	vroom
boogey	frenchkiss	kvetch	refocus	waterski
bootstrap	gaggle	lactate	rollerblade	whomp
breaststroke	grabass	moonwalk	schuss	whump
carpool	gronk	oink	showcase	wisk
cochair	handcraft	outcross	slalom	yack
counterpunch	harrumph	overspeed	sleaze	
crossfade	heehaw	photocopy	spritz	

Thus, including bi-directional results, the criteria showed agreement in the directions of 75 per cent of the conversion pairs, while for 25 per cent of the conversion pairs the different synchronic and diachronic criteria triggered conflicting results.

4.3.3. Discussion

Since this empirical analysis is strongly based on a study conducted by Balteiro (2007b: 90ff), it is worth pointing out some similar, as well as contrasting, results. Balteiro analyzed 367 potential conversions between nouns and verbs primarily based on a

British National Corpus' frequency list (Kilgariff 1996). Her study focused on establishing directionality, applying both synchronic as well as diachronic criteria to the data set. Similarly, the present study investigated directionality, however, of 252 recent US American English conversion pairs. Furthermore, for several reasons the criteria of semantic range, stress and relative markedness were not applied in this study and the criterion of restriction of usage was used only partially (for further details see chapter 4.3.1. on methodology). These differences between the two studies have to be taken into consideration when comparing the respective results.

Balteiro's (2007b) study found that the agreement of directions obtained by using diachronic data was the highest. In her analysis, applying the criterion of date of first record and etymology to the data set could establish agreeing directions in more than 90 per cent of the total (Balteiro 2007b: 176).

In this study, the diachronic criteria could only establish directionality for 15 per cent of the conversion pairs. However, this low figure mostly arose due to the recency and/or rarity of the conversions and the resulting absence in (etymological) dictionaries. If only those cases were considered where the necessary data was available, the percentage of agreeing directions would considerably rise to almost 60 per cent. Thus, if the lack of necessary data were taken into consideration, the diachronic criteria would trigger a higher number of agreeing directions than any other criteria category.

While in Balteiro's (2007b: 176), as well as in this study, the percentage of directionality agreements for the etymological criteria was considerably high, the number of directions established by the four synchronic content criteria was low. The criteria semantic dependence, restriction of usage, semantic range and semantic pattern as introduced by Marchand (1964) established the same directions in 46 per cent of the apparent conversion data set in Balteiro's analysis.

In the present study, the semantic content criteria established agreeing directions for 38 per cent of the conversion cases. However, two things should be considered in the comparison. First, Balteiro (2007b) investigated four criteria, while in this study the

criterion of semantic range was not applied. Secondly, due to the recency and rarity of some of the conversion items in this study, the sources were rather limited. If only the pairs were considered where the necessary data was available, a similar result to Balteiro's would be reached. In this case agreeing directions for 45 per cent of the pairs could be found.

In Balteiro's (2007b: 176) analysis, the criteria of external form revealed a considerably low agreement. If all three criteria were to be applied simultaneously, no direction would be established. This is mostly due to the fact that the application of these criteria is limited to specific lexical items. For this reason, in more than 70 per cent of the analyzed conversions, none of the external form-related criteria could be applied.

The results for this category in the present study were similarly low. If both¹³ external form-related criteria were applied simultaneously, no direction could be established, as they could not be applied to the same lexical items. Furthermore, even if those cases were considered, where either criterion could establish directionality, only 6 per cent of the directions could be solved. Again, the restricted applicability of the criteria caused this low percentage.

Finally, if all synchronic and diachronic criteria were to be used in the analysis simultaneously, neither in Balteiro's (2007b) nor in the present study, could any direction be established. However, if only the criteria were considered when they reached a result, 75 per cent of directions could be established in the present investigation. The established directions were primarily $N \rightarrow V$ (39 per cent), but a considerable number of bidirectional directions were established (24 per cent) as well. The number of $V \rightarrow N$ conversions was significantly lower with only 12 per cent. These percentages do not change if the 7 non-conversions (3 $N \rightarrow V$, 2 bidirectional and 2 conflicting results) are excluded from the analysis.

¹³ As has been mentioned in the methodology chapter, the criterion of stress was not applied to the data set.

Taking into consideration the different nature of the two data sets and the slightly varying methodologies, the results established in these two corpus-based analyses are fairly similar. Thus, Balteiro's (2007b: 176) assumption of these criteria being incomplete and under-defined can be reinforced by this analysis. Furthermore, her request for "further research [...] to overcome vagueness, underdefinition and inaccuracy of the criteria" (ibid) can be supported. Nonetheless, the fact that even though there was a lack of etymological data, three-fourths of agreeing directions could be established, should not be overlooked either. Through more research into etymological data and into the specification of the directionality criteria, even more agreeing directions of recent conversions can be expected in the future.

Furthermore, especially the criterion of morphologic type allowed two interesting observations. First, Balteiro's (2007b: 159f) assumption of "the very nature of conversion processes, which are almost exclusively concerned with underived items, or rather, with simple bases" (2007b: 160) cannot be supported by this analysis as more than 40 per cent of the data set consisted of compound conversions. As Balteiro (2007b) has dealt with the most common British English conversion pairs, while this study has focused on recent US American English conversions, this difference could either be specific to this regional variety or it could indicate a recent language change in this field.

Secondly, the criterion of morphologic type revealed that the great majority of compound conversions (101 out of 104 or 97 per cent) in this data set was headed by lexical items which were conversions themselves. Moreover, some of the compound conversions even displayed the same head (e.g. *shit*, *board*, *glass*). The great frequency of this pattern in the data set suggests a high likelihood of compounds which are based on conversions to become converted themselves.

Summing up the empirical analysis on directionality, it can be said that conversions between nouns and verbs are active in both directions and even bidirectional relationships seem possible. While all three potential directions are productive, noun to verb conversions are significantly more common than any other type of conversion.

