

A Diachronic Study on the Complementation Patterns of the Verb

***Scruple* in American English**

Laura Savilampi
University of Tampere
School of Language, Translation and Literary Studies
English Philology
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Pro gradu -tutkielmani aiheena on englannin kielen verbin *scruple* ja sen taivutettujen muotojen *scruples*, *scrupled* ja *scrupling* komplementaatio amerikanenglannissa 1800-luvun alkupuolelta nykypäivään. Tutkimukseni tavoitteena on selvittää, minkälaisia komplementteja kyseinen verbi on kahden viime vuosisadan aikana valinnut ja kuinka nämä komplementit ovat mahdollisesti muuttuneet.

Tutkimusaineistonani käytin korpusesimerkkejä pääasiassa *The Corpus of Historical American English* -korpuksesta, jonka materiaali koostuu kaunokirjallisuudesta, tietokirjallisuudesta, aikakauslehdistä ja sanomalehdistä kerätyistä teksteistä, ja joka kattaa aikavälin vuodesta 1810 vuoteen 2009. Aivan viimeaikaisinta kehitystä tutkiessani käytin myös *The Corpus of Contemporary American English* -korpuksesta kerättyjä esimerkkejä saadakseni enemmän tutkimusaineistoa aikaväliltä 1990-2012.

Tutkielmani alkuosassa käsittelen korpuslingvistiikkaa ja korpusmateriaalin tutkimusaineistona käyttämisen hyöty- ja haittapuolia. Selvennän myös mitä komplementaatiolla ja komplementeilla tässä tutkielmassa tarkoitetaan esitellen samalla teorioita, jotka ovat komplementaatiota tutkittaessa olennaisessa osassa. Lisäksi tutkin sekä sanakirjoja että kielioppiteoksia saadakseni selville, millaista tietoa verbistä *scruple* ja sen komplementeista on ennestään saatavilla.

Varsinaisessa analyysiosassa selviää, että vanhanaikaisena sanana koettu *scruple* esiintyi yleisimmin käytössä vuosina 1810-1859, jonka jälkeen sen käyttö on vähentynyt jatkuvasti. Laskevasta suosioistaan huolimatta *scruple* on kuitenkin verbi, joka esiintyy monien erilaisten komplementtien kanssa ja näistä komplementeista yleisimmin käytetty on *to*-infinitiivi niin nykypäivänä kuin jo 1800-luvullakin. Huomionarvoista on myös se, kuinka usein verbin käyttö on intransitiivista, mikä on johtanut erittäin suuriin eroihin verbin eri merkityksien esiintymisessä korpusaineistossa.

Asiasanat: *scruple*, verbi, komplementaatio, korpus, korpuslingvistiikka

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1 Introduction

Consider the following sentences, taken from the *Oxford English Dictionary*:

- (1) (a) He **scrupled** no means to obtain his ends. (Ld. Chesterfield, 1748)
 (b) The sovereigns..who **scrupled** at no means for securing themselves on the throne.
 (R. Southey, 1824)
 (c) Nor have I **scrupled** to forsake the ancient quantity in proper names. (R. Ellis, 1871)

As examples (1a), (1b) and (1c) illustrate, *scruple* as the head of the verb phrase may select different kinds of constructions, e.g. ones beginning with noun phrases, various prepositions or *to*-infinitives, to follow it. In different contexts a different construction is chosen by the verb. This phenomenon is called complementation, and the items selected by the head are called complements.

In this thesis I will examine the complementation patterns of the verb *scruple*. I will use authentic language data from a corpus to identify the different kinds of complementation patterns *scruple* has selected in a time period spanning from the beginning of the 19th century to the present day. In addition to identifying and discussing the complementation patterns of the verb *scruple*, I am also interested in seeing whether some complements have fallen out of use over the years and whether new ones have emerged.

However, before analysing the corpus data on *scruple*, I will first of all explain what corpora and corpus linguistics are. I will also address some of the problems of corpus linguistics and introduce the corpus used in this study. Secondly, I will discuss complementation and some important concepts and theories related to it more in depth. Thirdly, I will take a look at dictionaries such as the *Oxford English Dictionary* and grammars to see what has been said about the senses and the complementation patterns of *scruple*. Possible connections between certain meanings and patterns are paid special attention to. Fourthly and lastly, I will proceed to analyse and discuss the corpus findings.

As for the reasons why *scruple* and its behaviour are the topic of my thesis, the verb piqued my curiosity because I worked on archaic words in my bachelor's thesis. I also believe a diachronic study on the complementation patterns of *scruple* will be of interest to people who find the field of

complementation a fascinating subject area as there are no earlier studies that concentrate on this particular verb and as it is often excluded even from the more general discussion in complementation studies because of its old-fashionedness.

2 Corpora and corpus linguistics

In this chapter the focus is on explaining what corpora and corpus linguistics are. As using corpora in conducting linguistic research is not entirely unproblematic, I will discuss some of those issues and consider whether they have an effect on my study. I am also going to explain why normalising frequencies is a useful practice. Finally, towards the end of this chapter, I will introduce the Corpus of Historical American English, which is used as the primary source of material in this study.

2.1 What are corpora?

According to Svartvik (1992, 7) corpora are “large collections of text available in machine-readable form”. Lindquist (2009, 21) points out that it is of course possible to use for example different sorts of text archives as corpora and that they can indeed be very handy tools, although they have often been compiled because of the texts' “literary value or information content” and not necessarily for linguistic reasons, and thus the representation of the language might not be very balanced. Corpora, especially general corpora, differ from these text archives because their goal is to give a fair picture of the language as a whole (*ibid.*, 18).

However, it should be noted that general corpora are not the only type of corpus to exist. Lindquist (*ibid.*, 11) mentions, for example, historical corpora and specialised corpora, and so it is a logical conclusion to draw that the purpose of the corpus must be kept in mind while choosing the material that will be included in it. After all, a corpus of spoken language should comprise only authentic examples of speech. On the whole, many of the points made by both Svartvik and Lindquist are neatly included in the definition Tognini-Bonelli (2001, 2) presents: “A corpus can be defined as a collection of texts assumed to be representative of a given language put together so that it can be used for linguistic analysis.”

