From Turncoats To Backstabbers:

How Headedness and Word Order Determine the Productivity
of Agentive and Instrumental Compounding in English

Word Count: 14,570

Abstract

According to a study by Clark et al (1986), English-speaking children spontaneously create exocentric V+N (*turncoat*) compounds during the development of agentive and instrumental compounding. Historically, the *turncoat* pattern has low productivity in English. Appendix A is a chronological list of all of the known *turncoat* compounds that entered English between 1050 and 2009. Only two new words of this pattern have been created in the past fifty years: *Xpel-air* and *Pesterchum*.

Turncoat compounds are advantageous for children learning verb-object (VO) languages such as English and Spanish because the pattern mirrors the syntax. Forms which are simple and transparent in accordance to the headedness and word order of a language are productive for both children and adults. Patterns that are structurally unclear or that conflict with syntactic features will be abandoned.

The advantage of simplicity that *turncoat* compounds offer to children is outweighed by its many semantic limitations and unmarked structure. The synthetic N+V+er (*backstabber)* pattern, on the other hand, complies with the headedness of English, is not limited by semantic clumping or verb transitivity, and can describe neutral objects as productively as reductive insults. *Backstabber* compounds also flourish in West Germanic languages, which share right-headedness with English.

Turncoat compounds are memorable and evocative descriptors of objects and occupations, but because of their clash with the headedness of English, their productivity will never surpass *backstabber* compounds.

Acknowledgments

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1. Introduction

A compound is a concatenation of two words put together to form a new word that acts as a single unit. Every language has some amount of compounding, it is one of the cross-linguistic features of human language. The formation of compound words in English both borrows from rules in Romance and Germanic languages yet holds some originality in their creation. Despite the presence of spelling abnormalities, irregular verbs and borrowed vocabulary, foundational principles dictate the structure of the English language.

In her search to find why certain compounding forms are productive in Spanish, Moyna (2011, p. 5) posits that the adult productivity of compounding patterns in a language is motivated by the childhood acquisition of compounds in that language: "All things being equal, patterns that offer advantages in the process of language acquisition by children will tend to prevail." Examining the acquisition of compounds in children illustrates the development and dissolution of compounding patterns in English.

Children acquiring English must learn basic rules for monomorphemic word formation first, then expand on these rules to create compounds. Clark et al (1986) show the development of compound creation in children based on the principles of simplicity and transparency. Children begin with simple words and transparent patterns that are easy to create and understand, then add affixes and rearrange constituents to create more complicated patterns as skills develop into adulthood.

When shown simple pictures of people and items, children in Clark et al's landmark 1986 study were asked to create a compound word to name them. The results concluded that there are different stages children advance through as they develop. While progressive stages of difficulty are not surprising, Clark et al found that children learning English consistently use a compound pattern that is rarely found in the language. This pattern, exocentric verb-noun (V+N), has been largely deserted by English speakers, though children spontaneously use it without provocation. Why do children use a pattern they have little exposure to and why has that pattern, still thriving in Romance languages, become extinct in English?

The structure of this dissertation is as follows: Section 2 covers basic compound terminology and word formation theory, while Section 3 defines compoundhood. Section 4 will present data from Clark et al (1986) to integrate child acquisition into the mix of factors that determine compound productivity. Section 5 presents the methodologies of data collection used throughout this dissertation,

specifically in regard to Appendix A (attached). Section 6 summarizes English compounding, then focuses on the historical use of the rare pattern exocentric [V+N]. Section 7 and 8 summarize compounding in Romance and West Germanic languages, specifically in regard to their own developmental stages of compound acquisition. Section 9 puts forth a proposal as to why [V+N] has disappeared while [N+V+er] has thrived. Section 10 weighs possible counterarguments to Section 9. The findings will be further discussed in Section 11, concluding in Section 12.

2. Compounding Terminology

Before the Clark et al study is discussed in detail, basic compounding terms such as headedness, endocentricity and exocentricity, and word order will be defined.

2.1 Headedness

The most important concept in compounding is headedness. The head of a compound percolates its features to the entire compound, determining the form, meaning, and gender of the compound.

Languages are either left-headed or right-headed, meaning that the dominant constituent in a noun phrase appears on the left or right side. Headship can also be described as head-initial and head-final, or left-hand headed and right-hand headed. Romance compounds are commonly head-initial (left-headed), while English and Germanic compounds are head-final. In the syntax, headedness is discernable through the order in which a noun and its adjective appear in a noun phrase.

Chart 1. Left- and Right-Headedness in the Syntax

	Language	'The tired panda'	Headedness
1.	Dutch	*De vermoeide panda*	Right
2.	German	*Der müde Panda*	Right
3.	Norwegian	*Den slitne panda*	Right
4.	Catalan	*El panda cansat*	Left
5.	French	*Le panda fatigué*	Left
6.	Italian	*Il panda stanco*	Left

Examples 1-3 show that in right-headed languages such as Dutch and German, the noun, which is the head of the phrase, appears after the adjective. Romance syntax

uses an opposing structure, with the head noun appearing before the adjective, shown in examples 4-6.

The headedness which appears in the syntax of a language is mirrored in the structures found in its compounding. Compounds which combine an adjective with a noun retain the same order as they would in a sentence as seen in 7-10.

7. Dutch   *Een sneltrein*   fast+train   'an express train'

8. German   *Die Dunkelkammer*   dark+room   'a photography dark room'

9. French   *Un coffre-fort*   safe+strong   'a safe or strongbox'

10. Spanish   *Un pastor alemán*   shepherd+German   'a German shepherd dog'

Like Dutch and German, English is also right-headed, as shown in prototypical compounds such as *bluebird* and *hot tub*. The main feature that the head constituent determines is the lexical category. In English, adjective-noun compounds describe nouns, while the limited noun-adjective pattern is used for adjectives, most commonly to describe colors.

11.   Adj+N   blackboard, hot tub, bluebird, strongman, fast food

12.   N+Adj   army green, sky blue, brick red, ice cold

The composition of *bluebird* can be written as $[Adj+N_i]N_i$, where the elements inside the brackets describe the lexical category of the constituents, and the N_i outside of the brackets marks the lexical category of the compound. The microsyntax of the patterns in 11 and 12 are shown in 13 and 14, respectively.

13. $[Adj+N_i]N_i$ 14. $[N+Adj_i]Adj_i$
      N_i Adj_i

Adj N_i N Adj_i
blue   bird   sky   blue

Beyond percolating its word class to the whole compound, the head of the compound also projects its semantic meaning to the whole. A *bluebird* is a type of bird, making the compound a hyponym of the head. Likewise, *sky blue* modifies the hue of blue being described.

The head of a compound also determines the inflection of a compound, which in English is expressed only through pluralization. (In languages with case, such as Romanian or Latin, the head would also determine the declension of the compound.) The pluralization of the noun-noun compound *sweater-vest* is shown by pluralizing *vests* to make *sweater-vests*, not by the modifying left-hand constituent as in **sweaters-vest*. Similarly, the Dutch verb-noun compound *de slaapkamer* 'the sleep+room' (bedroom) inflects as *de slaapkamers.* In left-headed languages like Spanish, the left-

hand constituent carries the pluralization marker, as seen in *el pájaro campana* 'bell+bird' (the bellbird, a species of bird), whose plural form is *los pájaros campana.*

The Spanish compound for *bellbird* also demonstrates another facet of headship, the percolation of gender to the whole compound. While *la campana* is a feminine noun, *el pájaro* is masculine, which is reflected in the final compound through the masculine definite article *el*.

15. $[N_i+N_j]N_i$
N_i (masc.)

N_i (masc.) N_j (fem.)
el pájaro   la campana
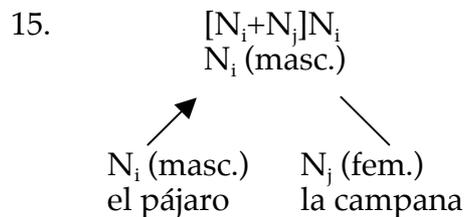
English does not have gender designations in its word classes or definite articles, therefore there are fewer criteria to determine headedness in English compounds. The lack of word class markers, gender, and cases in English is one of the reasons that linguists find it difficult to find cross-language definitions of compoundhood. Strong indicators of a compound in one language may be irrelevant in another. English must depend on lexical category, semantic meaning, order of constituents, and pluralization to determine the head.

All of the compounding examples so far have been bare root compounds, consisting of two independent lexemes which have been joined together without modification. When an affix is added to a bare root compound that changes the lexical category of one of the constituents, it becomes a synthetic compound. The most common synthetic compounds in English are [V+ing+N] and [N+V+er] as in *shooting range, firing squad, flyswatter* and *firefighter*.

2.1.1 Exocentric v. Endocentric Compounds

All the compounds discussed so far have been endocentric, because the head of the compound is contained within the compound itself. Exocentric compounds, on the other hand, do not contain a head that determines the features of the compound. *Black hat* is an exocentric compound that describes an evil person, based on the convention of villains wearing black cowboy hats in Westerns.

16. $[Adj_i+N_j]N_k$
N_k (person)

Adj$_i$ N_j
black   hat
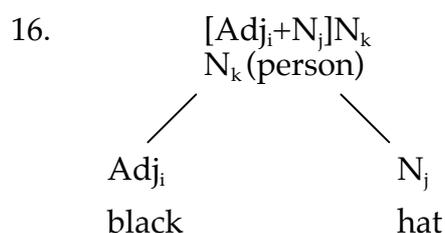
Although *hat* and *black hat* are both nouns, *hat* is not the head of the compound. While *blackboard* is a type of board, *black hat* is a type of person, not a type of hat. The head of *black hat* is external to the compound, making the pattern exocentric. The nouns are not co-referents as they are in *blackboard*, and instead have different subscript letters. Exocentric compounds often have an implied head of either 'person or 'thing' as in (person with a) *birdbrain* or (thing with a) *hammerhead*.

The most structurally complex of the exocentric compounds are verb-noun compounds like *killjoy* and *scarecrow* in which the noun is the direct object of the verb. *Killjoy* is understood as 'a person who kills joy.' The right-hand constituent of *killjoy* is *joy*, but it is not the head because the compound as a whole refers to a type of human, not a type of joy.

17. $[V_i+N_j]N_k$
            N_k (person)

            V_i N_j
            kill   joy
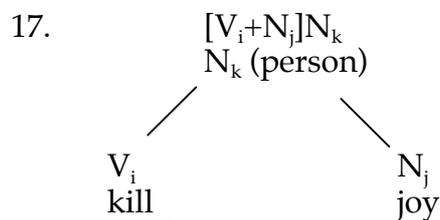
In the internal structure of exocentric verb-noun compounds, the verb governs the nominal constituent. On its most basic level, the head of a compound is the dominant constituent. Internally, the verb is the dominant half, but externally, it does not inflect for pluralization or match the word class of the compound.

Exocentric verb-noun (*turncoat*) compounds do not contain any strong candidates for a head constituent. The noun carries pluralization, but is not a hypernym of the compound, and while the verb is dominant over its direct object, it does not determine the lexical category of the word. This compounding pattern is headless, with an implied person or thing existing outside of the compound.

2.2 Word Order

Just as languages can either be left- or right-headed, languages can have one of two possible structures for the order of a verb and its direct object in a sentence: verb-object (VO) or object-verb (OV).

There are far more VO than OV languages in the world. While both Romance languages and English are VO languages, both have historically had OV as an option. VO and OV were competitors before Middle English, when VO became the dominant structure (Trips 2002). Late Latin experienced a period of VO/OV coexistence, but the VO pattern was dominant by the time that Romance languages began to develop, leading to a strong VO preference in Modern Romance languages.

(Moyna 2011). Scandinavian-Germanic languages such as Swedish and Danish also have VO order. On the other hand, German and Dutch are OV languages.

In general, VO languages have a rigid word order, whereas OV languages are flexible in their structure. Koster (2000) proposes that the VO/OV parameter is merely a superficial product of a deeper syntactic difference between languages. He finds that the difference in word order flexibility can be explained by the fact that OV languages like Dutch match the verb phrase (VP) against each portion of the phrase, whereas English and VO languages have a wider phrase-checking parameter, and match the VP with the entire phrase. Since OV languages are checked several times, the order does not matter, whereas English necessitates the order remaining rigid so that the VP can be checked against the phrase in its entirety. Koster (2000, p. 39) writes that "by assuming that the English checking phrase for VP-material is the whole VP instead of any of its constituents, we can for the first time explain why there are OV and VO languages in the first place."

The remainder of this paper will continue to distinguish between the two structural options as the VO/OV distinction. The flexible nature of OV languages will come into play later as compounding strategies are considered.

2.3 Headedness and Word Order

The last two sections have discussed headedness and word order. Combining the two features together, there are four possible combinations of those binary features. Romance languages are left-headed and use VO word order, while Germanic languages are right-headed and use OV word order. English is a mix of the two, being right-headed and using VO. There are no known left-headed languages that use OV word order apart from Classical Latin.

Chart 2 shows the related structures of English, Romance and Germanic languages, along with their most productive compounding patterns.

Chart 2. Headedness and Word Order in 3 Language Systems

	Headship	Word Order	Productive Agentive Compounds
Germanic	RIGHT	OV	Endocentric V+N, N+V+er
English	RIGHT	VO	N+V+er, V+ing+N
Romance	LEFT	VO	Exocentric V+N

The sentences below in 18-21 show the kinds of sentences that result from combining headedness and word order. The example sentences contain relative clauses, where VO and OV languages tend to exhibit their word order more

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prominently, according to Bok-Bennema and Kampers-Manhe (2006, p. 20). They argue that relative clauses are therefore linked to the phrasing used in compounding.

18. I thought that he *baked* a *tasty cake*.   Right VO   English
                  verb   *adj   object*

19. Je pensais qu'il *cuit* un *gâteau savoureux*.   Left   VO   French
                  verb   *object adj*

20. Ik dacht dat hij een *lekkere taart gebakken*.   Right OV   Dutch
                  adj   object verb

21. I thought that he a *cake tasty baked*.   Left   OV   -
                  object adj verb

Armed with an understanding of wordhood, compoundhood, headedness, and word order, the next section will lay out the debate between syntax and morphology, and how the two realms are united in compounding.

3. Syntax v. Morphology in Compounding

The study of compounds inhabits the intersection between syntax and morphology. While compounds require internal structure to determine headedness and the relationship between the constituents, a speaker must also know the meaning of words to comprehend a compound. This section provides a review of recent word formation theories as well as a glimpse into advanced debates about wordhood and compoundhood.

3.1 Recent Theories of Word Formation

The degree to which compounds are syntactically and morphologically governed has dominated the discussion of compound morphology since the Lexicalist Hypothesis was introduced in 1987 by DiSciullo and Williams, in which they view words (and therefore compounds) as consisting of several unconnected facets. They argue that "syntax and morphology are entirely separate domains of inquiry and that it is therefore incoherent to speak of syntactic rules affecting morphological structures." (Spencer 1991, p. 435) Since they view morphology and syntax as completely isolated from each other, words exist in several dimensions, and comply with the rules of each system independently.