Furthermore, compound conversions play a significant new role among recent conversions in American English. It is this specific strand of research, along with the directionality criteria, which I believe require a more thorough analysis in the future.

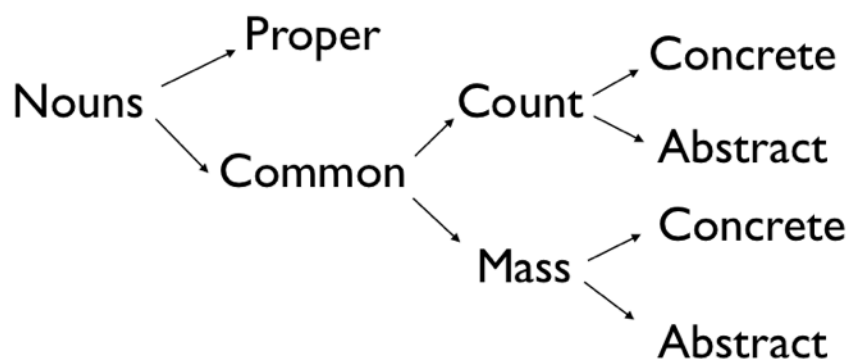
4.4. Systematic Analysis of the Conversion Pairs

Besides attempting to establish directionality of the conversion pairs, this diploma thesis further aims at grouping the nominal and verbal conversion counterparts based on different categories as established in the literature. To this end, first, the nouns will be structured according to the following criteria: proper versus common nouns, count versus mass nouns and concrete versus abstract nouns. Then, the verbs will be classified in terms of their transitivity, telicity and dynamism. For all categories, significant asymmetries will be highlighted.

4.4.1. Nouns

Generally, linguists agree upon the following classification of nouns: The most general semantic classes are common and proper nouns. The common noun category can further be grouped into count and mass (or noncount) nouns. Finally, both of these categories can be divided into abstract and concrete nouns (Crystal 2003: 208).

Figure 6: Common classification of nouns: based on Crystal (2003: 208)



4.4.1.1. Proper vs. Common Nouns

The first distinction between noun classes relates to their categorization as common or proper nouns. While proper nouns denote names of people, events, times, places etc., common nouns include all other nouns (Crystal 2003: 208).

Out of the 252 apparent conversion pair nouns, 243 items (96 per cent of the total) can be classified as common nouns while there are only 9 proper nouns (4 per cent). Of these 9 proper nouns, 5 refer to widely known trademarks (*Fedex*, *Vaseline*, *Windex*, *Rollerblade* and *DoubleClick*), 2 to projects (*Encode* and *Greenlight*), 1 to a phenomenon in classical physics (*Doppler*) and 1 to a mythical creature (*Boogey*).

Furthermore, of the proper nouns, the noun *Rollerblade* holds a special position. While the other 8 proper nouns belong to this category exclusively, the trademark *Rollerblade* has expanded its meaning to all inline-skates independently of the specific brands. Thus, the noun *rollerblade* now belongs both to the proper as well as the common noun category.

Proper Nouns

Noun Base

doppler	fedex	vaseline	windex
---------	-------	----------	--------

Verb Base

doubleclick	encode
-------------	--------

Bidirectional

greenlight

Unclear Direction

boogey

Common Nouns

Noun Base

autoclave	demagogue	golk	messenger	punk
backdrop	dick	gridlock	mousse	scaloppine
birddog	dogleg	guilt	napalm	scapegoat
blitz	dollop	helicopter	nightclub	sealift
blitzkrieg	dude	henna	nosh	sequence
blowtorch	duplex	hijink	orgasm	shirttail
bonefish	eagle	hologram	overnight	slapstick
broadside	electroshock	hotdog	pancake	smog
brunch	emcee	hotel	piggyback	synapse

buddy	eyeball	hydroplane	plexiglass	tailgate
bullshit	fiberglass	jeep	pogo	tarot
cannonball	filet	juke	pooch	telex
chickenshit	firebomb	leaflet	pork	thumbnail
chopper	fishtail	lens	pothole	transition
crud	flipflop	licker	potshot	vector
crutch	geek	mainstream	pratfall	video
deadend	gresso	mastermind	prep	wallboard
debut	gimmick	max	proctor	wonk
decoupage	glop	medevac	prototype	

Verb Base

brainwash	emfol	narrowcast	proofread	sleepwalk
chomp	futz	outperform	recharge	swoosh
debrief	galumph	overdub	relaunch	undock
defocus	godamn	overplay	renege	zoop
defrost	harumph	overstay	retrofit	
dehorn	misquote	oversteer	revamp	

Bidirectional

backlash	cornrow	juice	quarterback	straitjacket
badmouth	counterpoint	kayak	rehab	synch
blog	crosscheck	keyboard	shortlist	teargas
blueprint	deadpan	klutz	shotgun	telegram
bookend	deejay	laser	shrinkwrap	telemark
bookmark	firewall	mammogram	skateboard	tentacle
brad	giftwrap	mentor	snippet	torque
catnap	graffiti	microwave	snorkel	triage
co-anchor	hassle	mothball	snowmobile	videotape
co-sponsor	hostess	mouthwash	spaz	x-ray
cohost	hype	paperclip	spiderweb	zap
collage	increment	parasail	stoat	zombie

Unclear Direction

backpack	deaccession	homeschool	premix	thwap
backspace	dive-bomb	humph	presort	toke
bebop	doubletalk	jumpstart	priss	upload
blindside	downshift	kayo	re-release	vroom
bloop	flambe	keypunch	reboot	waterski
boing	frenchkiss	kvetch	refocus	whomp
bootstrap	gaggle	lactate	schuss	whump

breaststroke	grabass	moonwalk	showcase	wisk
carpool	gronk	oink	slalom	yack
cochair	handcraft	outcross	sleaze	
counterpunch	harrumph	overspeed	spritz	
crossfade	heehaw	photocopy	telecast	
crosshatch	homer	preload	teleport	

Proper and Common

Unclear Direction

rollerblade

As the previous chapter established roughly three times as many nominal bases as verbal ones, it is not surprising that both the proper and common noun category consist of more nominal bases, too. While there are considerably more common nouns than proper nouns, the distribution of nominal versus verbal bases is fairly similar in both categories.