When it comes to using corpora as a source of data, two major approaches have been recognised. According to Biber (2010, 162), the corpus-based approach “assumes the validity of

linguistic forms and structures derived from linguistic theory” and thus the results of corpus-based studies often have to do with the realisation that the descriptions given in dictionaries and grammars do not tell the whole truth about the actual usage of the given language. The corpus-driven approach, in turn, makes no assumptions about linguistic features and so “the linguistic constructs themselves emerge from analysis of a corpus ... and are the basis for subsequent linguistic descriptions” (ibid.). The approach adopted in this study is corpus-based.

2.2 Some advantages and disadvantages of corpus linguistics

Svartvik (1992, 7-8) notes that corpora in their modern form began to be used in language studies in the early 1960s, and that the popularity of corpus linguistics has risen steadily ever since. Not all linguists endorse this development, for example Chomsky has strongly favoured introspection as a method of linguistic analysis instead of using elicited reactions, i.e. native informant tests, and especially corpora as research material (Leech 1968, 88). However, some linguists such as Svartvik (1992, 8) feel that all three sources of information should be used to complement one another as “linguistic competence and performance are too complex to be adequately described by introspection and elicitation alone.”

Thus it appears that the advantages of using corpora in research are abundant, and in fact Svartvik (ibid., 8-10) presents a rather comprehensive list of them: corpus data are objective, shared and available to researchers everywhere in the world, and so the findings of studies can easily be verified by other linguists; corpus data are needed in order to study, for example, such features of language as dialect and register, and corpus data make conducting diachronic studies possible; corpus data and corpora provide us with “the possibility of total accountability of linguistic features” and with information about “the frequency of occurrence of linguistic items”; corpora are helpful in many practical applications of linguistics, e.g. in the process of designing word-processing software; corpora are theoretical resources in addition to being sources of illustrative

examples; and corpora are an ideal source of language data for non-native speakers. Svartvik (ibid., 11) also points out the usefulness of corpus data from the point of view of language skills: students are provided with “real data as a means to greater language awareness and better language proficiency.”

Nevertheless, there are also some disadvantages to using corpora in research. Lindquist (2009, 8-9) brings up Chomsky's criticism of corpus linguistics: he has claimed that corpus linguists' findings are insignificant on the basis of the fact that the sentence *I live in New York* appears in corpora more often than the sentence *I live in Dayton, Ohio*. This criticism is rejected, because although *I live in New York* is surely a statement uttered more often, the findings of corpus-based studies have very rarely been as trivial as that since corpus linguists are often interested in examining different types of constructions and linguistic features in depth, and not presenting mere figures as their findings.

Still, there are other valid concerns regarding the usage of corpora. Svartvik (1992, 10) emphasises the importance of analysing the corpus data manually, even though letting computers do all the work may seem like a temptingly convenient option. He (ibid.) goes on to note that it is dangerous to think that the size of the corpus is more important than the quality of the corpus, or that size actually equals quality. Lindquist (2009, 22) continues the discussion on a similar problem as he mentions that it may be very difficult “to get the right size (and of course the right type) [of corpora] for the particular question you want to answer.” He (ibid., 10) also points out some other caveats that users of corpora should be aware of: corpora can never contain all the possible sentences in a language; the grammaticality of sentences still needs to be judged by native speakers; corpora contain various sorts of mistakes and speech errors; and a theory of language is needed so that one can formulate their research questions and explain their findings. However, for example Leech (1968, 94) addresses Lindquist's concern that all the possible sentences of a language cannot be included in corpora by reminding us that “complete verifiability has been long acknowledged to

be too high a goal in the testing of scientific theories.”

Biber et al. (1998, 262), in turn, raise the subject of the occasional errors made by tagging systems, or taggers. In a tagged corpus every word is tagged for part of speech, but as natural languages tend to be very complex “it is sometimes difficult for a machine to make accurate decisions about tags” (ibid.). Thus queries in a tagged corpus may lead to irrelevant tokens in the data.

Related to the discussion on errors in tagging are the issues of precision and recall. Precision refers to “the proportion of retrieved material that is relevant”, while recall refers to “the proportion of relevant information that was retrieved” (Ball 1994, 295). As Ball (ibid.) remarks, the problems with precision can be dealt with in a relatively easy manner: the irrelevant tokens are simply discarded when sorting through the search results manually. However, recall is a more difficult obstacle to solve as the whole corpus would have to be analysed by hand if one desired to know whether any relevant tokens have been missed, and completing such a task would obviously take a very long time when dealing with a large corpus (ibid., 295-296). As *scruple* is a somewhat rare verb, it is certainly important to consider how significant an effect recall has on this study. Still, it is a common enough word to produce a sufficient number of relevant tokens that can be analysed and drawn conclusions from.

2.3 Normalised frequencies

As Biber et al. (1998, 263) say, there needs to be a way of making sure that the frequency counts are comparable even if the the texts under comparison are of different length, or many differently sized corpora are used. Comparing the frequency counts of various linguistic features in different texts may provide us with new and surprising information, but the information cannot be fully trusted if one forgets to take into account the lengths of the texts. After all, as Biber et al. (ibid.) note, if one of the texts is longer, there are more opportunities for the selected linguistic feature to appear in it

and thus comparing the raw frequency counts does not give us an accurate picture of the situation.

The process of normalisation is what Biber et al. (ibid.) among others present as the way to adjust the raw frequency counts so that texts of different lengths are comparable. When normalising frequencies, the raw frequency count is divided by the number of words in the text, or in the corpus, and this number is then multiplied by the basis one has chosen for norming. Often in corpus linguistics the basis chosen for norming frequency counts is one million. By way of example, the exclamation *alas* occurs 9,268 times in the Corpus of Historical American English (406,232,024 words, but the figure will be rounded to the nearest one hundred million for clarity's sake), and so the normalised frequency is:

$$(9,268 / 400,000,000) \times 1,000,000 = 23.17$$

As the calculation above shows, there are 23.17 occurrences of *alas* per million words in the corpus. The normalised frequencies, or NFs, will be used when analysing the corpus findings as they demonstrate the differences between the occurrences of various complementation patterns very nicely.

2.4 The Corpus of Historical American English

The Corpus of Historical American English (hereafter COHA), created by Mark Davies of Brigham Young University, is the primary source of data used in this study. COHA is a more than 400 million word corpus focusing on texts in American English, and its material covers the years from 1810 to 2009.