DiSciullo and Williams claim that there is no way to synchronize the rules which apply in one sphere to the domain of another. In this way, one word can be simultaneously thought of in three ways; as a morphological object, as a syntactic atom and as a listeme, with no overlap between the three, apart from a shared technical vocabulary. Under morphological rules, a word is created from morphemes through processes like affixation and compounding. From the syntactic rules, words are atomic building blocks of sentence structures. Finally, under the title of listemes, words, phrases, and idioms exist in the lexicon, and can be understood as "the linguistic expressions memorized and stored by speakers" (Spencer 1991, p. 425). Lexical items and listemes can be thought of as separate dictionary entries in the brain. Each unit of sound and meaning is catalogued such as an *apple*, *apple pie*, *Apple records*, and *Big Apple*.

While this theory allowed linguists to explore words from each of their unique technical viewpoints, it did not allow for findings in morphology to affect those in syntax, thereby limiting the larger perspective about the creation and functionality of words, especially compounds.

Linguists such as Beard reacted to this extreme view by creating the Separation Hypothesis, which advocates "divorcing the form of both inflection and derivational affixes from their function." (Spencer 1991, p. 431) Beard's model posits that word formation begins in the lexicon, where derivation takes place, after which morphological rules may be applied to a word, before finally being subjected to phonological rules. In this way, syntax and morphology rule over separate domains which words pass through linearly, before they emerge as a finished product.

Chart 3. The Separation Hypothesis

I. Derivation in the Lexicon	II. Morphological Rules	III. Phonological Rules

Though the Separation Hypothesis, as shown in Chart 3, maintains the division of rules, it relates the three facets of wordhood, which allows syntacticians and morphologists to engage in a dialogue. This also addresses one of the major issues with the Lexicalist Hypothesis: zero morphology. Zero morphology occurs when a word changes an internal property without any visible changes, as found in the singular and plural forms of *sheep* or the change of *run* from a verb to a noun. Beard solves this by declaring that "conversion is derivation with no affixation." This means the change of lexical categories which *run* undergoes takes place in the lexicon (Stage I), before the rules of morphology influence its form. When the

morphological rules are applied to a converted word like an ex-verb in Stage II, it appears to the morphology as its converted form of a noun, and the morphological rules treat it as such.

Japanese linguists Shibatani and Kageyama (1988) continue the conversation of word formation processes with the introduction of 'post-syntactic compounding.' In Japanese, compounds can be formed out of syntactic phrases in any sentence. This ability to apply morphological rules after the application of syntactic rules defies the previous notions mentioned above. Shibatani and Kageyama found that the newly formed compounds change their pitch pattern from that of two separate lexemes to that one of a single pattern as in *yaMA* 'mountain' and *noBORI* 'climbing' to *yaMA-NObori* 'mountaineering' where the capital letters represent the high tones (Spencer 1991, p. 444). From post-syntactic compounding, a new flowchart of word formation is developed, in which a word can begin in the lexicon, or through syntax, or through phonology (Spencer 1991, p. 447).

After creation, an independent 'morphology module' checks the wellformedness of a word, regardless of its initial origin. As with the previous hypotheses, syntactic and lexical rules exist independently of each other, but now they are able to communicate with the morphological module as a liaison. The addition of a phonology module that govern aspects such as pitch, allows Japanese post-syntactic compounds to fit in the model. Chart 4 illustrates this relationship.

Chart 4. Shibatani and Kageyama's model as in Spencer (1991, p. 447)

Morphology Module	→	Lexicon (e.g. lexical compounding)
	→	Syntax (e.g. syntactic compounding)
	→	Phonology (e.g. post-syntactic compounding)
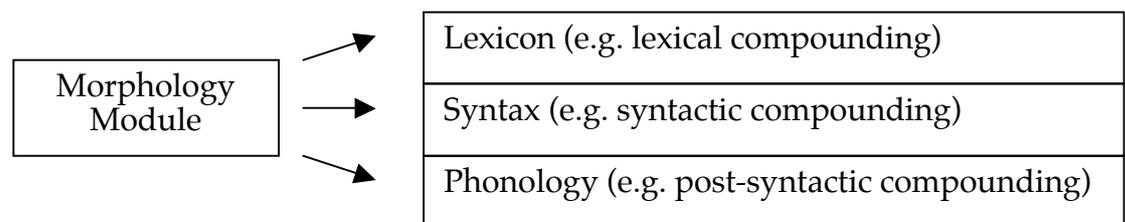
Though the Lexical Hypothesis allows for more streamlined flowcharts, such a simplistic view is indefensible with the acknowledgement of zero morphology and Japanese post-syntactic compounds. Word formation and compounding have been studied mainly through the lens of Romance languages. The discoveries of Shibatani and Kageyama encourage the communication of the world's languages as a means to finding a cross-linguistic explanation of the word formation process.

Looking forward, Kornfeld (2009, p. 452) advocates the union of syntax and morphology, explaining that:because

> "compounds can include certain syntactic structure, it seems more plausible to conceive of them as the product of 'reduced syntax' (or microsyntax), in

which certain properties of 'real' syntax are available while other properties
are not."

The debate about the degree to which words and compounds are influenced by
syntax will continue, but the complete separation championed by the Lexicalist
Hypothesis is no longer possible.

3.2 Defining Compoundhood

The defining features of a compound are a mix of structure and meaning. The
following section will discriminate between common attributes of compounds that
are valid in determining compoundhood, and those which are not.

3.2.1 Compound Atomicity, Idiomaticity and Fixity

Compounds can have all the possible relationships of a sentence between its two
constituents (temporal, locative, agent, patient) without any syntactic markers.
Without grammatical clues or a strong division between compounding and other
word formation processes, linguistics identifies compounds through syntactic
atomicity, semantic idiomaticity and fixity.

Compounds have syntactic atomicity, meaning that they are one structural
unit and cannot be separated. In the sentence, 'I used the nutcracker and it was
delicious', *it* cannot refer to *nut*, because *nut* is embedded within the compound
nutcracker, which cannot be broken apart.

Most English compounds also have phonological unity, which is shown
through primary-tertiary stress. (Clark 1986, p. 21) The compound *bláckbird* has its
primary stress on the first syllable, while the descriptive phrase *bláck bírd* stresses
both halves equally. The primary stress convention is not universal, however, and
right-hand constituents like *pie* in *apple pie* and *avenue* in *Madison Avenue* retain
primary stress in phrases, where similar words such as *cake* and *street* do not.
(Lieber, 1992, p. 83)

Compounds have semantic idiomaticity, in which they contain a figurative
meaning beyond their definitions of their components. On its basic level, a *blackboard*
refers to a vertical writing surface in a classroom. Even if a chalkboard is gray or
green, it is still called a *blackboard*. Many compounds contain constituents which are
no longer familiar. A *penknife* originally referred to a knife used to fix quill pens, but
is now used to describe a pocket knife, and is understood as 'a knife that is the size
of a pen.' Similarly opaque is *scape*, a variant of *escape* found in *scapegoat* and *scape-*

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gallows (a person likely to be hanged). Compounds often require a metaphorical interpretation to be understood.

Compounds are lexemes with a high degree of fixity. This means that once they have been established, compounds do not change their elements. The compound *house party* signifies a party that takes place in a residence. If one of the constituents is replaced with a synonym, such as *home party* or *house celebration,* they do not carry the same connotations as *house party*.

Turncoat compounds, however, have a certain degree of commutability, in which one constituent of a compound can be changed without radically altering the meaning of a word, found in *pinch-* compounds. *Pinch-penny, pinch-pence, pinch-plum, pinch-fart* were all used to describe miserly people. Spanish exocentric V+N compounds also utilize commutability in describing a parasol as a *quitasol* 'remove+sun', *guardasol* 'guard against+sun,' or *parasol* 'stop+sun.'

3.2.2 Orthography of Compounds

One basic assumption about the wordhood of compounds is the need for a word to be a solid train of letters, without hyphens or spaces. However, Moyna (2011) found in the historical record of Spanish that many compounds have been written alternately as a single word, with a hyphen, and with a separating space. The same is true in English, as found in *screwdriver*, *screw driver* and *screw-driver*. Surprisingly, there is no historical evolution from one to another. Instead, orthographic changes have been motivated by extralinguistic factors like space constraints, fashion, and legibility. Many historical texts conserved space by writing without any spaces at all, while some prototypical compounds such as *ice cream* have always been written with a hyphen or space, separating its constituents for the sake of legibility. The appearance of hyphenated compounds in Spanish in the 17th century was caused by the perceived fashionable use of hyphens in French orthography (Moyna, 2011). Recent German and Dutch spelling reform measures have encouraged hyphenating between constituents in long compounds to assist non-native speakers. These superficial changes in appearance do not affect the internal structure of the compounds. Two-part words which otherwise exhibit the behaviors of a compound word fall under the study of compounding. Orthographic conventions are not a legitimate gauge of wordhood.

3.2.3 Transparency of Compounds

Another definition of compounding focuses on the structural transparency of the combined constituents. The multimorphemic status of prototypical compounds is visible in *airplane*, *abrelatas*, 'open+cans' (can-opener) and *Esszimmer* 'eat-room' (dining room). The ability for speakers of the language to divide a compound into its constituents is an important feature which separates compounds from unrelated complex words.

Words like *cartography* and *dendrochronology*, known as neoclassical compounds, fail the transparency test, since the constituents are not free morphemes in English. Their ancient meanings require specialized knowledge beyond native speaker intuition: "The native speaker's awareness that a word is made up of pre-existing words seems the most direct evidence available of structural transparency." (Moyna 2011, p. 2) The Spanish verb *carcomer* (to gnaw) was originally composed of *carne* 'meat' and *comer* 'to eat', but over time, the constituents have eroded in a way which prevents native speakers from identifying the word as polymorphemic. English compounds which violate transparency will be dealt with in Section 5.3.3.

Moyna writes that the evidence of the separation of these morphemes is visible in the historical record through separate dictionary entries. "Broadly speaking, compound constituents have to exist independently at the time the compound is first attested in order for the complex form to be considered a compound" (Moyna 2011, p. 2). Modern speakers can confirm free lexemes, but the historical record must speak for past understanding, as shown through the presence or absence of independent dictionary entries before the first citation of a compound.

3.2.4 Summary of Compound Features

Though linguists have not found one strong cross-linguistic definition of compoundhood, an argument for the compoundhood of a certain phrase becomes stronger with the accumulation of several parameters. Orthography and primary stress are not valid tests of compoundhood, but syntactic atomicity, semantic idiomaticity, fixity, and transparency are.

Dressler (2006) writes that there may not be a strict division between compounds and non-compounds, but rather a sliding scale of features of which compound-like phrases may have a greater or fewer number. With Dressler's scale in mind, Section 6.2 will pursue a number of features of exocentric [V+N]

compounds, in order to find why that pattern is no longer productive while [N+V+er] has been extremely productive during the same time period.

This section looked at the debate about the degree to which syntax and morphology are integrated, and how they both contribute to the definition of compoundhood. Armed with a basic understanding of compounding, the next section will lay out the data from a child acquisition study that will lead to a better understanding of the historical development of compounds.

4. The Acquisition of Compounds: A Mystery

In Clark et al (1986), 48 children from age 3 to 6.5 were shown pictures of instruments and professional people and asked to create unique agentive and instrumental compounds to describe them. Agents and instruments are human or non-human actors that perform a function, such as a *cab driver* or *can opener.*

If the child responded to the picture with a noun-noun compound or non-compounding answer, they were encouraged to give a second response in a compound form. When asked to describe 'someone who rips paper,' a child in Stage 2 might respond with 'a rip-paper' instead of an adult response such as 'a paper ripper' (Clark et al, 1986, p. 14).

The children answered with deverbal compounds in grammatically sound patterns such as *openman* (V+N), as well as invented patterns such as *giverpresent* (V+er+N). By grouping the children into age ranges, Clark et al found that children in the 3 to 6.5 year range go through three stages of compounding, where some forms are made with great productivity while others are not used at all. The oldest children in the study have reached Stage 3 and use the most productive agentive pattern in Modern English, N+V+er. A summary of stages is shown in Chart 5.

Chart 5. Stages of Compounding Acquisition, Modified from Clark et al. (1986)

Stages	English children	Child Examples	Adult Examples
Stage 0	N+N (head-final)	present-man. plant-man	fireman, airplane
Stage 1	V+N (subject)	washman, openman	scrubwoman, hovercraft
Stage 2	V+N (object)	hug-kid, break-bottle	pickpocket, scarecrow
Stage 2.5	V+ing+N, V+er+N	throwing-ball, puller-wagon	-
Stage 3	N+V+er	water-drinker, well-builder	truck driver, can opener

Clark et al identify Stage 1 as the beginning of agentive and instrumental compounding, but acknowledge that there is an acquisition of basic compounding before verbs can be integrated into compounds. The first compounds made by children are [N+N], in which the first noun modifies the second. There is some linguistic evidence that every language has compounding to some degree, with N+N being the most basic pattern. In this beginning stage, children also learn that the main stress of prototypical compounds is carried by the first and third syllables. Clark et al (1986, p. 21) explain that before Stage 1, "children have mastered the primary-tertiary stress pattern and can typically coin [N+N] compounds of the type *plant-man* and *present-man* with nouns as both modifier and head." This paper will refer to this important link to more advanced compounding as Stage 0. Adults frequently create Stage 0 compounds to describe agents such as *business man*, *problem child*, and *flower girl*, as well as instruments like *cake tin*, *toothbrush*, and *hairpin*. Before children begin creating compounds with verbs, they learn that compounds need an identifiable head noun, and that the head should be on the right side of the compound. The order of the two nouns determines the topic, in the way that *houseboat* (a type of boat) becomes *boathouse* (a type of house) when their order is reversed.

In Stage 1, the youngest group of English-speaking children spontaneously started using the [V+N] pattern in which the noun is the subject being described by the verb. In the children's examples, these compounds often end in *–man* or *–machine* which is also used in noun-noun compounds such as *time machine*, *milkman*, and *war machine*. Here, the legacy of Stage 0 is visible, as children build V+N using the conventions they have already learned. This V+N pattern is moderately productive in English, primarily used by adults to coin technical terms like *stopwatch*, *dumptruck* and *swimsuit*. Children in this study did not spontaneously create any compounds of the pattern V+ing+N, which is more productive among adults than V+N. Both of these endocentric patterns use verbs to modify a subject, such as *washing machine*, *hunting cap*, and *swimming pool*. This V+ing+N pattern appears to be the same as those found in 2.5, but they are different. *Washing machine* is a machine that washes, whereas the novel creation by children *breaking bottle* is exocentric and describes a person or thing that breaks bottles, which adults would construct as *bottle breaker* or a *bottle-breaking machine*.