4.4.1.2. Count vs. Mass Nouns

After the proper nouns were separated from the common nouns, the latter group was divided into count and mass nouns. Whereas count nouns (or countable nouns) are those nouns which “refer to individual, countable entities“ (Crystal 2003: 209), mass nouns (or uncountable nouns) are defined as “an undifferentiated mass or notion“ (ibid). However, certain nouns do not exclusively belong to one of these categories but can correspond to both in different contexts (ibid).

The analysis revealed that of the 244 common nouns, 220 were count nouns (90 per cent of the total) and 18 are mass nouns (7 per cent). Furthermore, 6 of the nouns (2 per cent) could be classified as either mass or count nouns, depending on their context.

Count Nouns

Noun Base

autoclave	demagogue	golk	nosh	sequence
backdrop	dick	gridlock	orgasm	shirttail

birddog	dogleg	helicopter	overnight	slapstick
blitz	dollop	hologram	pancake	synapse
blitzkrieg	dude	hotdog	piggyback	tailgate
blowtorch	duplex	hotel	pogo	tarot
bonefish	eagle	hydroplane	pooch	telex
broadside	electroshock	jeep	pork	thumbnail
brunch	emcee	juke	pothole	transition
buddy	eyeball	leaflet	potshot	vector
cannonball	filet	lens	pratfall	video
chopper	firebomb	licker	proctor	wallboard
crud	fishtail	mastermind	prototype	wonk
crutch	flipflop	max	punk	
deadend	geek	medevac	scaloppine	
debut	gimmick	messenger	scapegoat	
decoupage	glop	nightclub	sealift	

Verb Base

chomp	galumph	outperform	proofread	revamp
debrief	godamn	overdub	recharge	sleepwalk
defrost	harumph	overplay	relaunch	swoosh
dehorn	misquote	overstay	renege	undock
futz	narrowcast	oversteer	retrofit	zoop

Bidirectional

backlash	cornrow	kayak	shotgun	telemark
badmouth	counterpoint	keyboard	shrinkwrap	tentacle
blog	crosscheck	klutz	skateboard	torque
blueprint	deadpan	laser	snippet	triage
bookend	deejay	mammogram	snorkel	videotape
bookmark	firewall	mentor	snowmobile	x-ray
brad	giftwrap	microwave	spaz	zap
catnap	hassle	mothball	spiderweb	zombie
co-anchor	hostess	paperclip	stoat	
co-sponsor	hype	parasail	straitjacket	
cohost	increment	quarterback	synch	
collage	juice	shortlist	telegram	

Unclear Direction

backpack	deaccession	humph	premix	teleport
backspace	dive-bomb	jumpstart	presort	thwap
blindside	downshift	kayo	priss	toke

bloop	flambe	keypunch	re-release	upload
boing	frenchkiss	kvetch	reboot	vroom
bootstrap	gaggle	lactate	refocus	waterski
breaststroke	gronk	moonwalk	rollerblade	whomp
carpool	handcraft	oink	schuss	whump
cochair	harrumph	outcross	showcase	wisk
counterpunch	heehaw	overspeed	slalom	yack
crossfade	homer	photocopy	spritz	
crosshatch	homeschool	preload	telecast	

Mass Nouns

Noun Base

bullshit	gesso	hijink	mousse	plexiglass
chickenshit	guilt	mainstream	napalm	smog
fiberglass	henna			

Verb Base

defocus	emfol
---------	-------

Bidirectional

teargas

Unclear Direction

bebop	doubletalk	grabass
-------	------------	---------

Count and Mass Noun

Noun Base

prep

Verb Base

brainwash	graffiti
-----------	----------

Bidirectional

mouthwash	rehab
-----------	-------

Unclear Direction

sleaze

In this category, it becomes apparent that verbal bases tend to be converted into count nouns rather than into mass nouns. In the mass noun class, only two conversions show a verbal base, compared to 12 nominal bases. However, the percentage of verbal bases for count nouns is considerably higher. Thus, mass nouns tend to be the input rather than the output category to the conversions process.

4.4.1.3. Abstract vs. Concrete Nouns

Finally, all common nouns were classified as either abstract or concrete. While concrete nouns can be described as “entities which can be observed and measured, [...] [a]bstract nouns refer to unobservable notions, such as *difficulty*, *idea*, *certainty*, and *remark*“ (Crystal 2003: 209). In theory, this classification seems rather straightforward. In practice, however, this dichotomy proves to be more complex for two reasons. First, nouns can belong to both categories, depending on their context-specific interpretations (ibid). Secondly, abstractness is not a binary notion, but “there are innumerable levels of abstractness“ (Köck 1973: 142). Nonetheless, for the purpose of this analysis the nouns were perceived as (rather) concrete, (rather) abstract, or as belonging to both categories.

Of all common nouns, 128 are concrete nouns (52 per cent) and 96 (39 per cent) abstract nouns. Additionally, 20 nouns (8 per cent) could be classified as concrete and abstract depending on their context.

As abstractness is seen as a feature of count and mass nouns, the classification was subordinated to the class of count and mass nouns. The distribution of concrete and abstract nouns in the count noun category is relatively even. Out of the 220 count nouns, there are 115 concrete nouns (52 per cent) and 87 abstract nouns (40 per cent). Additionally, 18 count nouns (8 per cent) could be classified as abstract and concrete depending on their context.