As is told on the COHA website¹, the material that COHA consists of comes from more than 100,000 individual texts that are drawn from the realms of fiction (i.e. film and play scripts, novels, short stories and poetry), non-fiction (i.e. non-fictional books and academic journals), popular magazines (e.g. *Harper's*, *Time*, *The New Yorker*, *Sports Illustrated* and *Cosmopolitan*) and newspapers (e.g. *The New York Times*, *The Wall Street Journal* and *The Washington Post*). In

¹ All the information on COHA given in this section can be found on their website.

addition to gathering the material from scanned books and newspapers, resources such as Project Gutenberg and Making of America have been utilised. The Corpus of Contemporary American English, a 450 million word corpus, has also been used as a source for the more recent material in COHA as it covers the years from 1990 to 2012.

One of the aims of creating COHA was to develop as balanced a corpus as possible: for example, fiction accounts for 51% and non-fiction accounts for 49% of the whole corpus. The sub-genres of fiction, i.e. genres such as prose and poetry, have also been balanced across decades.

Table 1 below gives us more information about the composition of the corpus.

Decade	Fiction	Popular magazines	Newspapers	Non-fiction books	Total	% Fiction
1810s	641,164	88,316	0	451,542	1,181,022	54
1820s	3,751,204	1,714,789	0	1,461,012	6,927,005	54
1830s	7,590,350	3,145,575	0	3,038,062	13,773,987	55
1840s	8,850,886	3,554,534	0	3,641,434	16,046,854	55
1850s	9,094,346	4,220,558	0	3,178,922	16,493,826	55
1860s	9,450,562	4,437,941	262,198	2,974,401	17,125,102	55
1870s	10,291,968	4,452,192	1,030,560	2,835,440	18,610,160	55
1880s	11,215,065	4,481,568	1,355,456	3,820,766	20,872,855	54
1890s	11,212,219	4,679,486	1,383,948	3,907,730	21,183,383	53
1900s	12,029,439	5,062,650	1,433,576	4,015,567	22,541,232	53
1910s	11,935,701	5,694,710	1,489,942	3,534,899	22,655,252	53
1920s	12,539,681	5,841,678	3,552,699	3,698,353	25,632,411	49
1930s	11,876,996	5,910,095	3,545,527	3,080,629	24,413,247	49
1940s	11,946,743	5,644,216	3,497,509	3,056,010	24,144,478	49
1950s	11,986,437	5,796,823	3,522,545	3,092,375	24,398,180	49
1960s	11,578,880	5,803,276	3,404,244	3,141,582	23,927,982	48
1970s	11,626,911	5,755,537	3,383,924	3,002,933	23,769,305	49
1980s	12,152,603	5,804,320	4,113,254	3,108,775	25,178,952	48
1990s	13,272,162	7,440,305	4,060,570	3,104,303	27,877,340	48
2000s	14,590,078	7,678,830	4,088,704	3,121,839	29,479,451	49
Total	207,633,395	97,207,399	40,124,656	61,266,574	406,232,024	51

Table 1. The composition of COHA. The table is available on the COHA website, but the last column has been modified in this thesis to make the presentation of percentages clearer.

This balance in the composition of COHA makes it possible for us to examine language usage and be relatively certain that if changes are observed, then changes have actually taken place and they are not simply a result of a shift in the make-up of the corpus, which might happen if, for example, the amount of fiction and non-fiction varied significantly from one decade to another.

Accessibility is also one of COHA's important features. It is available to everyone and since it is a tagged corpus, a wide range of queries can be made as one can easily choose to search for, for instance, *swell* as an adjective, but not as a verb or a noun. Additionally, COHA makes it straightforward to take a look at such matters as frequencies and collocates.

3 Complementation

In this chapter the concepts of *complement* and *complementation* will be examined in more detail, especially in terms of verb complementation, and I will briefly introduce some of the core theories that are relevant in this field of study in order to establish the theoretical framework of this thesis. I will finish up the discussion by presenting some external factors that have the potential to affect the complement selection of verbs.

3.1 What is complementation?

There appear to be a number of different ways to define *complement* and *complementation*, but dictionaries have proven to be a good starting point for gaining a basic understanding of what those terms refer to. First of all, according to the *Oxford English Dictionary* s.v. *complement* *n*, sense 3b, *complement* as a linguistics-related term refers to “one or more words joined to another to complete the sense”, while the *Oxford Dictionary of English* s.v. *complement* *n*.³ defines it as “one or more words, phrases, or clauses governed by a verb ... that complete the meaning of the predicate.” If we next turn to take a look at grammars, we can conclude that both of the dictionaries consulted are on the right track: Leech and Svartvik (2002, 271) state that *complement* can be defined as “something that is necessary to complete a grammatical construction”, and Quirk et al. (1985, 65) say that *complementation* refers to “the function of a part of a phrase or clause which follows a word, and completes the specification of a meaning relationship which that word implies.”

On the basis of these four definitions it is then possible to determine that complement is either a phrase (consisting of one or more words) or a clause that follows a verb and cannot be deleted without rendering the sentence ungrammatical and its meaning incomplete. The study of complementation, in turn, focuses on investigating these complements, and the relationship between the headword² and its complements. These notions of complementation and complement will be further explored and refined in the rest of this chapter.

² The headword can also be a noun or an adjective instead of a verb.

3.2 Valency theory

As Herbst et al. (2004, xxiv) note, the starting point in valency theory is the idea that the verb “occupies a central position in the sentence” and decides whether one or more elements need to follow it in order for it to form a complete and grammatical sentence. These elements that are closely related to the verb are called complements, and the valency of a verb refers to the number of complements the verb in question takes (ibid.). However, not all of the elements following the verb are necessarily dependent on it, and Herbst et al. (ibid., xxiv-xxv) use the following examples to illustrate the distinction between these more freely occurring elements, i.e. adjuncts, and complements:

- (2) (a) I put paper and kindling by the fire last night.
 (b) I put paper and kindling by the fire before I went to bed.
 (c) * I put by the fire.
 (d) * I put paper and kindling.

Sentences (2a) and (2b) show that *last night* is an adjunct that could easily be removed or replaced by a completely different type of construction, while the underlined elements are complements without which the sentence suddenly becomes ungrammatical and meaningless as (2c) and (2d) prove. It is worth noting that the subject of the sentence, *I*, has also been underlined, and it can indeed be counted amongst the complements because it is an obligatory element in active declarative sentences, but in the approach adopted in this study the focus is mostly on the complements that follow the headword.

It should also be noted that even though it is easy to classify *last night* as an adjunct in sentence (2a), one should not be tempted to think that “adjunct status is somehow an inherent feature of some elements” (Somers 1984, 508). With the help of the following examples Somers (ibid.) demonstrates how it is possible for the one and the same phrase, i.e. *in London*, to function as an adjunct (3a) and as a complement (3b) in different contexts:

- (3) (a) He looked for his friend in London.
 (b) James lives in London.