After Stage 1, children change their focus from verb-subject patterns to verb-object patterns. In Stage 2, English children create strange exocentric compounds like

hug-kid and *break-bottle*, which are used to describe a person who hugs kids, and a machine that breaks bottles, respectively. This pattern was appeared in English in the 14th century and was moderately productive from 1530-1890, but is now obsolete. This pattern comes from a basic sentence such as 'this is a machine that breaks bottles' returning the response 'this is a *breakbottle.'* Though the compound word order mimics the sentence order, the forms are uninflected, never resulting in 3rd person conjugations or plural nouns as in **breaksbottles*. There is no evidence that children create this form based on influence from adult speakers, and yet they consistently pass through this phase during compound acquisition. There must be a set of rules within English that lead children to create such compounds, and then decide to leave them behind for a more advanced construction.

Clark et al (1986) show that the next progression in compounding for English children is adding affixes to the end of the [V+N] compounds being made in Stage 2. They include this affixation in Stage 2 in their initial study, but here they have been separated to clarify the progression. Compounds created in Stage 2.5 are not at all grammatical in English. *Puller-wagon* is meant to denote a person or thing who pulls a wagon, which an adult might form as *wagon-puller*. Again, there would be no encouragement by adult speakers to create this pattern, though English children pass through a stage in which they attempt to create compounds using it.

Finally, English children reach Stage 3 in which they create [N+V+er], which is the most productive pattern for creating new agentive and instrumental compounds in English, exemplified by *bottle opener, vampire slayer, cookie cutter,* and *zookeeper*. This pattern also appeared in the 14th century, but has risen in productivity over time, whereas Stage 2 V+N compounds have not. Stage 3 appears as a progression from Stage 2.5 with a reversal of constituent order.

During the stages of compounding, children create one form to describe using a verb and subject (V+N), but three forms to describe things using a verb and its object (V+N, V+er+N, N+V+er). Why do children continue to evolve their compounding pattern after they reach the first verb-object form?

Though this study was conducted in 1986, children created compounds using patterns which have never been grammatical (V+er+N), and patterns which have not been productive for over 50 years (Stage 2 V+N).

Why did the verb-object pattern have historical productivity and why did it end, while the N+V+er form, which appeared in English around the same time, has

surpassed the other form in productivity, and maintained that productivity for hundreds of years?

This section has presented child acquisition data and asked questions about why children create ungrammatical forms unprompted. Before the spontaneous creation of ungrammatical forms by children can be explained, some background context is necessary.

To answer the strange behavior of children, a list of exocentric verb-noun compounds has been compiled. The next section will discuss the methodologies of data collection, and the findings will be discussed in the following section.

5. Data Collection

This section provides information about the data used in this paper, which has been gathered from many sources and authors. Attached to this dissertation is Appendix A which contains 483 exocentric English compounds. It can be stated with a reasonable amount of confidence that they are of the form [V+N] and were formed through the process of compounding in English.

5.1 Frequency v. Productivity

The purpose of the data included in this study is to quantify the productivity of the *turncoat* compound pattern, how it has been used historically, and why its productivity has not lasted while N+V+er has thrived. The preliminary results of this data collection will be discussed in Section 6.

Productivity and frequency are related variants which can be used to study the historical development of a compounding pattern. Moyna (2011, p. 56) contrasts the two: "Frequency thus measures how often a pattern is present in the language at any given time, whereas productivity is a measure of how much of that frequency is due to new compounds." If English exocentric verb-nouns were tracked by frequency, the quotidian use of *breakfast* would skew the results.

The majority of compounds in the appendix are listed as rare, regional, or obsolete, in the OED Online (2012). No distinction has been made between words which have been used many times, and those which only have one recorded use. Words which are created and used by one author, often only once in their writing, are known as nonce words. Many exocentric verb-nouns are nonce words, such as *kill-courtesy* (a boorish person), *tapskin* (a drum stick), and *shut-purse* (a demon of

miserliness*).* Every novel compound is an indicator of the productivity of the form in English.

5.2 Appendix A

The appendix at the end of this dissertation contains 483 exocentric compound words in English, listed chronologically by their first citation. This section will explain why compounds were included or omitted from the list.

5.2.1 The Compilation of Appendix A

To better understand the preferences that this pattern has in English, and how those preferences relate to compounds of the same pattern in Romance languages, I began to collect the examples that fellow linguists have used in their summaries of English compounding. I found that many only list *scarecrow*, *breakfast*, and *pickpocket* before leaving the topic. Through Gast (2008) I gathered more, totaling 19. I then searched the OED Online (2012) for other compounds based on the kinds of verbs which I had already encountered frequently in English, French and Spanish. Through this method, I gathered 110 words. Then I received a copy of Uhrström (1918), from which the rest of the 483 words have come.

The method of data collection for Appendix A is flawed, but because of the expansion of the data set from 110 to 483, general preferences of this pattern in English can be stated with a certain degree of confidence. Gast (2008) estimated the number of exocentric verb-nouns in English to be 'more than 400,' so with 483 entries in Appendix A, the known limits of this compounding pattern have been covered.

The words in Appendix A are listed chronologically by year, then alphabetically within that year. Sometimes years with multiple entries are from a single publication such as Grose's 1811 *Dictionary of the Vulgar Tongue*, while others are from numerous sources published in the same year.

5.2.2 Compounds Without Citation Dates

I was unable to locate citation dates for thirty-two exocentric verb-noun compounds listed in Uhrström (1918). I checked for references on the OED Online (2012), then Grose (1811), then Teall (1892), but if no date was available aside from Uhrström, I placed the word at the end of the chronological portion of the Appendix.

Since Uhrström describes many *turncoat* compounds as obsolete in 1918, I did not wish to unbalance my data by recording those compounds as originating in 1918. My goal in marking each compound with a citation date is to anchor them within the list in some way, not to make claims about their exact date of origin. Most entries were created between 1400 and 1900, and the 32 compounds without citations should fall within that expected range.

5.2.3 Appendix A Definitions

Each entry in Appendix A contains a short definition, following a category marker in capital letters. The definitions which accompany the 483 exocentric compounds are paraphrased from Uhrström (1918) or the OED Online (2012). Uhrström defines many plant and bird names by their binomial nomenclature, such as *sterna fluviatilis* for *dip-ear*, which is listed simply as 'a bird' in the appendix. However, some plants and animals have more description definitions such as *choke-children* (bony fish) and *tumbledung* (dung beetle) to aid the understanding of the reader.

Many compounds have shifted categories over time, such as a *spitfire* morphing from a person to a thing, *lickdish* from a parasite to a parasitic person, and *tangleleg(s)* existing as both a strong type of alcohol as well as a plant which may cause entanglement. In these cases, both categories are included, listing the first usage first.

5.3 Eliminated Compounds

Though this list was begun for personal use, future academics may appreciate a comprehensive list of exocentric verb-nouns. Therefore, entries have only been omitted when they are not English in origin, when they reference a surname, or when their lexical category cannot be determined.

5.3.1 Non-Native Compounding

There is a general consensus (Marchand 1960, Gast 2008, Lieber 2009, Moyna 2011) that the exocentric verb-noun pattern came into English through extended contact with French following the Norman Invasion in 1066.

In addition to adopting the pattern, English also accepted many 'calques' from French, words which are directly copied from one language to another, either as a complete word or as a literal translation. English briefly borrowed *gainpain*

'win+bread' (an adventurer's sword, a breadwinner), in addition to translating the constituents into the rare term *winbread*, a synonym of *gainpain*. For Appendix A, calques which are composed entirely of borrowed words such a *fainéant* 'do+nothing' (useless person) and *kerchief* (from *couvre-chef*) are left out. Words composed of a borrowed constituent and an English constituent, however, are included, such as *grippargent* 'grip+silver' (miserly person) and *blow maunger* 'blow+food' (fat-faced).

Literal translations such as *cutthroat* from Fr. *coupe-gorge* are included in Appendix A, as they demonstrate a degree of productivity of the pattern in English. The earliest recorded exocentric verb-noun compound in English in the OED Online is *catchpole*, meaning a tax collector. *Catchpole* is a calque from Medieval Latin *cacepollus* 'chase+fowl' (tax gatherer or debt-collector). The English word retained the relationship of verb-object, though the meaning between constituents became oblique. Similarly, *spitfire* now refers to a cannon or warplane, but had an earlier form as *shitfire*, which described a fiery or tempestuous person. *Shitfire* is a calque from It. *cacafuoco* 'shit+fire'. Both *spitfire* and *shitfire* have been included in Appendix A, as have other pairs of variants such as *ban-beggar* and *bang-beggar*, and *shovelboard* and *shuffleboard*. Though they may have been created through a mishearing of the first version, the second version is a novel creation, and counts towards the productivity of the pattern.

5.3.2 Surnames

Historically, surnames have not been considered to be in the same category as common words, and therefore deliberately not collected into dictionaries and compound word lists.

Lacklatin and *lackland* are included in Appendix A because both have been used as general monikers to describe people other than those with that surname. *Lacklatin* was a general term for an uneducated priest who could not speak Latin, while *lackland* has been used to describe the youngest son in a family who had no worth. The first citation in the OED for *lackland* is from 1622, four hundred years after a man called John Lackland ruled England. Clearly the surname predates the first recorded use of the common noun, but I have elected to list *lackland* as a productive compound in 1622. Fourteen *lack-* compounds were created between 1534 and 1887, which suggests that the surname was not used colloquially until other words such as *lack-brain* and *lack-lustre* encouraged productivity by analogy.

Several surnames which pre-date the Norman Invasion use the exocentric verb-noun form, but their history has not been well-documented. I have not included *Cunnebried* (test+bread) or *Clawecunte* (scratch+genitals) which Gast (2009) lists as existing in Old English, before the influence of the Normans. There is no record of these surnames being used as common nouns, or any context for their meanings. The study of historical English compounding would benefit from a collection of surnames (and perhaps toponyms) in the verb-noun pattern.

5.3.3 Categorical Ambiguity

Other words have been removed which contain constituents that are ambiguous in their word class membership. Moyna (2011, p. 28) explains that one issue with analyzing English compounding is the lack of overt word class markers. Word class markers let speakers know which lexical category a word has membership to, such as verb, noun or adjective. There is no differentiation between the verb and noun forms of many words in English such as *bear*, *kill*, *fish*, *pick*, and *turn*. Some nouns end in *–tion*, and *-er*, but there are many exceptions even to those broad observations such as *mention*, *motion*, *pester*, and *bicker*.

Without clear markers, English speakers must determine lexical category from the syntactic and semantic context. In compounding, all syntactic markers are removed except for the headedness of the language, which makes determining the word classes of compound constituents very difficult. For example, *slingshot* may be exocentric, meaning 'a rudimentary weapon that slings shots,' or it may be endocentric and describe a type of shot that slings, or that is shaped like a sling. There is no way to tell what part of speech *sling* is meant to be so it has not been included in Appendix A. *Hangdog* and *carrycot* pose similar problems.

5.4 Compounding Data from Other Languages

All of the examples from Germanic and Romance languages have been gathered from previous works by linguists. Germanic examples come from Gast (2008, 2009) and Neef (2009), while Spanish examples come from Lieber (2009), Moyna (2011), and Tuggy (2003). Examples from Dutch and French come from their respective chapters in the *Oxford Handbook of Compounding* (2009) unless otherwise stated. With the data now in context, the forms and preferences of English can now be discussed.

6. English Compounding

English is a Germanic language with a large Romance vocabulary. English received its headedness from German, but the origins of its contrarian word order are not clear. Trips (2002) explored this issue without conclusive findings. A hypothesis was put forth that the change from OV to VO in Middle English was driven by Scandinavian influence, but there is evidence that the shift to VO had already begun before the Vikings settled in England. When Old English began to lose case markers, the word order became less flexible in order to keep the distinction between the subjects and objects clear in a sentence. Examples 22-23 compare an OV word order in Latin to VO in Modern English. The loss of case markers may be more influential in the conversion of word order than external influences.

22.   Classical Latin: Puella puero flore   dedit.

          Girl   to boy flower gave

23.   Modern English: The girl gave a flower to the boy.

Modern English is right-headed and uses VO word order. These two factors determine the kind of patterns English has access to.

There are two patterns in English which appear categorically as [V+N]N, but which differ in their internal structure. Example 24 is endocentric, using the noun as the head, while 25 is exocentric, in which the noun is the direct object of the verb.

24. $[V_i+N_i]N_j$ 25. $[V_i+N_j]N_k$
        N_j(table) N_k(person)

V_i N_j V_i N_j
turn   table   turn   coat
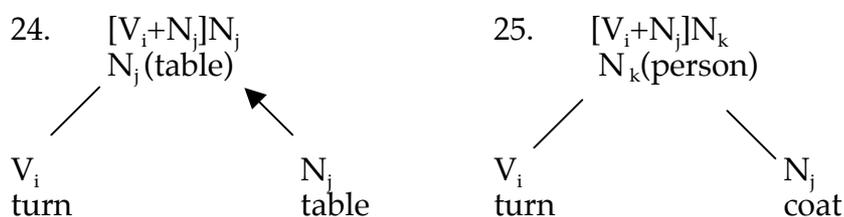
Both patterns have had modest productivity in English, with endocentric compounds often being used to describe aspects of certain technical fields such as *dragline*, *drawslate*, *shuttlecar*, *slope mine* and *blast hole*, which are all used in mining. Synthetic English compounds are more productive, created by the modification of the verb into a deverbal adjective ending in *–ing*. "The domain covered by the prolific verb-noun compounds in German is thus distributed over two major rivaling types in English, V-N compounds and V-ing-N compounds." (Gast 2008, p. 276) German uses V+N *Kaufkraft* 'purchase+power' while English uses *purchasing power*, and German *Schwimmstil* 'swim+style' translates into English as *swimming style.*

By previous estimates, there are over 2600 (Marchand, 1969) endocentric V+N compounds cited in the OED, and over 400 examples of exocentric V+N compounds

in English (Gast 2008). About twenty exocentric verb-noun compounds (shown in 26) have survived into Modern English, the most common being *breakfast*.

26.   *Breakfast, Breakneck, Breakwater, Cutpurse, Cutthroat, Daredevil, Dreadnought, Killjoy, Lacklustre, Makeshift, Passport, Pastime, Pickpocket, Sawbones, Scarecrow, Skinflint, Spendthrift, Spitfire, Spoilsport, Swashbuckler, Turncoat*

In the creation of agentive and instrumental compounds, Modern English primarily uses N+V+er, which can be used for both human and inanimate actors. This is because, as Clark (1993, p. 177) writes, *-er* is the "one suffix common to both agents and instruments" in English. A *dishwasher* can refer to a person or a machine whose job it is to washes dishes, depending on the context. Many suffixes can only be used for human actors such as *–cian* and *–ist*, while many object actors use *–tion*, *-ment*, or zero-morphology. By using *–er*, the N+V+er pattern is not limited by the nature of the subject being described.

Modern English has access to N+N, V+N, V+ing+N, and N+V+er for agentive and instrumental compounds, but predominately uses N+V+er, N+N and V+ing+N.

6.1 History of the Exocentric [V+N]

During Middle English, English transitioned from an OV to a VO language. The two oppositional word orders were competitors, but near the time of the Norman invasion, VO became more productive, due to the erosion of cases and further encouraged by Scandinavian influence (Trips 2003). The Norman conquest in 1066 brought French speakers to the British Isle. After several centuries of linguistic separation, French became fashionable, and words were borrowed between the languages. Since [V+N] is the most productive compounding form in Romance languages, many of the borrowings received from French were in that form.