Abstract Count Nouns

Noun Base

blitz	gridlock	overnight	sealift	wonk
blitzkrieg	max	pogo	sequence	

debut	medevac	potshot	transition	
duplex	orgasm	pratfall	vector	

Verb Base

chomp	godamn	overdub	recharge	sleepwalk
debrief	harumph	overplay	relaunch	swoosh
defrost	misquote	overstay	renege	undock
dehorn	narrowcast	oversteer	retrofit	zoop
galumph	outperform	proofread	revamp	

Bidirectional

backlash	counterpoint	hype	telemark	zap
badmouth	crosscheck	increment	torque	
catnap	hassle	synch	triage	

Unclear Direction

blindside	downshift	kayo	premix	upload
bloop	gronk	keypunch	presort	vroom
boing	harrumph	moonwalk	re-release	whomp
breaststroke	heehaw	oink	reboot	whump
counterpunch	homer	outcross	refocus	yack
crossfade	humph	overspeed	schuss	
deaccession	jumpstart	preload	thwap	

Concrete Count Nouns

Noun Base

autoclave	dogleg	gimmick	licker	scaloppine
backdrop	dollop	glop	mastermind	shirttail
birddog	dude	golk	messenger	slapstick
blowtorch	eagle	helicopter	nightclub	synapse
bonefish	electroshock	hologram	nosh	tailgate
buddy	emcee	hotdog	pancake	tarot
cannonball	eyeball	hotel	piggyback	telex
chopper	filet	hydroplane	pooch	thumbnail
crud	firebomb	jeep	pork	video
crutch	fishtail	juke	pothole	wallboard
demagogue	flipflop	leaflet	proctor	
dick	geek	lens	punk	

Verb Base

futz

Bidirectional

blog	cornrow	klutz	quarterback	spiderweb
bookend	deejay	laser	shotgun	stoat
bookmark	firewall	mammogram	shrinkwrap	straitjacket
brad	giftwrap	mentor	skateboard	telegram
co-anchor	hostess	microwave	snippet	tentacle
co-sponsor	juice	mothball	snorkel	videotape
cohost	kayak	paperclip	snowmobile	zombie
collage	keyboard	parasail	spaz	

Unclear Direction

backpack	flambe	kvetch	rollerblade	wisk
bootstrap	frenchkiss	lactate	spritz	
cochair	gaggle	photocopy	toke	
dive-bomb	handcraft	priss	waterski	

Concrete and Abstract Count Nouns

Noun Base

broadside	deadend	decoupage	prototype	scapegoat
brunch				

Verb Base

blueprint	deadpan	shortlist	x-ray
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Unclear Direction

backspace	crosshatch	showcase	telecast	teleport
carpool	homeschool	slalom		

Considering the count nouns, it is noticeable that the abstract noun category shows more verbal bases than nominal ones. This seems particularly striking for two reasons. First, three times as many conversions were found to be based on nouns rather than verbs, making a majority of verb bases unlikely in any category. Secondly, the category of abstract count nouns is the only one in this study, for which a higher number of verb bases to noun bases was found.

While abstract count noun conversions are likely to be based on verbs, concrete count nouns show the opposite tendency, with 1 verbal base to 58 nominal ones. Thus, concrete count nouns tend to almost exclusively serve as the input category for the conversion process, while abstract nouns appear both as input and product of conversions, and are likely to be based on verbs.

For the mass nouns, the distribution of abstract versus concrete nouns is fairly even. Of the 19 mass nouns, there are 11 concrete (58 per cent) and 7 abstract nouns (37 per cent). Only 1 of the 19 mass nouns (5 per cent) can be interpreted as abstract and concrete.

Abstract Mass Nouns

Noun Base

guilt	hijink	mainstream
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Verb Base

defocus	emfol
---------	-------

Unclear Direction

doubletalk	grabass
------------	---------

Concrete Mass Nouns

Noun Base

bullshit	fiberglass	henna	napalm	smog
chickenshit	gesso	mousse	plexiglass	

Bidirectional

graffiti	teargas
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Abstract and Concrete Mass Nouns

Unclear Direction

bebop

Comparing the nominal and verbal base distribution allows for interesting observations in the mass noun category. While there are less verb bases than noun bases in the abstract category, there are no verb bases in the concrete mass noun class at all. Thus, this study suggests the possibility of verbs to serve as bases for conversions to abstract mass nouns rather than concrete mass nouns.

Finally, of the 5 nouns classified as both mass and count nouns, 2 are abstract nouns, 2 are concrete nouns and 1 bears an abstract and concrete meaning, depending on its context.

Abstract Mass and Count Nouns

Noun Base

prep

Verb Base

brainwash

Concrete Mass and Count Nouns

Bidirectional

mouthwash

Unclear Direction

sleaze

Concrete and Abstract Mass and Count Noun

Bidirectional

rehab

Summing up the analysis of nouns, the classification of the vast majority of the nominal conversion counterparts as common count nouns became apparent, while only a small percentage could be classified as proper nouns or mass nouns. Additionally, there were more concrete nouns than abstract ones, however, this difference was not as striking. Finally, for all three classifications, examples which belong to both categories could be

found. The number of nouns being used in both categories is the highest in the abstractness category.

4.4.2. Verbs

Like the nouns, the verbal conversion counterparts were also grouped according to three criteria: transitivity, telicity and dynamism.

4.4.2.1. Transitivity

The notion of transitivity refers to the verb's dependence on a direct object. Verb clauses, which require direct objects to be complete, are classified as transitive verbs, whereas intransitive verb clauses do not contain direct objects (Crystal 2003: 212).

The analysis of the 252 investigated apparent conversion pairs revealed a rather balanced distribution concerning transitivity. Out of the 252 conversion pairs, 81 verbs (32 per cent) show an intransitive clause structure, 89 (35 per cent) display a transitive structure, and 82 (33 per cent) can be used either transitively or intransitively, depending on their contexts.