3.3 Complements and adjuncts from a syntactic point of view

We have already seen how one phrase may be a complement to one verb, but merely an adjunct to some other verb, which makes it clear that separating these two groups of elements from each other is not always a simple task. Pollard and Sag (1987, 134) make the issue an even more complicated one by pointing out that optional complements also exist and they “must be distinguished from other optional constituents, known as adjuncts or modifiers, whose relationship to the head is of a different syntactic and semantic nature.” Huddleston and Pullum (2002, 219) tackle this problem by identifying altogether eight differentiating factors that help us to recognise complements and adjuncts. Three of the factors deal with semantic issues, but they will not be considered now as I will discuss them in depth in Section 3.4. Instead, I will turn to the remaining five factors that deal with syntactic differences.

The first syntactic factor has to do with *licensing*. Huddleston and Pullum (ibid.) explain that complements, no matter whether they are phrases or clauses, “require the presence of an appropriate verb that licenses them”, and this is why constructions such as (4a) are good, while sentences such as (4b) sound strange:

- (4) (a) She mentioned the letter.
 (b) * She alluded the letter.

This close relationship between verbs and their complements can be described in terms of subcategorisation. “[V]erbs are subcategorised according to ... the different kinds and combinations of complement they license”, say Huddleston and Pullum (ibid., 219-220), which means that since *allude* in (4b) does not subcategorise for the same complements as *mention* in (4a), the end result is questionable. However, if one wanted to add an expression such as *on a Monday morning* to a sentence, it can be done easily as adjuncts do not require the presence of a particular type of verb.

The second factor has to do with *obligatoriness*. As linguists have observed, complements may be obligatory or optional, but adjuncts are always optional. Huddleston and Pullum's (ibid., 221) examples show that if the element is an obligatory complement (5a), its omission leads to

ungrammaticality, but if it is an optional complement (5b) or an adjunct (5c), it can be omitted without changing the basic meaning of the sentence:

- | | | |
|-----|-----------------------------------|----------------|
| (5) | (a) She perused the report. | * She perused. |
| | (b) She read the report. | She read. |
| | (c) She left because she was ill. | She left. |

Huddleston and Pullum (ibid.) also emphasise that if elements are removed in order to decide whether a given constituent is a complement or an adjunct, it may sometimes lead to “an unsystematic change of meaning” even if it does not lead to ungrammaticality. To illustrate this possibility they (ibid.) give the following example:

- | | | |
|-----|-----------------------|----------|
| (6) | She ran the business. | She ran. |
|-----|-----------------------|----------|

As we can see, the transitivity of the verb changes and consequently the basic meaning of the sentence becomes radically different, which means that in this case *the business* is definitely an obligatory complement of *run*.

The third factor has to do with *anaphoric expressions*. As Huddleston and Pullum (ibid., 223) explain, the antecedent for an anaphoric expression such as *do so* “must embrace all internal complements of the verb” and thus *do so* can then only be followed by an adjunct, not by any additional complements. To make matters less theoretical and more concrete, Huddleston and Pullum (ibid.) apply the so-called *do so* test in practice:

- | | |
|-----|--|
| (7) | (a) * I didn't read all the reports but I <u>did so</u> most of them. |
| | (b) I didn't cover this topic last time but I shall <u>do so</u> on Tuesday. |

In (7a) *all the reports* is a complement of the verb *read*, which means that if the sentence were written out, it would read as ** I didn't read all the reports but I read all the reports most of them*. By contrast, *last time* in (7b) is an adjunct, and so the sentence reads as *I didn't cover this topic last time but I shall cover this topic on Tuesday*, which is perfectly acceptable.

The fourth factor has to do with *category*. Huddleston and Pullum (ibid., 223) note that “in the simplest cases, complements have the form of NPs, adjuncts that of adverbs ... or adverb phrases.” Nevertheless, every phrase and clause should be judged separately because, firstly, there are always

exceptions to the rule and, secondly, there are constructions such as PPs that occur readily in both roles as the following examples from Radford (1988, 192-193) show:

- | | | |
|-----|---|--------------|
| (8) | (a) a student <u>of Physics</u> | [complement] |
| | (b) a student <u>with long hair</u> | [adjunct] |
| | (c) the attack <u>on the Prime Minister</u> | [complement] |
| | (d) the book <u>on the table</u> | [adjunct] |
| | (e) his disillusionment <u>with Linguistics</u> | [complement] |
| | (f) a cup <u>with a broken handle</u> | [adjunct] |

The fifth and final syntactic factor has to do with *position*. Huddleston and Pullum (ibid., 225) state that it simply means “complements are more restricted than most adjuncts as to what positions they can occupy in the clause.” They (ibid.) point out that some changes from the basic position to non-basic positions are permitted, e.g. moving *to Kim* to the beginning of the sentence in (9), but in general complements cannot move as freely as adjuncts.

- (9) He gave the beer to Kim. → To Kim he gave the beer.

3.4 Complements and adjuncts from a semantic point of view

Huddleston and Pullum's (2002, 226-227) three factors that help us to separate complements from adjuncts and that are concerned with semantic issues are *argumenthood*, *selection* and *role*. First of all, argument structure refers to a theory which proposes that every verb takes an argument, or several arguments. This theory of argument structure can be explained with the help of the following examples from Haegeman (1991, 35-38):

- (10) (a) Maigret stumbled.
 (b) Maigret imitates Poirot.
 (c) Hercule bought Jane a detective story.

In (10b) the verb *imitate* describes an activity that requires two participants, i.e. *Maigret* who imitates and *Poirot* who is imitated. Thus, says Haegeman (ibid., 35), “the predicate 'imitate' takes two arguments.” By contrast, the verb *stumble* in (10a) takes only one argument, i.e. *Maigret*, and the verb *buy* in (10c) takes three arguments, i.e. *Hercule*, *Jane* and *a detective story*.

Haegeman (ibid., 36) goes on to point out that “[t]he argument structure of the verb

determines which elements of the sentence are obligatory.” Huddleston and Pullum (2002, 226) agree with her as they note that “[p]rototypically ... the arguments correspond to complements.” Huddleston and Pullum (*ibid.*) offer sentence (11) as a support for this claim:

(11) He always reads the paper before breakfast.