English was predisposed to accept the *turncoat* pattern. Exocentric V+N compounds show up in great numbers in languages with VO word order. Verb-object sentence order is mimicked in exocentric V+N compounds, therefore the exocentric V+N pattern lends itself to child acquisition in VO languages.

Graph 1, below, shows the rise and fall of this pattern, including the 32 dateless examples listed at the end of Appendix A. Exocentric verb-nouns came into English starting in the 1300s, hit its apex in the mid-17th century, then fluctuated for 300 years before being abruptly dropped in the beginning of the 20th century.

Graph 1: Historical Productivity of Exocentric V+N Compounds in English

Exocentric V+N Productivity in English

Period	Value
Pre 1200	1
1200-1249	1
1250-1299	0
1300-1349	6
1350-1399	8
1400-1449	12
1450-1499	5
1500-1549	27
1550-1599	85
1600-1649	96
1650-1699	42
1700-1749	23
1750-1799	29
1800-1849	49
1850-1899	58
1900-1949	8
1950-1999	0
2000-2012	1
Dateless	32
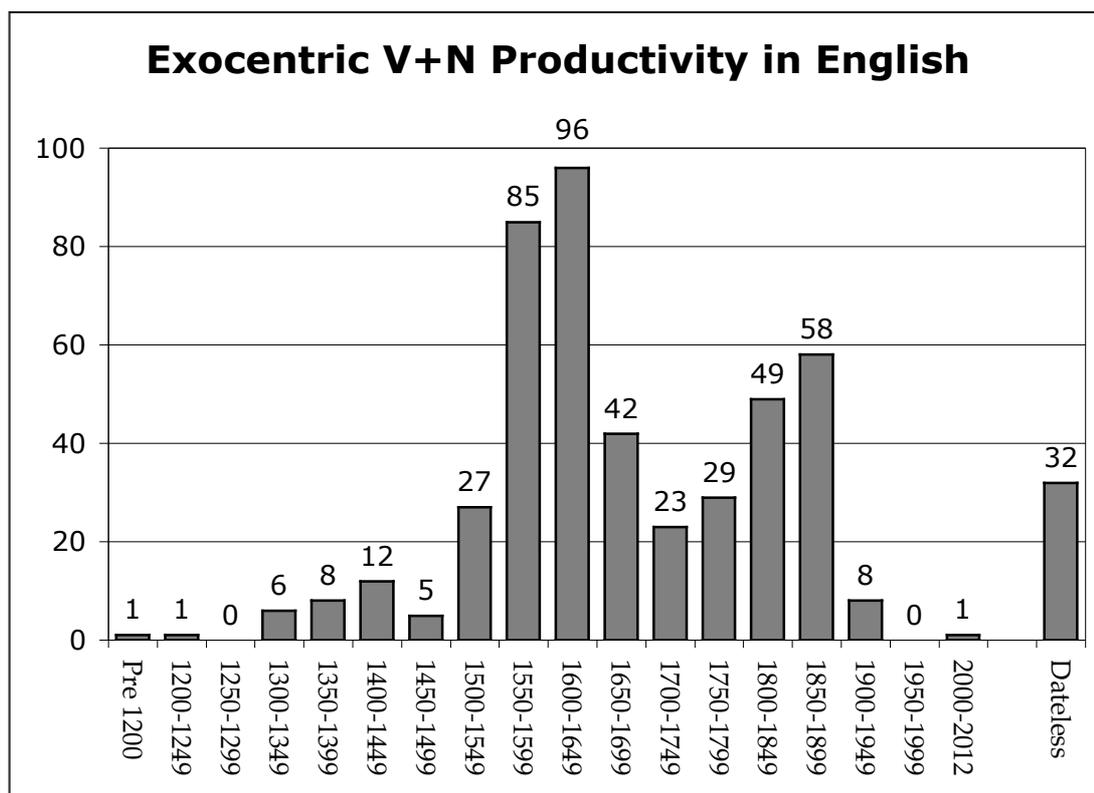
The pattern productivity began to slow down after 1890, with only eight new compounds entering the language in the first half of the 20th century, and only one nonce usage since then. With the timeline of productivity now established, the structure and meaning of the words created between 1050 and 2009 will now be discussed.

6.2 Preferences of Exocentric [V+N]

This section will walk through the preferences of English *turncoat* compounds which have been accumulated from the work of other authors. Just as Dressler (2006) created a list of the preferences of prototypical compounds, conceding that there was no cross-linguistic definition that can separate them from other complex phrasal structures, there are exceptions to nearly every preference listed below.

This section will briefly cover six (*i-vi*) preferences of English exocentric V+N compounding which have been collected from other authors, combined with personal observations of the data. Many of the preferences are linked to each other. After explaining each English preference, their status in Romance languages will be briefly discussed. The list will begin with four structural preferences followed by

two semantic preferences.

6.2.1 Structural Preferences

i.   As mentioned in Section 3.2.1, the main stress of compounds is typically carried by the primary and tertiary syllables. This trend is unbroken in English exocentric V+N compounds. The *avenue* and *pie* exceptions do not appear.

The emphasis on the first syllable can lead to the un-stressing of the second. This may account for the shift in sound in *breakfast*, which no longer mirrors the pronunciation of *break* or *fast*. *Breakfast* was first attested in 1463 and is the oldest compound of this form still in Modern English. It also may be that *break* in *breakfast* did not undergo the Great Vowel Shift because of its atomicity within the compound.

Spanish words have penultimate stress unless an accent over a vowel marks a different syllable as in *espantapájaros* 'scare+birds' (scarecrow), *tirebuzón* 'throw+mailbox' (corkscrew), and *matapolicía* 'kill+police' (cop killer). In Spanish, verbs and nouns retain the stress they would have if they were independent of one another. In lieu of syllabic-based stress, French has prosodic stress which often emphasizes the final syllable.

ii.   In English verb-noun compounds, the majority of constituents are monosyllabic rather than disyllabic (Tuggy 2003). This pattern is not used for any legal, medical or religious terms, which are often composed of Latinate words or neoclassical compounds. Constituents of this pattern that do have their origin in Latin, such as *purse* and *turn*, do not sound foreign or prestigious.

The most syllables found in this pattern are four, found in *carrycastle* (an elephant with a throne on its back) and *killcourtesy* (a boorish person). If one of the constituents is disyllabic, it is more likely to be the nominal constituent rather than the verb. Frequently used disyllabic nouns are *devil*, *penny* and *water*. If the verb is disyllabic, it is likely *carry* or *cover*, which are two of the most basic kind of actions found in the verbs of this pattern; i.e. the moving, opening and closing of objects. In the case of *carry* and *cover*, the semantics of the word overrule the phonetic trends of monosyllabic parts.

Graph 2: Frequently Used Verbs in Exocentric V+N Compounds

Common Verbs in Exocentric V+N Compounds
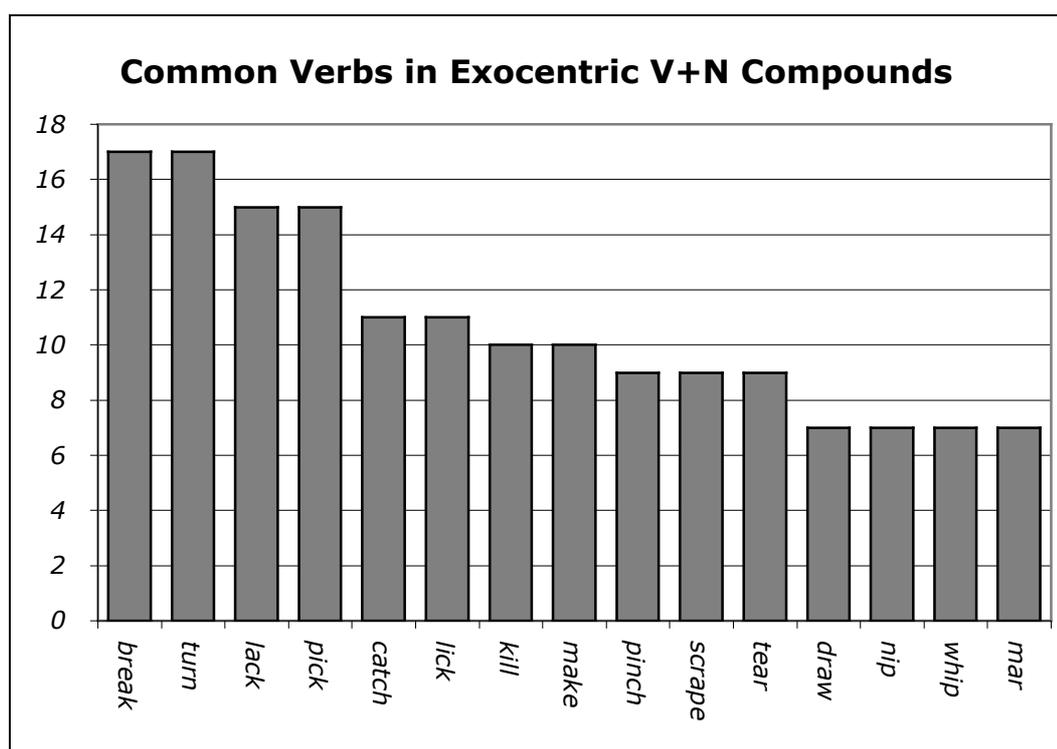
Graph 2 shows the fifteen most frequently used verbs in this pattern, all of which are monosyllabic. These fifteen verbs account for one-third of all the compounds in Appendix A.

In Spanish, all verbs are least disyllabic, with many being trisyllabic such as *calentar* (to heat up), *aguzar* (to sharpen), *escarbar* (to scratch), and *espantar* (to frighten). Nouns are also more likely to be disyllabic or longer.

iii.   In English compounds, nouns are typically shown in their singular form, even though the actions that are described are habitual or occupational. Someone who picks pockets is a *pickpocket*, not a *pickspockets or *pickpockets. Since English does not indicate number with the definite article *the,* like *el* and *los* in Spanish or *das* and *die* in German, English can only inflect pluralization through the head noun of a compound.with the *–s* suffix at the end of the noun.

It seems likely that English has chosen to represent the nominal constituents in their singular form so that the addition of *–s* can denote pluralization. There are several exceptions to the singular noun preference in English, such as *breakteeth* (something difficult to pronounce), *sawbones* (a surgeon), *breakbones* (a grey heron or osprey), *shitrags* (a lazy person), and *kickshins* (a game). In these cases, the plural form of these compounds is inflected with zero-derivation as in *one sawbones* and *two sawbones*. *Breakbones* corresponds with the Latin calque *ossifrage* 'bones+break' and

Spanish *quebrantahuesos* 'break+bones.' Therefore, *breakbones* may be plural through the influence of a direct translation of a calque.

One could also argue that compounds with *bones* are plural because bones are found in groups, but the same could be said for crows, flies, breeches, bottles, pennies, which are all found in the singular form in their compounds *scarecrow*, *catchfly* (a sticky plant), *shit-breech* (useless person), *blowbottle* (drunk), and *pinchpenny* (miser).

In Spanish, most nouns are plural, though the compound as a whole is singular, as in *el espantapájaros* for one scarecrow, and *los espantapájaros* for multiple scarecrows. In these cases, Spanish can use the definite article to mark the number of scarecrows, leaving the nominal constituent plural.

Nouns in Spanish verb-noun compounds are typically plural, unless the noun is a mass noun, and therefore non-countable.

27.   Countable nouns: *lavaplatos* 'wash+plates' (dishwasher), *matasanos* 'kill+the healthy' (quack doctor), *salvavidas* 'save+lives' (salvavidas)

28.   Mass nouns: *parasol* 'stop+sun', *ayudamemoría* 'aids+memory' (memory aid)

English verb-noun compounds do not appear to follow any pattern in their use of singular or plural noun constituents. There does not seem to be a rule governing the pluralization of certain compounds of this form.

iv.   The overwhelming majority of English V+N compounds are in the noun word class. However, there are fourteen examples in which the first citations of V+N compounds are in adjectival form. This can be shown in the form [V+N]A as opposed to [V+N]N. Any noun can be used as a modifier in English, but some compounds have been used almost exclusively as adjectives since their first citation.

29.   [V+N]N   *breakfast, lack-brain, cutwater, killpot, pinchpenny*, plus 469 others

30.   [V+N]A   *breakteeth, wash-hand, jerkwater, lack-linen, lackpity, mar-right, pinchpence, pinch-plum, lack-lustre, tear-brass, say-nothing, hanghead, tear-bridge, killcalf*

This category of [V+N]A is seldom acknowledged in the literature of English compounding, though Tuggy (2003, p. 53) comments on it in relation to Spanish:

> "English has V+O=adjective structures (e.g. *lackluster, catchpenny);* Spanish nouns and adjectives generally overlap more than English ones do, and many of the forms we have seen can be used adjectivally (e.g. *bacterias comepiedras* 'rock-eating bacteria', *polvo lavatrastes* 'dish-detergent powder')."

Graph 3 below, shows the adjectival category in relation to the other semantic ground covered by the nominal compounds in this pattern.

Graph 3. 483 Exocentric V+N Compounds in Appendix A Listed by Category

Exocentric V+N Compound Productivity By Category
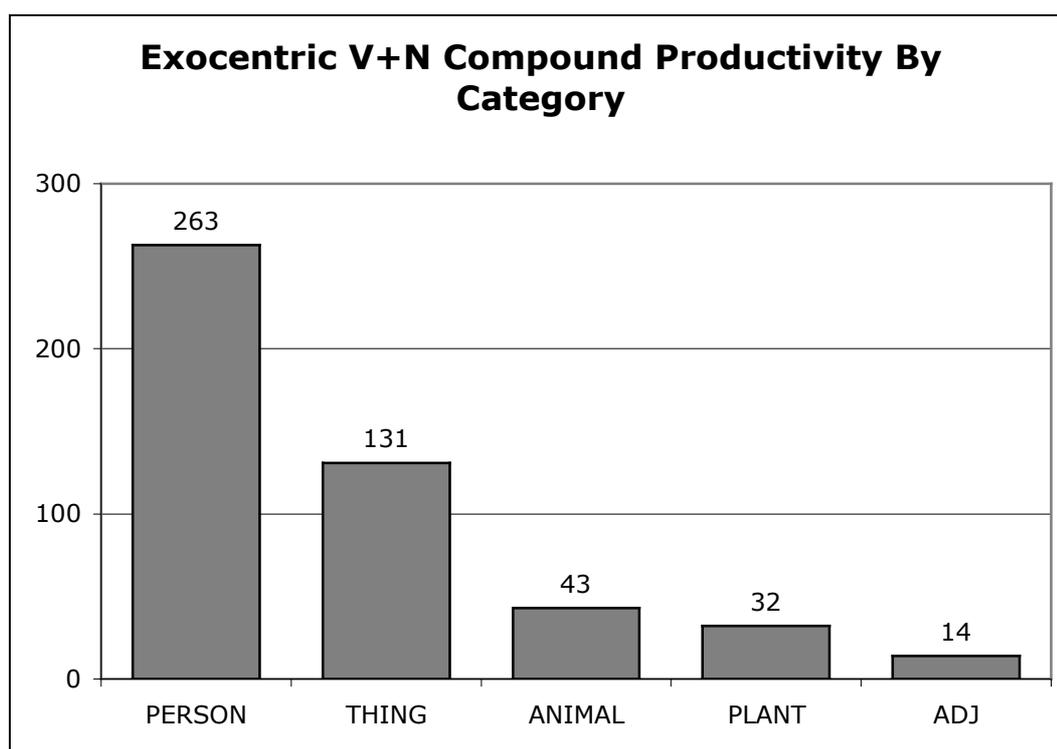
Though it is a minority feature of a minority pattern, the addition of a verb and noun together to create an adjective should be acknowledged as it may lead to a wider understanding of compound patterns.