Intransitive Verbs

Noun Base

bonefish	dogleg	gimmick	nightclub	pratfall
brunch	doppler	glop	nosh	scaloppine
buddy	dude	gridlock	orgasm	slapstick
cannonball	fishtail	hotel	pogo	synapse
chickenshit	flipflop	hydroplane	pooch	transition
dick	geek	licker	pork	

Verb Base

futz	harumph	oversteer	sleepwalk	zoop
galumph				

Bidirectional

backlash	deejay	parasail	spaz	zombie
brad	firewall	skateboard	telemark	
catnap	klutz	snippet	tentacle	

deadpan	paperclip	snowmobile	torque	
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Unclear Direction

backspace	doubletalk	heehaw	oink	thwap
bebop	downshift	homer	priss	vroom
boing	frenchkiss	humph	rollerblade	waterski
boogey	gaggle	kvetch	schuss	whump
breaststroke	grabass	lactate	slalom	yack
crossfade	harrumph	moonwalk	sleaze	

Transitive Verbs

Noun Base

autoclave	fedex	hologram	pothole	telex
backdrop	fiberglass	jeep	proctor	thumbnail
blowtorch	filet	mainstream	punk	vaseline
crud	gesso	mastermind	scapegoat	vector
duplex	golk	medevac	sealift	video
eagle	guilt	messenger	sequence	windex
electroshock	henna	napalm	shirttail	
eyeball	hijink	plexiglass	tarot	

Verb Base

brainwash	outperform	overstay	retrofit	revamp
debrief	overdub	proofread		

Bidirectional

badmouth	cohost	greenlight	mouthwash	straitjacket
blueprint	collage	hassle	shortlist	teargas
bookend	cornrow	increment	shotgun	videotape
bookmark	counterpoint	mammogram	shrinkwrap	
co-anchor	giftwrap	microwave	spiderweb	
co-sponsor	graffiti	mothball	stoat	

Unclear Direction

blindsides	handcraft	premix	showcase	teleport
bootstrap	jumpstart	presort	spritz	upload
cochair	kayo	re-release	telecast	wisk
flambe				

Transitive and Intransitive Verbs

Noun Base

birddog	deadend	helicopter	overnight	tailgate
blitz	debut	hotdog	pancake	wallboard
blitzkrieg	decoupage	juke	piggyback	wonk
broadside	demagogue	leaflet	potshot	
bullshit	dollop	lens	prep	
chopper	emcee	max	prototype	
crutch	firebomb	mousse	smog	

Verb Base

chomp	doubleclick	godamn	overplay	renege
defocus	emfol	misquote	recharge	swoosh
defrost	encode	narrowcast	relaunch	undock
dehorn				

Bidirectional

blog	juice	mentor	synch	zap
crosscheck	kayak	quarterback	telegram	
hostess	keyboard	rehab	triage	
hype	laser	snorkel	x-ray	

Unclear Direction

backpack	crosshatch	homeschool	photocopy	toke
bloop	deaccession	keypunch	preload	whomp
carpool	dive-bomb	outcross	reboot	
counterpunch	gronk	overspeed	refocus	

What seems noticeable is the fact that verb bases occur most often in the transitive and intransitive category. However, nominal, as well as verbal bases, can be found in the two other categories as well. Thus, the category of transitivity does not seem to considerably influence potential conversion processes between verbs and nouns.

4.4.2.2. Telicity

In addition to transitivity, the telicity of verb clauses was investigated. Telic situations are those which “must of necessity come to an end; moreover, until this point is reached [...] cannot come to an end“ (Comrie 1976: 44). Contrarily, this does not hold true for atelic situations, which do not have a built-in endpoint. Since the classification of

situations as telic or atelic depends not only on the verb itself but also on its arguments, one hereby speaks of (a)telic situations rather than (a)telic verbs (Comrie 1976: 45).

In the corpus, the great majority of recent apparent conversion verbs belong to atelic situations. While 182 verbs (72 per cent) were found to be used exclusively in atelic situations, only 23 verbs (9 per cent) are employed solely in a telic context. Finally, 47 conversion verbs (19 per cent) are utilized in both telic and atelic structures.

Verbs in Telic Situations

Noun Base

crud	hotel	medevac	synapse	wallboard
eagle	hydroplane	overnight	tarot	
henna	mastermind	proctor	transition	

Verb Base

defrost

Bidirectional

cornrow	telemark
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Unclear Direction

counterpunch	downshift	homer	kayo	telecast
deaccession	handcraft			

Verbs in Atelic Situations

Noun Base

autoclave	decoupage	firebomb	juke	pork
backdrop	demagogue	fishtail	leaflet	pothole
birddog	dick	flipflop	licker	potshot
blitz	dogleg	geek	mainstream	prototype
blitzkrieg	dollop	gesso	max	punk
bonefish	doppler	gimmick	mousse	scaloppine
broadside	dude	glop	napalm	scapegoat
brunch	duplex	golk	nightclub	sequence
buddy	electroshock	gridlock	nosh	shirttail
bullshit	emcee	guilt	pancake	slapstick
cannonball	eyeball	helicopter	piggyback	tailgate

chickenshit	fedex	hijink	plexiglass	thumbnail
crutch	fiberglass	hologram	pogo	vaseline
deadend	filet	hotdog	pooch	wonk

Verb Base

brainwash	emfol	godamn	outperform	retrofit
debrief	encode	harumph	overdub	sleepwalk
defocus	futz	misquote	oversteer	undock
doubleclick	galumph	narrowcast	renege	zoop

Bidirectional

backlash	deadpan	keyboard	quarterback	stoat
badmouth	firewall	klutz	rehab	straitjacket
blog	graffiti	laser	shortlist	teargas
blueprint	greenlight	mammogram	shrinkwrap	tentacle
bookend	hassle	mentor	skateboard	torque
brad	hostess	microwave	snippet	triage
co-anchor	hype	mothball	snorkel	x-ray
collage	increment	mouthwash	snowmobile	zap
counterpoint	juice	paperclip	spaz	zombie
crosscheck	kayak	parasail	spiderweb	