There are two complements, *he* and *the paper*, and two adjuncts, *always* and *before breakfast*, in the sentence above, but only *he* and *the paper* are also the arguments of the verb *read*.

Moving on to selection restrictions, Huddleston and Pullum (*ibid.*, 227) remark that verbs require their arguments to have certain semantic features, e.g. [+/- HUMAN] or [+/- ANIMATE], and sentences that violate these restrictions are perceived to be anomalous as example (12b) proves:

- (12) (a) Kim enjoyed the concert.
 (b) * The cheese enjoyed the cool breeze.

Marking semantic properties is not the only way of approaching the semantics of arguments. According to Carnie (2002, 168), “one way of encoding selectional restrictions is through the use of what are called thematic relations.” In other words, verbs do not only take arguments, they assign semantic roles, or theta roles³, to them. The sentence *Maigret killed Poirot*, for example, contains the verb *kill* which takes two arguments, *Maigret* and *Poirot*, and assigns the theta roles of agent (i.e. “the one who intentionally initiates the action expressed by the predicate”) and patient (i.e. “the person or thing undergoing the action expressed by the predicate”) to them (Haegeman 1991, 41). In *Maigret killed Poirot* the theta roles of agent and patient coincide with the subject and the object of the sentence, but Fillmore (1968, 25) warns us against thinking that certain theta roles always match certain “surface-structure relations” such as subject and object. It is also worth keeping in mind that different linguists may assign different theta roles to exactly the same arguments since “there is no agreement about how many such specific thematic roles there are and what their labels are”, as Haegeman (1991, 41) notes. Still, even more important is to remember that multiple theta

3 Carnie (2002, 169-170) notes that thematic relations and theta roles are not actually synonymous, and in fact theta roles are “bundles of thematic relations”, but it is a common practice to “refer to particular theta roles by the most prominent thematic relation that they contain.”

roles cannot be assigned to one argument and one theta role cannot be assigned to multiple arguments. This principle is known as the theta criterion (ibid., 46):

Each argument is assigned one and only one theta role. Each theta role is assigned to one and only one argument.

In contrast with arguments and their changing theta roles, adjuncts always bear the same meaning. It does not matter which verb occurs in the sentence with an adjunct such as *unfortunately* or *on a Monday morning* because, as Huddleston and Pullum (2002, 227) say, “adjuncts will have the same interpretation in each case, determined by their own content.”

3.5 Control and NP movement

The theta criterion introduced in the previous section plays an essential role in the analysis of the following sentences, taken from Davies and Dubinsky (2004, 3):

- (13) (a) Barnett seemed to understand the formula.
 (b) Barnett tried to understand the formula.

As Davies and Dubinsky (ibid.) state, superficially the sentences appear to be identical, but in fact, (13a) and (13b) are, respectively, a subject-to-subject raising structure and a subject control structure. This difference can be explained by examining the theta roles. In (13a) *Barnett* is assigned only one role, experiencer, by the verb *understand*, while the verb *seem* does not assign any theta role to the subject. Thus, *seem* is an NP movement verb, and in (13a) the sentence is presented in a form where we can see how the subject of the lower clause has been raised to the subject of the higher clause. However, in (13b) *Barnett* is assigned two roles, agent by the verb *try* and experiencer by the verb *understand*. This violates the theta criterion, which means “a special kind of null NP in the subject position of the embedded clause” is needed to fix the situation (Carnie 2002, 255). This type of special NP, i.e. the understood subject, is denoted by PRO. In (13b) PRO is added to the sentence and *understand* can now assign the experiencer role to it instead of assigning it to *Barnett*. But, it should be noted that PRO is controlled by the subject of the higher clause, which

means it is coreferential with *Barnett* and thus corresponds with our understanding of the meaning of the sentence.

- (14) (a) Barnett₁ seemed [*t*₁ to understand the formula].
 (b) Barnett tried [PRO to understand the formula].

In addition to analysing the sentence in which a given verb occurs, one can conduct several tests in order to distinguish subject-to-subject raising predicates from subject control predicates more easily. One such test is passivising the sentence. As Davies and Dubinsky (2004, 5) note, “a sentence with a passive complement is synonymous with the same sentence with an active complement” if the verb is a raising predicate, but if the verb is a control predicate, the constructions are not synonymous, or it may not even be possible to passivise the sentence. The following examples illustrate the results of this test (*ibid.*):

- (15) (a) Barnett seemed to have read the book. → The book seemed to have been read by Barnett.
 (b) Barnett tried to read the book. → * The book tried to be read by Barnett.

The second test is adding a semantically empty element such as meteorological *it* or existential *there* to the sentence. Sentence (16a) proves raising predicates allow such pleonastic subjects since they do not assign any theta roles to the subject of a sentence, but sentence (16b) shows that such constructions are not possible with control predicates because they need to assign theta roles to their arguments (*ibid.*, 7-8):

- (16) (a) It seemed to be raining. / There seems to be a unicorn in the garden.
 (b) * It tried to be raining. / * There tried to be a unicorn in the garden.

The third test is using an idiom such as *the cat is out of the bag* in the sentence. As Davies and Dubinsky (*ibid.*, 8) explain, *the cat is out of the bag* is an ambiguous expression that may refer to a situation where “a particular feline is not in a particular container”, or alternatively, it may refer to a situation where “a one-time secret is no longer a secret.” They (*ibid.*) continue by pointing out that if both interpretations are available as in (17a), the verb is a raising predicate, but if only the literal reading is possible as in (17b), the verb is a control predicate:

- (17) (a) The cat seemed to be out of the bag.
 (b) ? The cat tried to be out of the bag.

These three tests will now be carried out to decide whether the verb *scruple* is a raising predicate or a control predicate:

- (18) (a) Barnett **scrupled** to read the book. → * The book **scrupled** to be read by Barnett.
 (b) * It **scrupled** to be raining. / * There **scrupled** to be a unicorn in the garden.
 (c) ? The cat **scrupled** to be out of the bag.

Sentence (18a) cannot be passivised without resulting in a semantically odd sentence, the pleonastic subjects in (18b) are not permitted and only the literal interpretation of (18c) is retained. On the basis of these examples it is possible to determine that *scruple* is a subject control verb.

Not all verbs can be analysed in exactly the same manner, but as *scruple* does not appear in constructions similar to *Barnett believed the doctor to have examined Tilman* and *Barnett persuaded the doctor to examine Tilman* (taken from Davies and Dubinsky 2004, 3), a detailed discussion on subject-to-object raising structures and object control structures will not be provided here.