6.2.2 Semantic Preferences

There are semantic gaps and gluts of productivity in English exocentric verb-noun compounds. There are 15 terms for men who should be hanged, 26 for miserly people, and 5 for tailors. Tuggy (2003, p. 39) refers to this phenomenon of haphazard grouping as "semantic clumping." Romance languages also have some degree of clumping in their exocentric verb-noun compounds, but with fewer limits, leading to wider coverage of vocabulary and categories.

Tuggy (2003, p. 33) notes that English does not use the exocentric pattern to describe many instruments as Romance languages do, but created many "instrument-like" objects. Instruments are objects which have a purpose, and whose purpose is carried out with the action of a human, such as *can opener*, *nutcracker*, and *windshield wiper*. Seven instruments were produced in English: *draw-latch* (1614) *quench-coal* (1615), *blow-coal* (1622), *turnkey* (1655), *turn-screw* (1801), *stop-motion* (1851), *pickwick* (1864), but this clumping does not represent a significant group.

The exocentric verb-noun pattern has greater productivity describing instrument-like objects such as *breakwater*, *scarecrow*, *spurn-water*, *wardrobe*, *scarefly*, and *catch-water*, which function without human presence. The pattern also thrives on games (forty-six), types of alcohol (eight), and articles of clothing such as *dread-nought*, *fear-nought*, *fear-nothing*, *cover-shame*, *cover-slut*, *wrap-rascal*, and *hap-harlot*.

v.   One of the difficulties in tracking the exocentric verb-noun compound back to its oldest citations is that the kinds of words produced in English by this pattern do not interact with well-documented fields such as medicine, religion, and law. Rather, they are found in the fictional works of Chaucer, Shakespeare, Dickens, and Poe, in regional guides to plants and animals, and later in slang dictionaries. In other words, exocentric verb-nouns are found in sources that capture the speech of common people, but not official documentation created by governments or institutions.

Exocentric V+N compounds have been growing in productivity in Romance languages since the 1400s. Though regional insults are a component of this pattern in Spanish, it is also more broad in its span, allowing for more household objects, neutral professions, and animals to be named, rather than the overflow of obsolete slang terms in English.

vi.   The most easily identifiable preference of exocentric V+N compounds in English is their overwhelming use to describe humans, particularly with a biting sense of humor. Some reduce a profession to a simple process such as *sawbones*, *turnspit* (a dog or boy who turns a crank), or *watchbirth* (a midwife). Some describe inherently evil or violent people such as *drawblood*, *cutthroat*, *scofflaw*, *breakpeace*, *turncoat*, and *makebate*, while others describe useless, joyless or stupid people such as *spoilsport*, *lackgrace*, *killjoy*, *shit-breech*, *lacklatin*, *blowbottle* and *stretchgut* (a glutton).

English has specialized this pattern to mainly serve as an insult generator. Tuggy (2003, p. 47) notes that when this form is used, especially when referring to a human, "there is usually a perceptible, sometimes a strong tinge of deprecation, condescension, contempt, or ridicule conveyed." Romance languages can also use this form for jocular deprecation, such as *cagatinta* 'shit+ink' (office worker), *sacamuelas* 'remove+molars' (bad dentist), and *huelebraguetas* 'smell+zippers' (private detective), among countless others.

Perhaps because the Romance languages have access to fewer compounding patterns, there are also a number of professions which are described neutrally, such as *guardabosques* 'guard+forests' (forest ranger), *pinchadiscos* 'scratch+disks' (disk

jockey) *salvavidas* 'save+lives' (lifeguard) and *guardameta* 'guard+net' (football goalkeeper).

English and Romance languages use the majority of exocentric verb-noun compounds to describe humans. Both systems have the ability to describe people as 'despised or... laughable' (Tuggy, 2003, p. 48), rather than in a neutral or positive way, but English lacks a significant number of compounds that describe occupations in a neutral or positive way.

6.3 Exocentric [V+N] in Modern English

An argument can be made that no new exocentric verb-nouns have come into English since 1924, when the term *scofflaw* emerged as a word for a law-breaker. The term was manufactured for a contest, which indicates that the pattern was transparent at the time, and its tendency to degrade its subject was still available. *Prodnose* (busybody) is cited in 1934, though the term comes from a character in a humorous newspaper column that began in 1875. The creation of the word may be several decades older than its first OED citation. Apart from these late-comers, the pattern disappeared from English in the early 20th century and has been dormant ever since. The next two subsections explore two possible resurrections of the pattern.

6.3.1 Verb+All compounds

Bauer (2006) and Tuggy (2003) argue that the exocentric verb-noun pattern continues in Modern English through a very limited clumping of cleaning products.

Tuggy shows that as well as limiting the second constituent as *–all*, this pattern has also reduced its semantic abilities down to cleaning products such as the proprietary eponym *Cleen-All*. Tuggy (2003, p. 39) lists several "commercially-coined names such as clean-all, copy-all, dispose-all, dust-all, farm-all, fix-all, hide-all, haul-all, lift-all, saws-all, sticks-all. store-all, tote-all, etc" which have appeared in this form. *All* is not commonly considered to be a noun, but rather a pronoun or strong quantifier, which exclude them from the verb-noun pattern.

After taking Tuggy's argument into consideration, eleven V+all compounds appeared that conform to the typical preference of the *scarecrow* pattern, which are listed in 31. These verb–all compounds cross categories of plant names, occupations, games, and despised people, and blend in with other compounds of this type.

31.   Verb-All Compounds: *spend-all* (wasteful spender), *heal-all* (medicinal plants), *mar-all* (a spoilsport), *take-all* (a wheat disease), *scrape-all* (a miserly person), *carry-all* (a carriage), *move-all* (a game) *save-all* (a miserly person), *dare-all* (a dreadnought), *hold-all* (a portable case), *stick-all* (a cement for mending things)

Tuggy's examples and reasoning on the other hand, lack similar substance. "The reason there is a clump of V + *all* commercially advertised product nouns in English is precisely because that pattern is being used to form new nouns." Tuggy (2003, p. 39) appears to be using circular logic to explain this limited resurgence of the pattern. Unfortunately, by being instrumental and positive, these cleaning products do not line up with the previous uses of V+N or verb+all in English, and his argument is unconvincing.

In contrast, Bauer (1983, p. 205, as cited in Bauer 2006) names *Xpel-air* as another recent sanitary example, which is a company that sells ventilation systems. *Xpel-air* is agentive with a verb-object relation, and it describes an instrument-like tool. The origin of *Xpel-air* is not clear, but with Bauer's citation in 1983, it maybe the only compound of this kind from the second half of the 20th century. It has been included at the end of Appendix A.

Based on the topics covered and preferences of the modern *–all* combinations, they are not a continuation of the pattern that enjoyed moderate productivity from 1530-1890.

6.3.2 Pesterchum

English is the current global lingua franca, and while the language comes into contact with many Romance words in the exocentric verb-noun pattern, it has not resulted in a resurgence of productivity. English speakers may be familiar with the cryptozoological creature known as the *chupacabra* 'suck+goats' (undocumented creature that sucks the blood from farm animals), but there is no evidence that exposure to this word has created neologisms of the form [V+N]N in English. With terabytes of casual language available online, however, there has been one addition to the V+N pattern.

In the first frames of the webcomic Homestuck, written by Hussie (2009), the main character logs onto an instant messaging chat application on his computer. The application is called *Pesterchum*, in which the title is understood to mean 'an application that pesters chums.' *Pesterchum* conforms to many of the preferences of the historically active exocentric V+N pattern. It describes an instrument-like object,

it describes the behavior of that object, and it carries a derogatory tone towards it, as many people and professions have been negatively captured in the past.

The form of *Pesterchum* is transparent to Modern English speakers even without an overt word class marker because *pester* can only be a verb, and since the referent is a thing, not a human actor, the reader is lead to parse the internal relationship as verb-object, and the compound as an exocentric verb-noun. Though this rare compounding pattern only contains 20 active words in Modern English, and the burst of productivity which this pattern experienced has ended, a community of webcomic readers has now been exposed to this form. If linguists continue to seek out this pattern in Modern English, other novel creations may emerge.

7. Romance Compounding

All modern Romance languages are left-headed and use VO word order. Romance languages are derived from Latin, which did not create many agentive and instrumental compounds of its own, but borrowed a few from Greek. Romance languages are bonded by what Moyna (2011, p. 259) calls "the well documented replacement of OV order by VO which had started in Latin itself and continued in Romance."

The most productive pattern in all Romance languages, with the exception of Romanian, is the exocentric [V+N] form. This pattern is most commonly used to describe household tools, car parts, occupations, despicable people, and birds and insects, as shown in 32-36. The three most common verbs used in this pattern are *matar* (to kill), *guardar* (to guard) and *portar* (to carry).

32.   Household Objects: *abrelatas* 'open+cans' (can opener), *lavaplatos* 'wash+dishes' (dishwasher) *cortalápices* 'cut+pencils' (pencil sharpener), *pesacartas* 'weigh+letters' (postal scale), *portaplumas* 'carry+pens' (pen holder)

33.   Car Parts: *quemacocos* 'burn+coconuts' (sunroof), *parabrisas* 'stop+breezes' (windshield), *parachoques* 'stop+crashes' (car bumper)

34.   Occupations: *guardabosque* 'guard+forest' (forest ranger), *salvavidas* 'save+lives' (lifeguard), *portavoz* 'carry+voice' (spokesperson), *cuidaniños* 'cares for+children' (babysitter)

35.   Despised People: *vendepatrias* 'sell+homelands' (traitor), *robaniños* 'steal+children' (kidnapper) *rompecorazones* 'break+hearts' (a cold and beautiful woman, a heartbreaker), *aguafiestas* 'rain on+parties' (party pooper), *calientalibros*

'warm+books' (bookworm)

36.   Birds and Insects: *quebrantahuesos* 'break+bones' (vulture), *picaflor* 'picks+flower' (hummingbird), *saltamontes* 'jumps+hills' (grasshopper)

For Spanish, deverbal compounds began ascending in the 1400s to become the most productive pattern in the language. Moyna (2011, p. 206) lists 961 examples from the corpora, 415 of which were first attested in the 20th century. Together, [V+N] compounds make up 27.8% of all Spanish compounds.

Spanish, French, and Italian have endocentric compounds, apart from [V+N]. They are found in [N+N] and [N+A] patterns such as *hombre rana* 'man+frog' (frogman) and *hierbabuena* 'herb+good' (mint). Romance languages do not productively create N+N compounds, but rather create complex phrases in the form of N+de+N, as in Spanish *cuarto de baño* 'room+of+bath' (bathroom) or French *nom de plume* 'name+of+pen' (pen name).

7.1 French Compounding Development

In 2007, Nicoladis (as cited in Moyna, 2011) replicated the Clark et al (1986) study in French. Her results show a much more simple sequence of stages in her study of spontaneous agentive compounding in children.

French children move from creating N+N compounds to making V+N compounds, in which the noun is the object of the verb. This means, in terms of the Stages which English children pass through, French children jump from Stage 0 to Stage 2, then stop.

Chart 6, below, illustrates the stages of compounding acquisition for French, with novel compounds from children alongside established adult productions.

Chart 6. Nicoladis (2007) Stages of French Compounding Development as in Moyna (2011)

Stages	French children	Child Examples	Adult Examples
Stage 0	N+N (head initial)	*machine-boutons* 'machine+button' (button machine)	*oiseau-mouche* 'bird+fly' (hummingbird)
Stage 1	-	-	-
Stage 2	V+N (exocentric)	*tire-ordures* 'empty+trash' (garbage man)	*porte-parole* 'carry+speech' (spokesperson)

Since French is a left-headed language, the head noun in Stage 0 and the verb component in Stage 2 are both the dominant constituents of the compound, and there is no conflict as there is in English.

Romance languages are harmonious in their combination of morphological headedness and syntactic word order. English requires a greater number of steps to reconcile its mismatched VO and right-headedness.

8. West Germanic Compounding

The Germanic language family includes Dutch, Danish, Norwegian, Flemish, and Icelandic, among others. These languages are all right-headed, but the Scandinavian members use VO order. The West Germanic languages of German and Dutch are right-headed and use OV order. Though Romance languages form their sentences in polarized ways from West Germanic ones, both are harmonious.

Noun-noun compounds are found to some degree in all languages, and it is the most productive pattern in German. Since the language is right-headed, it is the second constituent which determines the gender, inflection, and categorical meaning of the compound as a whole, while the first constituent merely modifies the head noun, which is shown in 37.

37.   *Holzhaus* 'wood+house' (wooden house), *Bücherregal* 'book-shelf', *Löwenzahn* 'lion+tooth' (dandylion), *Bücherwurm* 'books+worm', *Taschen-dieb* 'pocket+thief (pickpocket)

Second in terms of productivity in German are endocentric V+N compounds which are used for agentive and instrumental compounds, as well as measurement, time, compounds using *-mittel*, and relations between persons and activities, as shown in 38. (Gast 2008, p. 278).

38.   *Schleifstein* 'grind+stone', *Schlafzimmer* 'sleep+room' (bedroom), *Zahltag* 'pay+day' *Raffgier* 'pile+greed' (avarice), *Nährmittel* 'nourish+tool' (nutriments), *Traglast* 'carry+load' (bearing load), *Rennbahn* 'run+track' (racecourse)

Exocentric compounds exist in German, and Dutch, but never in the V+N form. Exocentric examples include German *Blondschopf* 'blonde hair' (blonde person) and Dutch *roodborstje* 'red+breast (robin).

German also uses the form N+V+er to create agentive and instrumental compounds, and examples are shown in 39.