Unclear Direction

bebop	crosshatch	homeschool	preload	thwap
blindsides	dive-bomb	humph	premix	toke
bloop	doubletalk	jumpstart	presort	vroom
boing	frenchkiss	keypunch	priss	waterski
boogey	gaggle	kvetch	re-release	whump
bootstrap	grabass	lactate	rollerblade	wisk
breaststroke	gronk	oink	showcase	yack
carpool	harrumph	outcross	sleaze	
crossfade	heehaw	overspeed	spritz	

Verbs in Telic and Atelic Situations

Noun Base

blowtorch	jeep	orgasm	sealift	vector
chopper	lens	pratfall	smog	video
debut	messenger	prep	telex	windex

Verb Base

chomp	overplay	proofread	relaunch	swoosh
dehorn	overstay	recharge	revamp	

Bidirectional

bookmark	co-sponsor	deejay	shotgun	telegram
catnap	cohost	giftwrap	synch	videotape

Unclear Direction

backpack	flambe	reboot	slalom	whomp
backspace	moonwalk	refocus	teleport	
cochair	photocopy	schuss	upload	

While the percentage of verb bases is quite low for verbs in telic situations, the percentages of verb bases for verbs in atelic situations and for verbs applicable in both atelic and telic situations are rather high. Hence, while all form classes can serve as verbal input categories for conversions, verb bases are more likely in the latter categories, while noun bases occur relatively often in all categories.

4.4.2.3. Dynamism

Finally, dynamic verbs were distinguished from stative verbs. While dynamic verbs refer to changing situations or actions, stative verbs describe states (Alexander 1988: 160).

The dynamism analysis of the 252 apparent conversion pairs revealed that the vast majority of verb clauses are dynamic. Only 3 of the 252 apparent conversion pairs (1 per cent) are stative, while the other 249 (99 per cent) conversion verbs show a dynamic verb structure.

Verbs in Stative Situations

Noun Base

deadend	dogleg
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Bidirectional

bookend

Verbs in Dynamic Situations

Noun Base

autoclave	dollop	guilt	nightclub	sequence
backdrop	doppler	helicopter	nosh	shirttail
birddog	dude	henna	orgasm	slapstick
blitz	duplex	hijink	overnight	smog
blitzkrieg	eagle	hologram	pancake	synapse
blowtorch	electroshock	hotdog	piggyback	tailgate
bonefish	emcee	hotel	plexiglass	tarot
broadside	eyeball	hydroplane	pogo	telex
brunch	fedex	jeep	pooch	thumbnail
buddy	fiberglass	juke	pork	transition
bullshit	filet	leaflet	pothole	vaseline
cannonball	firebomb	lens	potshot	vector
chickenshit	fishtail	licker	pratfall	video
chopper	flipflop	mainstream	prep	wallboard
crud	geek	mastermind	proctor	windex
crutch	gresso	max	prototype	wonk
debut	gimmick	medevac	punk	
decoupage	glop	messenger	scaloppine	
demagogue	golk	mousse	scapegoat	
dick	gridlock	napalm	sealift	

Verb Base

brainwash	doubleclick	harumph	overstay	retrofit
chomp	emfol	misquote	oversteer	revamp
debrief	encode	narrowcast	proofread	sleepwalk
defocus	futz	outperform	recharge	swoosh
defrost	galumph	overdub	relaunch	undock
dehorn	godamn	overplay	renege	zoop

Bidirectional

backlash	counterpoint	juice	quarterback	straitjacket
badmouth	crosscheck	kayak	rehab	synch
blog	deadpan	keyboard	shortlist	teargas
blueprint	deejay	klutz	shotgun	telegram
bookmark	firewall	laser	shrinkwrap	telemark
brad	giftwrap	mammogram	skateboard	tentacle
catnap	graffiti	mentor	snippet	torque
co-anchor	greenlight	microwave	snorkel	triage
co-sponsor	hassle	mothball	snowmobile	videotape

cohost	hostess	mouthwash	spaz	x-ray
collage	hype	paperclip	spiderweb	zap
cornrow	increment	parasail	stoat	zombie

Unclear Direction

backpack	crosshatch	homer	preload	telecast
backspace	deaccession	homeschool	premix	teleport
bebop	dive-bomb	humph	presort	thwap
blindsides	doubletalk	jumpstart	priss	toke
bloop	downshift	kayo	re-release	upload
boing	flambe	keypunch	reboot	vroom
boogey	frenchkiss	kvetch	refocus	waterski
bootstrap	gaggle	lactate	rollerblade	whomp
breaststroke	grabass	moonwalk	schuss	whump
carpool	gronk	oink	showcase	wisk
cochair	handcraft	outcross	slalom	yack
counterpunch	harrumph	overspeed	sleaze	
crossfade	heehaw	photocopy	spritz	

Of the three verbs in stative situations, none has only a verbal base. Thus, verbal conversion counterparts in stative situations occur as the product of a conversion process, rather than as the input.

Summing up the analysis of verbs, the great majority of verb situations can be classified as dynamic and atelic. In terms of their transitivity, the verbs are evenly distributed between the two categories, with a large percentage of verbs being applied in both transitive, as well as intransitive, situations.

4.4.3. Additional observations

Additionally to these verbal and nominal categories, three other interesting observations can be made. Of all 252 apparent conversion pairs, 15 pairs (6 per cent) are onomatopoeic (*bloop*, *boing*, *chomp*, *harrumph*, *harumph*, *humph*, *gronk*, *oink*, *swoosh*, *thwap*, *vroom*, *whomp*, *whump*, *zap* and *zoop*). Furthermore, the base for 5 apparent conversions are shortenings (*emcee*, *kayo*, *prep*, *rehab* and *max*). Finally, as has been

mentioned in the previous section, a striking number of apparent conversion pairs (104 pairs or 41 per cent) can be classified as compounds.