3.6 Additional concepts related to complementation

In this section I will offer a quick overview of one major change in the English language as it is significant from the point of view of our interests. Afterwards, I will proceed to discuss several principles which suggest that sometimes the environment of the sentence may be the deciding factor when a verb is selecting its complement.

3.6.1 The Great Complement Shift

There have been great many changes in the history of the English language, but not all of those changes have an effect on the complement selection of verbs. However, as Rohdenburg (2006, 143) notes, a phenomenon that he has begun to call the Great Complement Shift is relevant from this point of view. The Great Complement Shift has been discussed by numerous linguists in addition to

Rohdenburg, and Vosberg (2009, 212), for instance, describes it as “a series of linguistic processes [that] has resulted in a reorganization of the entire system of sentential complementation.” He (ibid., 213) also notes that this reorganisation has in many cases “led to the replacement of *to*-infinitives by *-ing* forms in complement function.”

Although the Great Complement Shift encompasses other changes in it too, Rohdenburg (2006, 143) believes it is quite possible that “the most important set of changes” is exactly this tendency to replace *to*-infinitives with both prepositional gerunds and directly linked gerunds. The following examples from Rohdenburg (ibid., 143-144) illustrate the shift from the earlier construction to the one that is more common nowadays:

- (19) (a) She delighted to do it. → She delighted in doing it.
 (b) She was used/accustomed to do it. → He was used/accustomed to doing it.
 (c) She avoided/dreaded to go there. → She avoided/dreaded going there.

However, Vosberg (2009, 227) points out it is worth keeping in mind that insertions/modifications, extractions and *horror aequi* – concepts which will be introduced in the next three sub-sections – may either accelerate or, alternatively, delay the change from *to*-infinitives to gerunds, and thus matters are not as clear-cut as they may first seem. In fact, he (ibid., 223) remarks that “[o]ne of the most intriguing issues ... is the question of how and to what extent different factors influence (weaken or reinforce) one another.”

3.6.2 The complexity principle

Often one of the language user's most important goals is to communicate their thoughts in a manner that is as clear and easily interpretable as possible. Keeping this in mind Rohdenburg's (1996, 149) claim that the complexity of the sentence has an effect, for example, on the complement selection of a verb seems more than reasonable. This means that if the environment of the sentence is cognitively complex, i.e. it includes features such as discontinuous or passive constructions, subordinate clauses, or lengthy subjects or objects, the verb is more likely to select the more explicit

alternative – if there is such an option – as its complement than it perhaps would in a simpler environment (idib.). Some of these factors that can make one alternative more explicit than another are the presence of optional prepositions and the replacement of a non-finite complement with a finite one (ibid.). In order to explain the reason behind these observations, Rohdenburg (ibid., 151) has developed the complexity principle, or the transparency principle:

In the case of more or less explicit grammatical options the more explicit one(s) will tend to be favoured in cognitively more complex environments.

The following example from Vosberg (2003a, 211) shows how the complexity principle affects the language that is used:

(20) I recollect, as I passed by one of pier-glasses, that I saw in it his clenched hand offered in wrath to his forehead. (Samuel Richardson, 1748, *Clarissa*)

The sentence above is an example of one type of discontinuous construction, or in other words, the environment of this sentence is cognitively more complex because of an insertion of material after the matrix verb, and therefore it is preferable to spell *that* out explicitly instead of omitting it, or indeed, instead of using a non-finite clause in its place.

3.6.3 The extraction principle

According to Vosberg (2003a, 201) extractions are “deviations from the canonical sentence structure”, which means that they do not follow the familiar pattern where the subject of the sentence is followed by a verb and then an object. In this way extractions, just like insertions, are discontinuous constructions and make the environment of the sentence more complex, and so they may actually have an effect on the complement that the verb selects. Postal (1994, 159-162) recognises nine different types of extractions that may occur in sentences, and these extraction types along with his examples of them are presented in Table 2 below.

Extraction type	Example
1. Question extraction	Who ₁ did they nominate t ₁ to be director?
2. Restrictive relative extraction	The gun (which) ₂ they claimed t ₂ was used in the crime.
3. Pseudo clefting	What ₃ Ellen wants t ₃ is a Mercedes-Benz.
4. Negative NP extraction	[No such gorilla] ₄ did I ever see t ₄ .
5. Comparative extraction	Stella tickled more chimps than (what) ₅ I said that Dwight tickled t ₅ .
6. Exclamatory extraction	[What a lovely woman] ₆ I found out that he married t ₆ !
7. Topicalisation	Frank ₈ , I would never hire t ₈ .
8. Nonrestrictive relative extraction	Frank ₇ , who ₇ they adored t ₇ , is dishonest.
9. Clefting	It was Frank who ₉ they hired t ₉ .

Table 2. Postal's nine types of extractions. The subscripted constituent on the left has been moved to its current position, while *t*, i.e. the *trace*, marks the gap from which the constituent has been extracted.

Vosberg (2003b, 307) continues the discussion on extractions and suggests that out of Postal's nine types of extractions the four major ones are relative extraction (i.e. restrictive and nonrestrictive relative extraction), comparative extraction, topicalisation and interrogation (i.e. question extraction). Based on his analyses of these different types of extractions and the contexts in which they appear Vosberg (2003a, 202) also proposes that the presence of an extracted element in a sentence delays “the otherwise pervasive establishment of the new *-ing* form. And ... the same holds true for prepositional *-ing* complements.” This proposal leads to the formulation of the extraction principle (Vosberg 2003b, 308):

In the case of infinitival or gerundial complement options, the infinitive will tend to be favoured in environments where a complement of the subordinate clause is extracted (by topicalization, relativization, comparativization, or interrogation etc.) from its original position and crosses clause boundaries.

Thus it means that extractions often lead the verb to select a complement that is more explicit, which in turn makes the sentence more easily understandable for the language user.