39.   *Appetit-hemmer* (appetite suppressant), *Hals-abschneider* 'throat+cut+er' (cutthroat), *Unruhestifter* 'unrest+foment+er' (trouble maker), *Spielverderber* 'game+ruin+er' (spoilsport)

English and German both have the patterns V+N and N+V+er. English received these forms from German, but the two languages do not line up perfectly when translating between patterns. English might use an exocentric V+N compound where German uses a N+N such as *Taschendieb* for *pickpocket* or German may use an endocentric V+N compound where English uses a monomorphemic Romance word such as *Brennstoff* 'burn+stuff' for *fuel*. The N+V+er form used by Dutch *nachtwaker* 'night+watch+er' changes into *night watchman* or just V+N *watchman* in English. As shown in *nachtwaker*, Germanic N+V+er compounds are able to express temporal and locative relationships just as the English pattern does. Without constraints on the noun-verb structure, both languages have almost unlimited abilities to create new compounds of this form.

8.1 A Proposal for Germanic Compounding Development

There has been no equivalent study in German or Dutch for childhood compounding acquisition. However, with the stages already uncovered by Clark et al (1986) and Nicoladis (2007), I propose the patterns that linguists may encounter if such a study were carried out.

As I have come to understand it, each stage is motivated by different factors which come into focus or are overruled by more hierarchically significant factors. Stage 0 is ruled by basic compounding, which extends its ability to Stage 1, in which the attributive constituent changes from a noun to a verb. Becker (1992, p. 16) writes that V+N compounds "were non existent in Germanic and came into being through the reanalysis of N + N compounds." This strengthens the argument that Stage 1 is an extension of Stage 0.

Stage 2 then changes tack by looking to the syntax to develop verb and object-based compounds, creating a new word without changing the order of two words or adding extra elements. German and English diverge here because of their VO/OV distinction.

I hypothesize that during Stage 2, German children would have no inclination to move into an VO formation but instead might create ungrammatical OV compounds of the form object+verb as in *Hals-abschnied* 'throat+cut' before learning to add suffixes in Stage 2.5 used in the adult production of *Hals-abschneider*

'throat+cutter' (cutthroat). Chart 7 shows a side-by-side comparison of the German proposal with the results of the English and French studies.

Chart 7: Comparison of English and French to Potential Germanic Compounding Stages

Stages	English children	French children	German children
Stage 0	head-final N+N	head initial N+N	head-final N+N
Stage 1	endo V+N	-	endo V+N
Stage 2	exo V+N	exo V+N	*exo N+V*
Stage 2.5	V+ing+N, V+er+N	-	N+V+er
Stage 3	N+V+er	-	-

Since the word order found in dependent clauses in German is the same as in synthetic compounds (OV), Germanic children would complete the stages there, not needing to re-order the constituents to agree with headedness. English is a less harmonious language than Romance or Germanic languages, and needs the extra stage.

Stage 0 and 1 progress from modifying the subject noun with a noun to a verb. Stage 2 then unites the verb and object from a verb phrase to create a headless compound. Stage 2.5 then changes the verb to a deverbal noun, unifying the dominant member of the compound with the lexical category, making the deverbal noun a stronger candidate for a head. English then takes a final step to shift the head noun to the right side, which German does not require.

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9. From Turncoats to Backstabbers: English Agentive Compounding

English is a right-headed Germanic language with a large Romance vocabulary and VO word order. English was able to integrate exocentric V+N compounds into the lexicon because of long-term exposure to another VO language, French. This exploited the otherwise temporary form that children use in training before moving onto N+V+er. These two patterns are pseudo-competitors, but as the next two subsections will show, N+V+er has always been a superior choice for English speakers in terms of headedness, transparent relationships, and semantic flexibility.

9.1 The Limited Productivity of Exocentric [V+N]

As seen in the Clark et al (1986) study, there is an inherent ability of English speakers to create exocentric V+N compounds. From the influence of French loan words, new English exocentric V+N compounds were created from analogy, either through common verbs (break, turn, lack, pick) or common semantic themes (misers,

criminals, cowards, games, clergy, alcohol). This led to a period of moderate productivity from 1530 to 1890.

No linguistic or historical event specifically extinguished the productivity of the exocentric V+N compound, rather it was the pattern's own problems in combination with a rise in productivity of other forms (N+V+er, blends) that has led to its absence from Modern Day English.

Since English does not indicate number with the definite article *the,* as Spanish does with *el* and *los,* and German with *das* and *die*. English can only inflect pluralization through the head noun of a compound as in *the scarecrow* to *the scarecrows.* Romance exocentric verb-nouns use the definite article to indicate singular and plural forms, (*el espantapájaros* to *los espantapájaros*) allowing the nouns to remain plural. The plural form used by Spanish and other Romance languages helps mark compounds of this type and guides speakers toward the internal structure of the two parts. English lacks comparable signposts. The singular noun constituent in English also creates a gap between the meaning of the compound and its appearance. A *scarecrow* scares crows, but with the nominal constituent in a singular form, that relationship is not as clear. The need to singularize the nominal constituent negates the simplicity of choosing a form which mimics VO syntax.

Another syntactic limitation of this pattern is that the verbs must be transitive, that is, being able to take a direct object, since that is the relationship between the components. Verbs like *turn* and *watch* are ambitransitive, meaning they can be either transitive or intransitive. Ambitransitive verbs can appear in both types of [V+N] patterns in English, such as *turnstile* and *turncoat*, and *watchdog* and *watchbirth*. Ambitransitivity allows a verb to be more productive in English, but since there is no external marker for either form, English speakers must determine the transitivity of the verb from the context.

English also lacks overt word class markers, making the lexical category of compound parts difficult to parse. Bare root compounds cannot rely on affixes like *–er* and *–ing* to clarify the word class of a component, forcing the speaker to contemplate every possible lexical category and relationship between the two constituents in a compound like *love-pot*, *whipcan*, and *blowbottle*, which are all terms for a drunkard.

In addition to the structural limits mentioned above, exocentric V+N suffers from semantic constraints as well. While Romance languages can use the pattern to neutrally describe occupations and instruments, English has only focused on the

negative, with 80% of Appendix A describing people in a reductive or demeaning way.

The 483 exocentric compounds have been amassed through creation by analogy with previously created compounds. In such a dependent system, a lack of productivity leads to a greater lack of productivity. All of the exocentric compounds are somehow related to each other, through common verbs, nouns, or topics. This pattern inherited semantic clumping from the handful of French calques which began the trend, and never moved beyond the initial influence. Borrowings such as *coupe-bourse* (cutpurse), *passe-temps* (pastime), and *faineant* (do nothing) established a pattern of naming violent criminals, games, and lazy people, from which English never significantly expanded.

Though exocentric verb-nouns offer advantages to children learning the rules of compounding, its flaws soon outweigh the ease with which they can be created. Syntactic problems like the lack of overt word class markers, the marking of a habitual action with a singular noun, and the need for the verb portion to be transitive, limit the coherence of this pattern to listeners. Exocentric V+N are also limited semantically by their extreme clumping and bias towards comical rudeness.

The limits of the pattern, combined with its lack of a head, have nullified the syntactic advantage of using a pattern which emerges naturally from a VO sentence. Other patterns emerged and overtook the semantic territory covered by exocentric V+N, making the simple pattern redundant.

9.2 The Limitless Productivity of [N+V+er]

The synthetic compound N+V+er (as in *backstabber*) is an extension of V+N. When children begin to create agentive compounds based on a verb and its object, they begin with V+N, but soon morph into V+er+N, and finally N+V+er. This succession is shown as *give-present*, *giver-present*, and *present-giver*. The N+V+er form overtakes its predecessor due to superiority in syntactic clarity and semantic possibilities.

While exocentric verb-noun compounds lack a head, the *backstabber* pattern becomes synthetic to mark the head. The addition of the affix *–er* to [V+N] matches the dominant constituent (V) with the lexical category of the compound (N), and establishes it as the head. The pattern V+er+N is then reversed to move the head to the right side of the compound.

According to Marchand (1960), N+V+er compounds began appearing in 1300. The first examples found by Marchand describe people such as *man-slayer*

(murderer*)*, *purse-bearer* (treasurer), and *house-breaker* (robber). Later examples describe animals and objects, and other categories covered by *turncoat* compounds. N+V+er and other modern word formations like blending are able to insult people (*frenemy*, *motherfucker*, *bridezilla*), in addition to name household tools and games (*spork*, *screwdriver*, *Pictionary*, *Scattergories*).

While V+N needs to use transitive verbs to create a verb-object relation, N+V+er can have temporal and locative relationships as well, expanding the inventory of verbs to include intransitive forms. *Cliff-divers* and *day dreamers* do not dive cliffs or dream days, they dive off of cliffs, and dream during the day.

The structure of N+V+er is more transparent than V+N, it has fewer limits on its semantic range, it is right-headed instead of headless, it can include intransitive verbs, and it uses a singular N, so that the plural marker *–s* can be used on the V+er head constituent only. Overall, N+V+er offers more advantages to English speakers than exocentric V+N. *Turncoat* compounds are easy for children to produce, but are not sustainable in a right-headed language. *Backstabber* compounds, on the other hand, are easy for adults to produce, and complies with the headedness of the language.

10. Exceptions to the Headedness and Word Order Rules

I propose here that headship and word order, but headship most of all, determine the acceptability of compounding patterns in a given language. The next three subsections look at possible counterarguments from Romance and Germanic sources.

10.1 French Endocentric Calques

In her collection of compounding patterns found in French newspapers, Rosenberg (2007) includes right-headed calques from English such as *hit parade* and *liberty ship*. Both compounds are head-final N+N, which goes against the headedness of the French language. English borrowings like *hit parade* have not led to any native productivity of right-headed compounds.

From this we learn that individual borrowed words can violate headedness when they are clearly of foreign origin. A language may borrow words like *wi-fi*, *los bluejeans*, or *le week-end* without integrating the pattern that created that word, especially if it conflicts with its basic compounding and syntactic rules.

10.2 Romanian Compounding

As mentioned previously, all Romance languages use the exocentric V+N pattern for agentive and instrumental compounds, with Romanian as the one exception. Though Romanian is left-headed and has VO word order, it does not feature much compounding at all, a trait it shares with Classical Latin. Latin and Romanian also use declensions and case markers, which other Modern Romance languages did not inherit.

Through research, two exocentric verb-noun examples have emerged: *girofar* 'rotate+lighthouse' (flashing lights on the roof of an emergency vehicle) and *zgârie-nori* 'scrape+clouds' (skyscraper.) Originating in English, *skyscraper* has been constructed in many languages in comparable agentive forms such as *gratte-ciel* 'scrape+skies' in French, and *Wolkenkratzer* 'cloud+scraper' in German. *Girofar* may also be a borrowed word, but its origins were not determined during the course of this research. Further study is necessary in the field.

Chung (1994, p. 23) argues that Romanian has no exocentric V+N productivity of its own.

> "Romanian is a Romance language, and while it has a number of French borrowings of this compound type, it does not seem to have developed its own native version of this compounding pattern, suggesting that membership in the Romance branch of languages does not imply automatic adoption of this compound type. Similar borrowings from French of this type of compound occur even in non-Indo-European languages such as Turkish, which is SOV."

If Romanian does not naturally create exocentric verb-noun compounds, *girofar* and *zgârie-nori* may be rule-breaking calques, equivalent to English borrowings like *hit parade* appearing in the French language.

Romania is geographically set apart from the rest of the Romance languages, and was influenced mainly by Turkish and Slavic languages until the 18th century (Close, 1974). During this time of separation, Romanian may have changed in a way that other Romance languages did not, or perhaps Romance languages morphed while Romanian remained close to its Latin roots. Since Romanian uses case markers, word order is not as crucial as in other VO languages, so a compounding pattern based on VO word order would not offer as many advantages to children as it would for a more order-based language.

The Romanian exception weakens the argument that compounding patterns are determined exclusively by their headedness and VO/OV word order.

10.3 Germanic Exocentric [V+N]

During my research, eleven exocentric verb-noun compounds emerged from Germanic languages, seven from German (Gast 2008, Becker 1992) and three from Dutch (Tuggy 2003) listed in 9. Though they appear to be similar to English and Romance exocentric V+N compounds, Becker (1992, p. 25) calls these "citation words," sentences or phrases that can be used as nouns. Syntactically frozen sentences in the English and German versions of *Vergißmeinnicht* (*forget-me-not*), and the *Our Father* prayer, known in German as *Vaterunser*. These complex German phrases should perhaps be removed from this study of compounding, in the same way that phrases with participles or syntactic markers such as *know-it-all, lady-in-waiting,* and *offput* have been excluded from English compounding. Many of these compounds use *nothing* and *all*, which can be considered pronouns or strong quantifiers, not nouns, much like the *Cleen-all* type of compounds excluded in 6.3.1.

However, in the event that these should be categorized as compounds, they are placed here in 40 and 41 as possible exceptions to headedness and VO proposal.

40. German: *Binnnichts* 'am+nothing' (unimportant person), *Habenichts*, 'have+nothing' (have-not), *Storenfried* 'make+trouble' (trouble maker), *Stortebeker* 'overturn+cup' (name of pirate), *Taugenichts* 'do+nothing' (good-for-nothing), *Traugott* 'Trust+God' (a surname), *Trautsichnicts* 'does-nothing' (coward), *Weißnichts* 'know-nothing' (ignoramus)

41. Dutch: *weet-veel* 'know+much' (knowledgable person), *doe-al* 'do+all' (busy person), *bemoieal* 'meddle+all' (busybody)

Stortebeker, born in 1360, was a famous pirate. Aside from his own lifetime, there is no historical anchor for the rest of these exocentric exceptions. Germanic languages may have a very minimal ability to create words of this form, or they may have been borrowed from English or French, and their foreign source may excuse the unusual form in which they come. Until more conclusive research is executed, the exact origins and circumstances which led to the creation of the aforementioned examples will have to remain unsolved.

11. Discussion

It is not by coincidence that English shares features with Romance and Germanic languages. As a Germanic language, English has maintained right-headedness, and

therefore has shares head-final N+N, endocentric V+N, and N+V+er patterns with its relative. Through historical interaction with Romance languages, English received a boost in productivity from the exocentric V+N pattern. In addition, English's unique proclivity to synthetic compounds has resulted in the inclusion of V+ing+N compounds as well.

Chart 8 summarizes the structural features that the Romance and Germanic language systems have in common with English, and how those syntactic similarities are mirrored in the creation of similar agentive compound forms in those languages.