Compounds

Noun Base

backdrop	chickenshit	flipflop	medevac	prototype
birddog	deadend	gridlock	nightclub	scapegoat
blitzkrieg	dogleg	hologram	overnight	sealift
blowtorch	electroshock	hotdog	pancake	shirttail
bonefish	eyeball	hydroplane	piggyback	slapstick
broadside	fiberglass	leaflet	plexiglass	tailgate
bullshit	firebomb	mainstream	pothole	thumbnail
cannonball	fishtail	mastermind	potshot	wallboard

Verb Base

brainwash	narrowcast	overdub	overstay	proofread
doubleclick	outperform	overplay	oversteer	sleepwalk

Bidirectional

backlash	deadpan	microwave	shortlist	straitjacket
badmouth	firewall	mothball	shotgun	teargas
blueprint	giftwrap	mouthwash	shrinkwrap	telegram
bookend	greenlight	paperclip	skateboard	telemark
bookmark	keyboard	parasail	snowmobile	videotape
catnap	mammogram	quarterback	spiderweb	x-ray

Unclear Direction

backpack	carpool	handcraft	outcross	telecast
backspace	dive-bomb	homeschool	overspeed	teleport
blindside	doubletalk	jumpstart	photocopy	upload
bootstrap	frenchkiss	keypunch	rollerblade	waterski
breaststroke	grabass	moonwalk	showcase	

The majority of compound conversions in this analysis are based on nouns rather than on verbs. This does not seem surprising, considering that compound nouns converted to compound verbs account for a large part of all compound verbs in English (Bauer & Huddleston 2002: 1642). However, compound conversions in the other direction are possible as well and even bidirectional compound conversions seem possible.

4.4.4. Discussion

The analysis of the nominal and verbal counterparts of the recent apparent conversion pairs highlights the diverse natures of the lexical items involved in conversion processes. Besides the fact that the recent conversion pairs were unsurprisingly more likely to occur with common and count nouns rather than proper and mass nouns, respectively, the investigation has revealed that generally atelic and dynamic verb clauses occur significantly more often than telic and stative situations. The distribution of abstract vs. concrete nouns and transitive vs. intransitive verbs was rather even. The results thus suggest that recent conversion processes occur between various form classes and therefore constitute a productive word formation process to and from many diverse form classes in the English language.

Considering the bases of these conversion processes, two particular findings seem noticeable. First, abstract nominal conversion counterparts are considerably often based on verbs, while concrete noun conversions almost exclusively form the input category to conversion. Thus, verbs are far more likely to serve as sources for abstract rather than concrete nouns. Secondly, this study has neither established a verb-based concrete mass noun nor a verb-based stative verb. Hence, these two output categories seem to be particularly dependent on a denominal or bidirectional conversion process.

Besides these valuable findings, two limitations to this systematic analysis have to be mentioned. First, this part of the analysis is based on the written English COHA corpus and therefore the results only hold true for written English and not the English language as a whole. Hence, it would be useful to systematically compare spoken English conversions to written English conversions in the future. Secondly, while 75 percent of the directions could be established by the directionality criteria in the previous chapter, 25 per cent of the directions remain uncertain. Establishing these directions as well could influence the conclusions drawn in this systematic analysis.

5. Conclusion

This diploma thesis sought to fulfill four major objectives: First, it aimed at presenting an ample definition for conversion, as well as at providing criteria for establishing directionality of conversion pairs. Secondly, it attempted to give a brief overview of the major points of considerations in the field of corpus linguistics. Thirdly, it aimed at establishing directionality of a data set of 252 recent apparent conversions through an empirical analysis. Finally, it sought to systematically review conversions and classify the nominal and verbal conversion counterparts according to different semantic classes.

To reach the first aim, a detailed overview of the current state of research on conversion was provided. Therefore, marginal opinions on conversion were introduced before the prevailing understanding of conversion as a derivational process was supported. A precise examination made apparent that even within derivational morphology, the opinions vary. The contrasting theories either view conversion as covert affixation with a zero-morpheme or argue against all kinds of affixation. As a result of considerable difficulties for a zero-derivational reading, this diploma thesis supported the derivation without affixation theory. Thereafter, various types of conversion between different word and form classes were introduced. This analysis revealed the difficulty of categorizing certain phenomena as conversions or demarcating them from this linguistic field. Further, the developmental stages of conversions, which enter a language permanently, were outlined and similarities and differences to nonce-formations, which only exist in a language for a short period of time, were established. Concluding the section on the definition of conversion, the word formation process was analyzed in the context of natural morphology before German conversions were briefly introduced.

Having established a definition of the conversion process, the diploma thesis attempted to find criteria to establish directionality of conversion pairs. However, finding suitable criteria proved to be rather difficult. First, the generally most widely known synchronic criteria for establishing directionality by Marchand (1964) were introduced and critically examined. As several difficulties concerning Marchand's directionality criteria could be unveiled, the application of additional synchronic, as well as diachronic criteria was suggested.

The third part of this diploma thesis dealt with the linguistic discipline of corpus linguistics. First, a general overview of what typically characterizes a corpus was given, establishing the five key features sampling and representativeness, finite size, machine-readability, applicability as a standard reference (McEnery & Wilson 2001: 29) and authenticity (Tognini-Bonelli 2001: 55). Subsequently, the advantages and disadvantages of working with annotated and unannotated corpora were introduced before quantitative and qualitative research methods were presented as complementary rather than contrasting approaches. Hereby, possible difficulties for corpus analyses were highlighted and it was recommended to treat corpus data with a certain degree of caution. Finally, it was predicted that the linguistic field of corpus linguistics is prone to change as vast technological advancements can be expected and, as a result, adaptations to present research strategies will become necessary.