3.6.4 The *horror aequi* principle

As defined by Rohdenburg (2003, 236), the *horror aequi* principle refers to “the widespread (and presumably universal) tendency to avoid the use of formally (near-) identical and (near-) adjacent (non-coordinate) grammatical elements or structures.” In practice this means that the language user will attempt to avoid using two immediately successive *-ing* constructions as well as try not to place two *to*-infinitive constructions one after another, although Vosberg (2003b, 315) notes that the aversion towards the latter option is not quite as strong as towards the double *-ing* option. Still, there is evidence that in a sequence of two non-finite verb phrases, it is overwhelmingly likely that the pattern is either *to*-infinitive + *V-ing*, or *V-ing* + *to*-infinitive (ibid.). The following examples from Vosberg (ibid., 316, 321) illustrate how *horror aequi* affects sentences:

- (21) (a) ... Amy ... told me it was not safe for me to attempt doing him any Good, ... (Daniel Defoe, 1724, *Roxana*)
 (b) ... for we know not what to call them, keeping their Stand and not attempting to hinder us. (Daniel Defoe, 1719, *The Farther Adventures of Robinson Crusoe*)
 (c) She contrived to sack him, ..., without bothering to tell him. (*The Guardian*, 1994)
 (d) “..., I suspect he just didn't want to bother reading it.” (*The Guardian*, 1994)

However, as Rohdenburg (2003, 236) and Vosberg (2003b, 320) remind us, there are other possible avoidance strategies such as delaying the introduction of the second *to*-infinitive in the sentence, or even replacing the verb with an appropriate NP. Both of these strategies are again exemplified by Vosberg (ibid., 316), even though it could be said that the complexity principle also enters the picture when examining example (22a):

- (22) (a) He thought it better, therefore, to attempt by mild and soothing language to divert him from his horrid design. (William C. Bryant, 1832, *The Skeleton's Cave*)
 (b) ..., he sat down to attempt the translation of the poem. (Maria Edgeworth, 1809, *Ennui, or Memoirs of the Earl of Glenthorn*)

3.6.5 Bolinger's generalisation

In his article Bolinger (1968) considers the curious problem that the existence of synonymous constructions poses to linguists as it has been suggested that languages in general tend to avoid unnecessarily repetitive constructions. He (ibid., 122) notes that “[i]f two structures are the same in

meaning, all features and constituents in the base must be identical”, which then means that if even one element in otherwise identical constructions is different, the constructions are in fact no longer synonymous. He (ibid., 123-124) supports his claim with the help of such minimal pair examples as:

- (23) (a) I like him to be nice to you. / I like his being nice to you.
 (b) Can you remember to do that? / Can you remember doing that?
 (c) He started to get mean (but thought better of it). / He started getting mean (so I got out of there).

Drawing on evidence from these and several other examples, Bolinger (ibid., 124) suggests the *to*-infinitive constructions refer to hypothetical situations or events that will potentially take place, while the *-ing* constructions refer to something that has actually happened. This is a conclusion with which, for instance, Quirk et al. (1985, 1191) agree as they state that “as a rule, the infinitive gives a sense of mere potentiality for action ... while the participle gives a sense of the actual performance of the action itself.”

Consequently, it seems clear that verbs do not select their complements randomly. Bolinger (ibid., 127) voices this assumption which is nowadays known as the so-called Bolinger's generalisation: “[A] difference in syntactic form always spells a difference in meaning.”

4 *Scruple* in selected dictionaries and grammars

In this chapter I will first take a brief look at the etymology of the verb *scruple* and then proceed to discuss the dictionary findings on it. Thirdly and lastly, I will examine a number of grammars to see whether they make any comments on *scruple* and its complementation patterns.

4.1 Etymology

According to the *Oxford English Dictionary* (hereafter *OED*) the verb *scruple* originates from the same source as the noun *scruple*. The noun *scruple* is a late Middle English word that comes from the Old French word *scrupule* which in turn has its roots in the Latin word *scrūpulus*, i.e. the diminutive form of *scrūpus*. The *Chambers Dictionary of Etymology* (hereafter *CDE*) gives more information on its first appearance in the English language by pointing out that before the year 1382 the word appeared in the Wycliffe Bible as *scripil*, but that it changed its form to *scrupul* probably around the year 1425.

The *OED* notes that the literal meaning of the word is a 'pebble', or especially a 'rough or hard pebble', but it began to be used figuratively to refer to a cause of uneasiness or anxiety by the Roman philosopher Cicero. The *CDE* suggests that this figurative use of *scruple* alludes to the discomfort of having a pebble in one's shoe or sandal. *Scruple* as a verb, according to the *CDE*, first entered the written English language in 1627, which is supported by the *OED* as the earliest quotation illustrating the usage of the verb *scruple* recorded in the *OED* is from that year.

4.2 *Scruple* in dictionaries

The *OED* is used as the main source of dictionary information in this thesis, but additionally two other dictionaries published by Oxford University Press in the recent years and two dictionaries dating from the early 20th century are consulted.

4.2.1 The *Oxford English Dictionary*

There are all in all seven different senses and sub-senses given for the verb in the *OED* s.v. *scruple*, v. The vast majority of them are labelled as rare, possibly obsolete or obsolete, but nonetheless all the senses are presented in Table 3 below as they might appear in the corpus data from the beginning of the 19th century. In addition to summarising the different senses of *scruple*, Table 3 also includes a selection of quotations from the *OED* and the complementation patterns that can be derived from these quotations.

Senses	Quotations	Patterns
1. <i>trans.</i> To have or make scruples about; to demur to, take exception to, question the propriety or expediency of (something done or to be done); to hesitate or stick at (doing something). ? <i>Obs.</i>	It seems reasonable not to scruple a word so convenient. (H. Hallam, 1839)	NP
†2. a. To doubt, question, hesitate to believe (a fact, allegation, etc.); to question the truth, goodness, or genuineness of. <i>Obs.</i> †b. with obj. a sentence introduced by <i>that</i> or <i>whether</i> . <i>Obs.</i>	a. Though I don't scruple your veracity, I have some reasons for believing you were there. (R. Tyler, 1787) b. They at the first scrupled , whether or no they might take up armes for their own defence against that cruell arrest. (<i>Coll. Rights & Privileges Parl.</i> , 1642) It is not to be scrupled that the omnipotent and wise Creator saw and judged all things that he had made to be good. (N. Biggs, 1651)	NP <i>whether</i> -clause <i>that</i> -clause
†3. <i>causative.</i> To excite scruples in (a person), to cause to feel scruples. <i>Obs.</i>	If he had anything that scrupled him in matter of Law. (In <i>Colonial Rec. Pennsylvania</i> , 1689)	NP
4. a. <i>intr.</i> To entertain or raise scruples; to hesitate, demur, †doubt. Chiefly <i>to scruple at</i> (also in indirect passive). Now	a. Although M. de Nointel scrupl'd at first, yet he consented at length. (J. Chardin, 1686)	Ø

<i>rare.</i>	His love for the Church was a passion and he scrupled at nothing which could advance its interests. (H. T. Buckle, 1861)	<i>at</i> + NP
b. quasi- <i>refl.</i> with complement: To allow one's scruples to drive one <i>out of</i> .	b. Mr. R. of Birmingham has indeed had some sceptical qualms about his situation in the Church, and some thoughts of seceding or dissenting from us... I shall be sorry if he scruples himself out of a sphere of usefulness. (J. Newton, 1786)	NP (<i>refl.</i>) + <i>out of</i> + NP
5. <i>Const. inf.</i> : To hesitate or be reluctant (<i>to do</i> something), esp. on conscientious grounds, or out of regard for what is fit and proper. (The current use.)	The Pope did not scruple to preach a crusade against the Emperor himself. (J. Bryce, 1866)	<i>to</i> -infinitive

Table 3. *Scruple* in the *OED*.