Chart 8. The Web of Language Structure and Compounding Patterns

```
left-headed        VO          right-headed        OV

        \      /        \      /        \      /

        Romance      English          Germanic

        \      /            \      /

        exo V+N              endo V+N
                              & N+V+er

                V+ing+N
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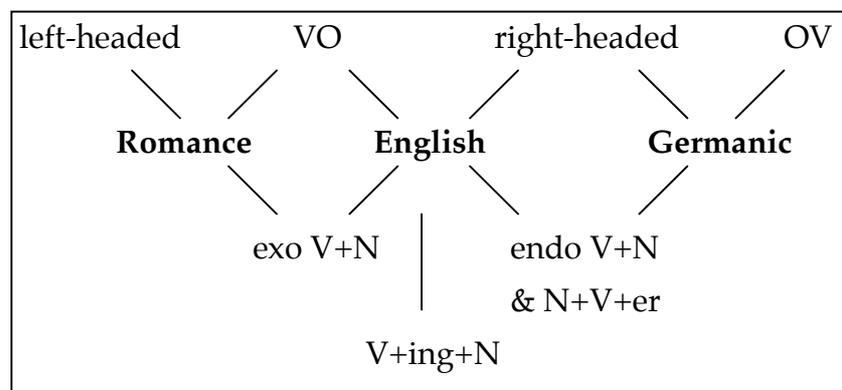
Even though they are the most productive agentive pattern there have been no in-depth studies of N+V+er since Marchand (1960). Compounding books sideline this pattern by calling it a 'synthetic compound' and focusing only on bare root compounds. Exocentric V+N is also ignored because of its small number of examples in English. Even they do not conform with prototypical compounds like *blackbird*, these patterns contain information about historical word formation in English as well as information about what factors cause the genesis and productivity of compounding patterns in a given language.

The erosion of the case marking system necessitated a more strict word order in Latin, leading to the rise of the VO system in Vulgar Latin, which was passed onto the Romance languages. English also lost its declensions during Middle English, which again resulted in a switch from OV to VO. Without case markers, word order is the next most reliable way to determine the relationships between words.

VO languages stress a rigid word order. With a consistent word order, children can rely on the order of the constituents to tell the speaker what the relationship is. Children find it simple to build compounds from neighboring words like verb and object. Perhaps because of its retention of case markers, Romanian

children do not receive as many advantages by basing word formation off of syntax. With a more free word order, Romanian behaves like Classical Latin, mimicking its paucity of compounding.

More discussion between child acquisition and adult production of compounding could result in greater understanding of how to teach languages, how to assist people with language defects, and a better way to teach children to speak their first language in school. This can also help narrow down the number of features of English which are considered to be inexplicable or extra-linguistic in nature. Though some features occur through historical mismatches, such as spelling conventions, English is still grounded by foundations of headedness and word structure, just like every language is.

12. Conclusion

The stages of compounding through which children progress underline the basic syntactic rules of English. Children test out each stage as their knowledge of their language increases. Children create new compounds by following the guidelines of simplicity, transparency, and productivity, and will abandon patterns that fail to conform to these guidelines.

The uncommon pattern exocentric [V+N] was amplified by exposure to French, but within English, which lacks many syntactic markers, it could never become an extremely productive form. It appears that history has mirrored the childhood acquisition of compounding, in which exocentric [V+N] are created through a flurry of activity, but each new compound cannot be sustained over a long time, leaving behind a treasury of nonce words. These words are briefly used by children before moving on to more structurally and semantically transparent forms, namely [N+V+er]. Exocentric [V+N] and [N+V+er] both appeared in Middle English around the year 1300, but due to its superior inventory of concepts and vocabulary, [N+V+er] rose to become the most productive compound in English for agentive and instrumental compounding.

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Appendix A

#	Date	Word	Definition
1	1050	catchpole	PERSON: a tax gatherer
2	1225	gulchcup	PERSON: a drunkard
3	1300	makefare	ANIMAL: a hare
4	1305	trail-baston	PERSON: a thug who carries a club
5	1312	pick-harness	PERSON: a battlefield scavenger
6	1325	wait-gleed	PERSON: a person who sits by the fire lazily
7	1340	shut-purse	THING: a demon of miserliness
8	1347	spurn-water	THING: a channel that diverts water
9	1350	shite-row	ANIMAL: a bird, the grey heron
10	1362	cutpurse	PERSON: a pickpocket
11	1362	spill-time	PERSON: a useless person
12	1374	let-game	PERSON: a spoilsport
13	1375	turnsole	PLANT: a plant that follows the sun, a heliotrope
14	1385	pickpurse	PERSON: a pickpocket
15	1387	lickpot	THING: the index finger
16	1391	chopchurch	PERSON: a trafficker of church benefices
17	1400	lickpenny	PERSON: a person who acquires money
18	1400	wardrobe	THING: a closet
19	1412	pickthank	PERSON: a sycophant, a flatterer
20	1412	pinchpenny	PERSON: a miserly person
21	1430	tickle-tail	PERSON: an abusive teacher
22	1430	turnbroach	PERSON: a turnspit
23	1440	lickdish	ANIMAL: a parasite, also a PERSON
24	1440	lockchester	ANIMAL a woodlouse
25	1440	lockdor	ANIMAL a woodlouse
26	1440	pick-penny	PERSON: a miserly person
27	1440	wag-start	ANIMAL: a bird, same as wag-tail
28	1448	want-wit	PERSON: a stupid person
29	1456	pick-fault	PERSON: a critical person
30	1463	breakfast	THING: a morning meal
31	1488	shove-groat	THING: a game
32	1490	pastime	THING: a game
33	1498	passport	THING: a travel document
34	1500	crack-rope	PERSON: a person likely to be hanged
35	1510	pluck-buffet	THING: an archery contest
36	1510	wag-tail	ANIMAL: a bird, same as wag-start
37	1516	makepeace	PERSON: a peace maker
38	1519	lick-sauce	PERSON: a parasite
39	1519	smell-feast	ANIMAL: a parasite, also a PERSON
40	1521	slip-groat	THING: a game
41	1522	shove-board	THING: a game
42	1524	give-ale	THING: an annual banquet in Kent
43	1529	makebate	PERSON: a trouble maker
44	1530	pick-quarrel	PERSON: a trouble maker
45	1532	shovelboard	THING: a game
46	1532	spurn-point	THING: a game
47	1532	stretchhemp	PERSON: a person likely to be hanged
48	1533	choplogic	THING: a sophistical argument
49	1534	lack-Latin	PERSON: an uneducated person

50	1535	cutthroat	PERSON: a violent person, a rogue
51	1540	pinchpence	ADJ: miserly
52	1541	slide-thrift	THING: a game
53	1542	chop-loge	PERSON: a sophistical arguer
54	1542	pick-tooth	THING: a toothpick
55	1542	prick-madam	PLANT: a stonecrop
56	1543	stretchneck	THING: a pillory
57	1548	loose-strife	PLANT: lysimachia
58	1548	telltale	PERSON: a slanderer, a gossip
59	1548	turnkind	THING: transubstantiation
60	1549	claw-back	PERSON: a sycophant, a flatterer
61	1550	rest harrow	PLANT: ononis arvensis, same as stay-plough
62	1550	smellsmock	PERSON: a lover of women, a great wencher
63	1551	heal-bite	PLANT: alyssum
64	1551	heal-dog	PLANT: alyssum
65	1552	fill-belly	PERSON: a glutton
66	1552	hap-harlot	THING: a coarse overlet (garment)
67	1552	slide-groat	THING: a game
68	1553	pick-lock	PERSON: a burglar
69	1553	scarecrow	THING: a deterrent used by farmers
70	1553	spend-all	PERSON: a wasteful spender
71	1554	makeshift	PERSON: a shifty person, a rogue
72	1555	spy-fault	PERSON: a critical person
73	1557	heal-all	PLANT: various medicinal plants
74	1557	turncoat	PERSON: a traitor
75	1558	turn-tippet	PERSON: a traitor
76	1560	bite-sheep	PERSON: a bishop who attacks their 'sheep'
77	1560	stretchleg	THING: a personification of Death
78	1560	swashbuckler	PERSON: a swordsman
79	1561	chop-cherry	THING: a game
80	1566	crack-halter	PERSON: a person likely to be hanged
81	1566	nip-farthing	PERSON: a miserly person
82	1567	breakneck	PERSON: a recklessly daring person, also ADJ
83	1567	stanchblood	PLANT: yarrow or bloodstone
84	1567	stay-ship	ANIMAL: a remora or sucking fish
85	1568	burn-grange	PERSON: a person who sets barns on fire
86	1568	toss-pot	PERSON: a drunkard
87	1570	hang-rope	PERSON: a person likely to be hanged
88	1570	wag-halter	PERSON: a person likely to be hanged
89	1571	lick-trencher	PERSON: a parasite
90	1571	shake-rag	PERSON: a disreputable person
91	1572	troll-madam	THING: a game
92	1573	slap-sauce	PERSON: a glutton
93	1575	mar-hawk	PERSON: a falconer
94	1576	turnspit	ANIMAL: a dog who turns a spit
95	1577	carrytale	PERSON: a slanderer, a gossip
96	1577	find-fault	PERSON: a critical person
97	1577	scattergood	PERSON: a wasteful spender
98	1577	scorch-villein	PERSON: an oppressive lord
99	1578	drop-piss	THING: a urinary disease
100	1579	do-nothing	PERSON: a useless person
101	1579	slip-thrift	THING: a game
102	1580	blowbottle	PERSON: a drunkard

103	1582	break-vow	PERSON: an unreliable person
104	1582	makesport	THING: an amusement
105	1582	pinch-crust	PERSON: a miserly person
106	1582	whip-cat	THING: a farmer's feast
107	1583	break love	PERSON: an unreliable person
108	1583	break-league	PERSON: an unreliable person
109	1583	break-net	ANIMAL: a dogfish
110	1583	stretchhalter	PERSON: a person likely to be hanged
111	1584	quake breech	PERSON: a coward
112	1584	scrape-penny	PERSON: a miserly person
113	1585	rake-hell	PERSON: a rogue, scoundrel
114	1586	blow-point	THING: a game
115	1586	do-little	PERSON: a useless person
116	1586	prick-louse	PERSON: a tailor
117	1586	seek-sorrow	PERSON: a wet blanket
118	1587	scarefly	THING: device for scaring flies / old name for Jupiter
119	1588	steal-counter	PERSON: a person who cheats at games
120	1589	breakpulpit	PERSON: a boisterous preacher
121	1590	kill-courtesy	PERSON: a boorish person
122	1590	killcow	PERSON: a butcher or bully
123	1590	kill-devil	PERSON: a recklessly daring person
124	1590	lack-learning	PERSON: an uneducated person
125	1591	pickpocket	PERSON: a thief, a cutpurse
126	1591	scarebabe	PERSON: a monster to scare children, a bogeyman
127	1592	pinch-fart	PERSON: a miserly person
128	1592	steal-placard	PERSON: one with a stolen begging license
129	1593	breakpeace	PERSON: a trouble maker
130	1593	breed-bate	PERSON: a trouble maker
131	1593	patch-panel	PERSON: a bad carpenter
132	1594	do-nought	PERSON: a useless person
133	1596	lack-brain	PERSON: an unintellectual person
134	1597	catchfly	PLANT: lychnus viscaria
135	1598	fetch-water	PERSON: a water carrier
136	1598	love-man	PLANT: catchweed, goosegrass, same as catch-rogue
137	1598	make-fray	PERSON: a mischief maker
138	1598	shit rags	PERSON: a lazy person
139	1598	shit sticks	PERSON: a miserly person
140	1598	shitfire	PERSON: a fiery person
141	1599	carry-castle	ANIMAL: an elephant with a throne on its back
142	1599	huffcap	THING: a strong ale
143	1599	lick-spigot	ANIMAL: a parasite, also a PERSON
144	1599	rake-shame	PERSON: a rogue, scoundrel
145	1599	robpot	PERSON: a drunkard
146	1600	break-promise	PERSON: an unreliable person
147	1600	lackbeard	PERSON: a young man
148	1600	lack-linen	ADJ: lacking linen
149	1600	lacklove	PERSON: a person who doesn't know love
150	1600	pinch-back	PERSON: a miserly person
151	1600	tear-placket	PERSON: a cutpurse
152	1600	trick-madam	PLANT: a stonecrop
153	1601	kindle-fire	PERSON: a mischief maker
154	1601	spendthrift	PERSON: a wasteful spender
155	1602	scape-Tyburn	PERSON: a person likely to be hanged

156	1602	scrape-scall	PERSON: a miserly person
157	1603	scrape-trencher	PERSON: a servant
158	1603	trouble-feast	PERSON: a wet blanket
159	1603	wantgrace	PERSON: a reprobate
160	1605	spend-good	PERSON: a wasteful spender
161	1605	tapskin	THING: a drumstick
162	1605	tear-bridge	ADJ: that which destroys a bridge
163	1605	watch-birth	PERSON: a midwife
164	1606	share-penny	PERSON: a wasteful spender
165	1606	tame-grief	THING: something that subdues grief
166	1606	tear-cat	PERSON: a ruffian, a bully
167	1607	scrape-shoe	PERSON: a sycophant, a flatterer
168	1608	draw blood	PERSON: a violent person, a rogue
169	1608	eat-bee	ANIMAL: a bird
170	1608	trouble-house	PERSON: a wet blanket
171	1609	fill-pot	PERSON: a drunkard
172	1609	steelback	THING: a kind of wine
173	1609	suck-egg	ANIMAL: a bird such as the cuckoo, also a PERSON
174	1610	claw-back	PERSON: a flatterer
175	1610	spoil-paper	PERSON: a bad writer
176	1610	trouble-cup	PERSON: a wet blanket
177	1610	whip-king	THING: a game
178	1611	catch-bit	PERSON: a critical person
179	1611	catch-coin	PERSON: a greedy judge
180	1611	gripp-argent	PERSON: a miserly person
181	1611	lick-box	PERSON: a parasite
182	1611	lick-halter	PERSON: a person likely to be hanged
183	1611	love-pot	PERSON: a drunkard
184	1611	mar-all	PERSON: a spoilsport
185	1611	ply-pot	PERSON: a drunkard
186	1611	seek-trouble	PERSON: a wet blanket
187	1611	spare-good	PERSON: a wasteful spender
188	1611	spitfire	THING: a cannon, a fighter plane
189	1611	suck-fyst	PERSON: a parasite
190	1611	tame-horse	PERSON: a tamer of horses
191	1611	turn-pate	ANIMAL: a crested pigeon
192	1611	whiparse	PERSON: an abusive teacher
193	1611	whipcan	PERSON: a drunkard
194	1612	kill-buck	PERSON: a butcher
195	1614	draw-latch	THING: a string which raises a latch
196	1614	spurn-cow	PERSON: a cow-herd
197	1615	pick-tree	ANIMAL: a great green woodpecker
198	1615	pinch-gut	THING: bad sour beer
199	1615	quench-coal	THING: something that extinguishes burning coal
200	1615	turn-poke	ANIMAL: a bird, a gamecock
201	1616	kill-pot	PERSON: a drunkard
202	1616	lack-lustre	ADJ: not bright or shiny, lacking lustre