Having established these two major theoretical foundations, the diploma thesis moved to a corpus-based analysis of conversions. The target data set was defined as including all recent American English conversion pairs between nouns and verbs. Furthermore, the choice of COHA corpus as the source for this analysis and the utilization of its frequency list was justified. After filtering potential conversion pairs from the COHA corpus frequency list, the received data set was cross-checked through the online mask of the corpus. As several mistagged lexical items could be found, it soon became apparent that the COHA corpus' frequency list lacked complete reliability. Therefore, a manual refinement of the raw data was necessary, requiring each of the 3677 potential conversion pairs to be manually entered into the online mask of the COHA corpus. Among the most common corpus problems were tagging errors but additional corpus difficulties became apparent as well. Therefore, the data set shrank drastically to less than a tenth of the initial raw data. While the existence of wrongfully added potential conversions could be counterbalanced by this extensive manual effort, the problem of the corpus possibly containing additional conversions, which cannot be filtered from the corpus, could not be solved.

Thereafter, in order to ensure that the target data set only consisted of core cases of conversion, conversions with different stress patterns and without semantic overlaps

were excluded from the data set. Having completed these research steps, the final data set consisted of 252 recent apparent conversions between nouns and verbs in American English. These 252 word pairs were then analyzed in terms of their directionality and their systematic characteristics.

In the first part of the empirical analysis Marchand's (1964) synchronic directionality criteria (restriction of usage, semantic dependence, semantic pattern, phonetic shape, and morphologic type), as well as two diachronic criteria (etymology and date of first record) as proposed by Balteiro (2007b), were applied to the data set. The investigation revealed that none of the criteria could establish directionality for all conversion pairs under examination. Thus, finding completely reliable criteria to accurately establish directionality for all conversions pairs remains unresolved at this point and requires further research in the future. This finding is in accordance with a similar directionality analysis by Balteiro (2007b), which focused on the most common British English conversion pairs.

Nonetheless, while directionality could not be established for all conversion pairs, a considerable number of directions could be identified if several criteria were applied simultaneously only in those cases where they provided directionality. Under these circumstances, agreeing directions could be found in 75 per cent of the total. Of these directions the majority were denominal (39 per cent) but also bidirectional (24 per cent) and deverbal directions (12 per cent) could be established. Thus, all three potential directions were found to be productive in present-day American English.

Besides directionality, the analysis provided another interesting finding. While Balteiro (2007b: 159f) claimed in her study that conversions "are almost exclusively concerned with underived items, or rather, with simple bases" (ibid), the data set under investigation showed contrasting tendencies, as it consisted of roughly 40 per cent of compound conversions. Interestingly, the vast majority of these compound conversions were headed by conversions themselves, which suggests a high likelihood of this pattern in recent American English.

The second part of the empirical study focused on a systematic analysis of the 252 apparent conversion pairs, revealing that various form classes are involved in the conversion process. While conversions in all categories, i.e. proper and common nouns; count and mass nouns; abstract and concrete nouns; transitive and intransitive verbs; telic and atelic verb situations; stative and dynamic verb situations, could be identified, the process of conversion occurred most often with common and count nouns and atelic and dynamic verb situations rather than with their counterparts. Furthermore, a pattern of verbs being converted to abstract rather than concrete nouns was identified and a high unlikelihood of verbs to be converted to mass nouns became apparent.

While these analyses contributed to valuable findings on the nature of conversion, one considerable limitation of this study has to be mentioned. This empirical study was based on written American English, rather than the whole language variety as such. Although the written language allows for some useful observations, further research on spoken data seems necessary as conversions often enter the language through the spoken medium. Hereby, it seems particularly valuable to compare spoken occasionalisms to those lexical items which manage to surpass spoken boundaries and are permanently added to the vocabulary of a language.

In my opinion, it is in particular the comparison between conversions in the spoken and written media, but also the directionality criteria and compound conversion, which require a fundamental analysis in the future. Given the vast productivity of conversion, and the linguists' continued fascination by this word formation process, I am convinced that the field of conversion will continue to spark valuable discussions in the future.

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7. Appendix

Abstract

Linguistic conversions, i.e. formally indistinguishable lexical pairs, bearing a semantic relation, but appertaining to contrasting word (or form) classes, are just as fascinating as they are controversial. Considering the nature of conversions, as well as the direction of the conversion process, several disagreements among linguists become apparent. It is these disagreements this diploma thesis aims at dissolving by providing an ample definition for conversion, as well as by reviewing reliable criteria to investigate directionality. Having established a theoretical framework, the discussion moves to an empirical analysis of recent N/V American English conversion pairs, focusing on their directionality, as well as their systematical classification. While the state of the art concerning directionality criteria is found to be slightly unsatisfactory – 25% of the directions cannot be established –, the systematic analysis successfully reveals that some form classes are more likely to be involved in the conversion process than others. In addition, the empirical analysis illustrates the necessity of critically evaluating the corpora utilized in linguistic analyses and suggests the increasing relevance of compound conversions in American English.

Zusammenfassung

Linguistische Konversionen, i.e. formal identische Wörter, die verschiedenen Wort- oder Formklassen angehören, sind sowohl faszinierend, als auch umstritten. Die Natur der Konversionen an sich ist hierbei genauso kontrovers wie die Direktionalitätsbestimmung der Konversionspaare. Die vorliegende Arbeit bietet daher eine umfangreiche Definition dieses linguistischen Wortbildungsverfahrens sowie eine kritische Betrachtung gängiger Kriterien zur Richtungsbestimmung. Auf das theoretische Fundament aufbauend, wird eine empirische Analyse von rezenten N/V Konversionen im amerikanischen Englisch durchgeführt, in der sowohl die Richtung der Konversionspaare, als auch deren systematische Klassifikation erfolgt. Diese Analyse zeigt zum einen, dass die Direktionalitätskriterien einiger Überarbeitung bedürfen, da die Richtung von 25% der Konversionspaare nicht eruiert werden kann. Weiters wird festgestellt, dass manche der Formklassen mit einer höheren Wahrscheinlichkeit in den Konversionsprozess involviert sind, als andere. Zusätzlich zu diesen Ergebnissen wird die Notwendigkeit der kritischen Evaluation linguistischer Korpora sowie die steigende Relevanz von Kompositum-Konversionen im Amerikanischen Englisch dargestellt.

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