203	1616	tear-mouth	PERSON: a ranting actor
204	1617	ding-thrift	PERSON: a wasteful spender
205	1617	make-strife	PERSON: a trouble maker
206	1618	lacklooks	PERSON: an unattractive person
207	1619	trouble-town	PERSON: a wet blanket
208	1620	tear-throat	PERSON: a ranting actor, also THING: throat irritant

209	1621	turn-tail	PERSON: a coward
210	1622	blow-coal	THING: a sheet used to cause a draft, also PERSON
211	1622	break-bulk	PERSON: a captain who abstracts part of his cargo
212	1622	fuckwind	ANIMAL: a windhover, a kestrel
213	1622	lackland	PERSON: one without land, a useless man, youngest son
214	1622	squeeze-grape	PERSON: a drunkard
215	1625	mar-tail	PERSON: a prostitute
216	1626	scrape-pelf	PERSON: a miserly person
217	1626	spill-good	PERSON: a wasteful spender
218	1627	quake buttock	PERSON: a coward
219	1628	killcalf	ADJ: unnecessarily cruel
220	1628	mar-right	ADJ: malicious
221	1628	steal-truth	THING: a heresy
222	1629	cover-shame	THING: a coat which covers up
223	1629	lick-spittle	PERSON: a parasite
224	1630	carryknave	PERSON: a prostitute
225	1630	clap-shoulder	PERSON: an officer of justice
226	1630	scald-rag	PERSON: a dyer
227	1632	kindle-coal	PERSON: a mischief maker
228	1632	rot gut	THING: a cheap alcoholic drink
229	1634	chop-living	PERSON: a trafficker of church benefices
230	1634	stretchrope	PERSON: a bellringer
231	1639	bangpitcher	PERSON: a drunkard
232	1639	cover-slut	THING: a coat which covers up
233	1639	tickle-brain	THING: alcohol, also PERSON: bartender
234	1643	clutchfist	PERSON: a miserly person
235	1643	pluck-penny	THING: a game
236	1644	cutwater	THING: a ship, also a large nose
237	1646	burst-cow	ANIMAL: an insect which injures cattle
238	1647	mar-good	THING: an evil force
239	1648	draw-glove	THING: a game
240	1648	pinch-belly	PERSON: a miserly person
241	1648	shit-breech	PERSON: a useless cowardly person
242	1651	know-little	PERSON: an ignorant person
243	1655	take-all	THING: a disease of wheat
244	1655	turnkey	THING: instrument to help burglars
245	1657	sweep-chimney	PERSON: a chimney sweep
246	1658	burn-cow	ANIMAL: an insect which injures cattle
247	1658	nip-bud	ANIMAL: a small plant pest
248	1658	twitch-ballock	ANIMAL: an earwig
249	1659	fill-paunch	PERSON: a glutton
250	1659	slip-halter	PERSON: a person likely to be hanged
251	1661	changechurch	PERSON: a religious worker who changes churches
252	1661	nipshred	PERSON: a tailor
253	1663	catch-fish	PERSON: a tradesman, a fencer?
254	1663	shake-bag	ANIMAL: a bird, a large breed of fowl
255	1667	lack-wit	PERSON: an unintellectual person
256	1667	quench-fire	THING: something that extinguishes fire
257	1668	skip-kennel	PERSON: a lackey
258	1668	trouble-belly	PLANT: gutwort
259	1668	turn-cap	PLANT: a lily
260	1670	scatter-story	PERSON: a slanderer, a gossip
261	1671	kill-herb	PLANT: a parasite plant

262	1671	shearwater	ANIMAL: a puffin
263	1671	stitch-back	THING: a strong ale
264	1672	turnwheel	PERSON: a boy employed to turn a lathe
265	1673	stretchgut	PERSON: a glutton
266	1674	turnstone	ANIMAL: a limicoline bird
267	1675	hang-string	PERSON: a person likely to be hanged
268	1676	tip-cat	THING: a game
269	1677	hangdog	PERSON: a cutthroat
270	1678	keep-friend	THING: iron rings connected by a chain
271	1678	tell-clock	PERSON: a useless worker
272	1679	catch-cloak	PERSON: a thief
273	1680	sell-truth	PERSON: an unreliable person
274	1681	sell-soul	PERSON: an unreliable person
275	1682	scorn-book	PERSON: an ignorant person
276	1685	tear-rogue	PERSON: a disreputable person
277	1688	breakstone	PLANT: saxifraga
278	1688	say-nay	ANIMAL: a fish, a lamprey
279	1693	scrape-good	PERSON: a miserly person
280	1693	spin-text	PERSON: a clergyman
281	1693	trip-madam	PLANT: a stonecrop
282	1695	makeweight	THING: a small item added to reach a certain weight
283	1699	skinflint	PERSON: a miserly person
284	1700	scrape-all	PERSON: a miserly person
285	1700	split-fig	PERSON: a grocer
286	1700	tickle-pitcher	PERSON: a drunkard
287	1705	clingstone	PLANT: a type of peach that clings to the stone
288	1705	spoil-trade	PERSON: a wet blanket
289	1706	tear-brain	THING: rum and brandy
290	1707	puzzle-text	PERSON: an ignorant person
291	1707	spare-penny	PERSON: a miserly person
292	1711	turn-cock	PERSON: a water works official
293	1712	shuffle-cap	THING: a game
294	1713	tickle-toby	THING: a rod or switch used for punishment
295	1714	carry-all	THING: a carriage
296	1716	rake-kennel	PERSON: a scavenger
297	1716	spit-poison	PERSON: a malicious person
298	1716	wrap-rascal	THING: a coat which covers up
299	1721	break-water	THING: a wall for slowing down water near a harbor
300	1725	fear-nothing	THING: a heavy coat, same as dreadnought
301	1727	slabber-chops	PERSON: an untidy eater
302	1736	catch-fart	PERSON: a servant who walks behind their master
303	1737	pitch-farthing	THING: a game
304	1738	whip-belly	THING: bad sour beer
305	1739	know-nothing	PERSON: an ignorant person
306	1746	scrape-pan	THING: an instrument for scraping a salt pan
307	1750	slip-rope	PERSON: a person likely to be hanged
308	1751	scare-devil	PLANT: hypericum
309	1751	thread-needle	THING: a game
310	1759	catchpenny	THING: a worthless thing to attract customers with
311	1760	wash-hand	ADJ: for hand-washing, as a basin
312	1762	makegame	THING: a source of amusement, also PERSON
313	1773	fear-nought	THING: a heavy coat or ship
314	1775	shite-poke	ANIMAL: a bird such as the green heron

315	1775	tumble-dung	ANIMAL: a beetle
316	1776	kill joy	PERSON: a spoilsport
317	1782	move-all	THING: a game
318	1785	burne-win	PERSON: a blacksmith
319	1785	hang-gallows	PERSON: a person likely to be hanged
320	1785	nipcheese	PERSON: the purser (treasurer) of a ship
321	1785	save-all	PERSON: a miserly person
322	1785	slip-gibbet	PERSON: a person likely to be hanged
323	1785	squeezecrab	PERSON: a shrunken, shrivelled person
324	1785	squeezewax	PERSON: a good natured but gullible person
325	1785	tame-poison	PLANT: a healing plant
326	1785	tickle-text	PERSON: a parson
327	1788	breakteeth	ADJ: difficult to pronounce
328	1788	say-grace	PERSON: one who says grace at meals
329	1788	spoil-pudding	PERSON: a long-winded preacher
330	1790	draw-breech	PERSON: an untidy woman
331	1790	twitch-bell	ANIMAL: an earwig
332	1794	daredevil	PERSON: a daring or foolish person
333	1796	swish-tail	ANIMAL: a pheasant or a horse with an undocked tail
334	1799	catch-water	THING: a drain leading to the main drain
335	1799	scape-gallows	PERSON: a person likely to be hanged
336	1800	stay-stomach	THING: a snack
337	1800	steal-clothes	THING: a game
338	1801	pick-point	THING: a game
339	1801	spoilsport	PERSON: a wet blanket
340	1801	turn-screw	THING: a screwdriver
341	1803	lockjaw	THING: a variety of tetanus when jaws clamp shut
342	1803	spare-thrift	PERSON: a miserly person
343	1806	dreadnought	THING: a jacket or ship
344	1807	smellfungus	PERSON: a fault finder
345	1809	scapegrace	PERSON: a reprobate
346	1811	bang-straw	PERSON: a farm servant
347	1811	buss beggar	PERSON: a useless old person
348	1811	kill-priest	THING: port wine
349	1811	mix-metal	PERSON: a silver smith
350	1811	puzzle-cause	PERSON: a lawyer
351	1811	split-cause	PERSON: a lawyer
352	1815	tell-fare	THING: a recording device or gauge
353	1816	shack-bag	ANIMAL: a bird, a large breed of fowl
354	1816	steal-coat	THING: a game
355	1817	lackgrace	PERSON: a reprobate
356	1819	lackstock	PERSON: one who has no money in stocks
357	1821	mar-feast	PERSON: a parasite
358	1821	pinch-commons	PERSON: a miserly person
359	1823	break-wind	THING: a disease of sheep
360	1823	snap-apple	THING: a game
361	1824	turnpenny	THING: a game
362	1825	pick-cheese	ANIMAL: a bird, the great and blue tits
363	1825	prick-bill	PERSON: a student who checks off an attendance list
364	1825	wash-dish	PERSON: a dishwasher, also ANIMAL: bird, a wagtail
365	1827	thump-cushion	PERSON: a boisterous preacher
366	1829	shuffle-wing	ANIMAL: the hedge-sparrow
367	1829	stick-jaw	THING: sweetmeat

368	1831	turn-skin	PERSON: a lycanthrope, a shape-shifter
369	1833	lick-spit	PERSON: a parasite
370	1837	chuck-hole	THING: a game
371	1837	sawbones	PERSON: a surgeon
372	1837	scrape-gut	PERSON: a fiddler
373	1837	turn-trencher	THING: a game
374	1838	break-bones	ANIMAL: a bird such as the osprey or vulture
375	1838	chuck-halfpenny	THING: a game
376	1838	say-nothing	ADJ: silent
377	1840	dare-all	THING: a heavy coat, same as dreadnought
378	1841	shove-halfpenny	THING: a game
379	1845	turn side	THING: a disease of cattle
380	1846	cover-point	THING: a position in cricket
381	1847	ceasefire	THING: a truce during a war
382	1848	chokepriest	THING: a thick italian soup
383	1848	toss-halfpenny	THING: a game
384	1849	lick-ladle	PERSON: a parasite
385	1851	break-back	THING: harvest moon time
386	1851	hold-all	THING: a portable case
387	1851	stop-motion	THING: a device that stops a machine or engine
388	1855	win-bread	THING: the sword of an adventurer
389	1857	break-club	THING: an obstacle on a golf course
390	1858	scratch-back	THING: a back scratcher
391	1860	tangle-foot	THING: intoxicating beverages
392	1860	tangle-leg(s)	PLANT: a hobble-bush
393	1861	puzzle-wit	PERSON: a stupid or silly person
394	1863	chuck-button	THING: a game
395	1863	stay-plough	PLANT: ononis arvensis, same as rest-harrow
396	1863	whip-tongue	PLANT: galium mollugo
397	1864	pickwick	THING: instrument for pulling up wick on a lamp
398	1865	bang-beggar	PERSON: a constable
399	1866	tear-thumb	PLANT: polygonum
400	1870	choke-dog	THING: hard cheese
401	1871	hanghead	ADJ: that hangs its head
402	1874	kill-lamb	PLANT: andromeda (poisonous to sheep)
403	1874	toss-penny	THING: a game
404	1876	nip-skin	PERSON: a miserly person
405	1876	twitch-clock	ANIMAL: a roach
406	1877	bunch-clot	PERSON: a clod-hopper, a dancer
407	1878	jerkwater	ADJ: insignificant, inferior
408	1880	chuck-board	THING: a game
409	1880	draw-stop	THING: a knob in an organ
410	1880	stick-all	THING: a cement for mending things
411	1880	tear-brass	ADJ: rowdy, prodigal
412	1881	fill-basket	THING: prolific plants like peas, potatoes
413	1881	lackpity	ADJ: lacking pity
414	1881	lacksense	PERSON: an ignorant person
415	1882	eat-meat	PERSON: an idle useless person
416	1883	ban-beggar	PERSON: a constable
417	1883	cut-finger	PLANT: a plant thought to heal cuts and sores
418	1883	mar-joy	PERSON: a wet blanket
419	1883	toss-cup	PERSON: a drunkard
420	1885	dip-ear	ANIMAL: a bird

421	1885	draw-water	ANIMAL: a tame bird
422	1886	drop-seed	PLANT: grass
423	1887	lackmind	PERSON: an unintellectual person
424	1889	tattle-tale	PERSON: a slanderer, a gossip
425	1890	pull-devil	THING: a cluster of fish hooks
426	1892	hang-fire	THING: a delayed explosion, a delay
427	1892	pinch-plum	ADJ: miserly
428	1894	cheat-law	PERSON: a law breaker
429	1894	snap-fig	ANIMAL: a bird, a beccafico
430	1895	push-ball	THING: a game
431	1896	burn-gully	PERSON: an inefficient workman
432	1896	chop-straw	PERSON: an argumentative person
433	1896	kick-shins	THING: a game
434	1896	knock-salt	PERSON: a heavy stupid fellow
435	1896	pick-folly	PLANT: the lady's smock
436	1896	piss-bed	PLANT: dandelion
437	1896	shake-cap	THING: a game
438	1896	steal-bonnets	THING: a game
439	1896	stealcorn	THING: the index finger
440	1896	stop-blood	PLANT: yarrow, same as stanch-blood
441	1897	buz-bloke	PERSON: a pickpocket
442	1897	choke-jade	THING: a specific location in England
443	1901	dust-point	THING: a game
444	1903	pick-brain	PERSON: a person who picks another's brains
445	1906	push-board	THING: a game
446	1912	draw-fast	PERSON: a quack doctor
447	1912	rake-jakes	PERSON: a rogue, scoundrel
448	1912	stamp-crab	PERSON: a lumpish walker
449	1924	scofflaw	PERSON: a law breaker
450	1934	prodnose	PERSON: a nosy person, a detective
451	2009	pesterchum	THING: instant messaging application

Exocentric V+N Without Citations before Uhrstrom (1918)

#		Word	Definition
452		bang-tail	ANIMAL: a bird
453		blow-maunger	PERSON: a fat-faced person
454		breed-debate	PERSON: a mischief maker
455		catch-corner	THING: a game
456		catchrogue	PLANT: catchweed, goose grass, same as love-man
457		choke-children	ANIMAL: a bony fish, alosa vulgaris
458		choke-sparrow	PLANT: bearded wheat
459		ding-dew	PERSON: a splay-footed person
460		drive-knurr	THING: a game
461		drop-handkerchief	THING: a game
462		drop-key	THING: a game
463		fear-crow	THING: a scarecrow
464		kick-shoe	PERSON: a dancer
465		kick-stone	THING: a game
466		make-debate	PERSON: a mischief maker
467		nip-louse	PERSON: a tailor
468		nip-lug	PERSON: an abusive teacher
469		pitch-button	THING: a game
470		save-brass	PERSON: a miserly person
471		save-penny	PERSON: a miserly person
472		save-scran	PERSON: a miserly person
473		slip-string	PERSON: a person likely to be hanged
474		stab-rag	PERSON: a tailor
475		stitch-louse	PERSON: a tailor
476		suck-blood	ANIMAL: a leech
477		swash-bucket	PERSON: an untidy woman
478		take-bannets	THING: a game
479		tangle-toad	PLANT: creeping buttercup
480		trouble-mirth	PERSON: a wet blanket
481		twitch-clog	ANIMAL: a roach
482		whip-straw	PERSON: an unexperienced worker
483		Xpel-air	THING: a ventilation system