As the quotations given in the *OED* show, the zero complement, non-sentential complements NP, *at* + NP and NP (*refl.*) + *out of* + NP and sentential complements *whether*-clause, *that*-clause and *to*-infinitive seem to be the complements that *scruple* selects. However, it is worth noting that *whether*-clauses and *that*-clauses – and consequently *scruple* in sense 2b – are actually highly unlikely to appear in the corpus data as complements of *scruple*, since even the most recent quotation recorded in the *OED* dates from the year 1665. NP complements in connection with sense 3 are in a similar situation because, again, the most recent quotation recorded in the *OED* dates back to the year 1689. Still, it is reasonable to assume that there will be plenty of NP complements in the corpus data as they are associated with several other meanings of *scruple*, too.

The *OED* also specifically mentions that *scruple* in sense 4 is often followed by the *at* + NP and NP (*refl.*) + *out of* + NP constructions and in sense 5 by the *to*-infinitive construction, and on the basis of the *OED* entry these complements do not have any other associated meanings.

4.2.2 Other *Oxford* dictionaries

The *OED* offers a comprehensive view of the different senses and complementation patterns of *scruple*, but occasionally more concise dictionaries can offer relevant information that may have gone completely unmentioned in the *OED*. *Scruple* is not defined in some well-known dictionaries such as the *Collins COBUILD Advanced Dictionary of English* (as its selection of words is based on corpus data and on the basis of word frequencies more marginal words are excluded from it, because they are not deemed to be essential for language learners), but both the *Oxford Advanced Learner's Dictionary of Current English* (hereafter *OALD*) and the *Oxford Dictionary of English* (hereafter *ODE*) shed some additional light on its behaviour.

There is only one sense given for the verb in both the *OALD* and the *ODE* s.v. *scruple*, *v*. Their definitions, which are presented in Table 4, match the definition of sense 5 given in the *OED*. This is logical as it is the current use and more concise dictionaries, especially learner's dictionaries, naturally tend to focus on how words are used in the English language nowadays. Both dictionaries also imply that *scruple* takes the *to*-infinitive as its complement.

Definition	Pattern
not scruple to do sth to be willing to do sth even if it might be wrong or immoral	<i>to</i> -infinitive
[no <i>obj.</i> , with infinitive][usu. with negative] hesitate or be reluctant to do something that one thinks may be wrong	<i>to</i> -infinitive

Table 4. *Scruple* in the *OALD* and the *ODE*, respectively.

However, the *OALD* and the *ODE* note that *scruple* often, or even in most cases, appears in negative sentences. Negative contexts add their own shade of meaning to the verb, and thus this piece of further information is a useful addition to sense 5 of the *OED*. When considering negative contexts in which *scruple* is used, it is helpful to think back on the history of negation, and in *A Modern English Grammar on Historical Principles: Part V Syntax* by Jespersen (1961) it is discussed briefly. Jespersen (1961, 427-428) points out that negative constructions used to be formed by placing the word *not* after the verb. He continues by saying (*ibid.*, 428) that

[t]he construction *I say not* was normal for a long time ... such constructions became rarer and rarer from the beginning of the 18th century. In poetry they are by no means rare, but there as well as in prose they are felt as archaisms. Sometimes they must be considered direct imitations of biblical usage.

Hence it can be expected that the negative contexts where *scruple* often appears can be of both the *not + scruple* type mentioned in the *OALD* and the *ODE*, and the *scruple + not* type.

4.2.3 *Dictionary of Constructions of Verbs, Adjectives and Nouns*

The *Dictionary of Constructions of Verbs, Adjectives and Nouns* (hereafter *DCVAN*) does not attempt to define the meaning of *scruple* at all, but instead the focus of the dictionary is on the different types of constructions where the verb is used and it lists the verb's complementation patterns explicitly. Three of the four complementation patterns recognised in the *DCVAN* are familiar from the *OED*: the NP complement in sentences where the meaning of *scruple* matches sense 1 of the *OED*, the *to*-infinitival complement in sentences where it matches sense 5 and the *at* + NP complement in sentences where it matches sense 4, although it is stated that “the intransitive application with *at* ... seems to be uncommon, except, perhaps, in the combination *to scruple at a lie*.”

However, this leaves one construction that is not mentioned in the *OED*: the gerund-construction, i.e. the *-ing* complement. The *DCVAN* gives an example of its usage:

(24) Barnabas told him that he need not **scruple** trusting the sermons in the bookseller's possession. (Fielding, *Joseph Andrews*)

Going by sentence (24), it appears that the meaning of *scruple* corresponds to sense 5 of the *OED*, but this conclusion poses a problem as the *OED* specifies that sentences in which *scruple* is used in this sense are constructed with *to*-infinitives. Bearing this in mind, it is also possible to say that the meaning of *scruple* in sentences where the complement is a gerund-construction is consistent with sense 1 of the *OED*, especially as one part of its definition is “to hesitate or stick at (**doing** something)”.

4.2.4 Webster's Revised Unabridged Dictionary

There are three different senses and sub-senses given for the verb in the *Webster's Revised Unabridged Dictionary* (hereafter *WRUD*) s.v. *scruple*. The senses along with some *WRUD* quotations and the complementation patterns derived from them are presented in Table 5 below.

Senses	Quotations	Patterns
v. i. To be reluctant or to hesitate, as regards an action, on account of considerations of conscience or expedience.	We are often over-precise, scrupling to say or do those things which lawfully we may. (Fuller) Men scruple at the lawfulness of a set form on divine worship. (South)	<i>to</i> -infinitive <i>at</i> + NP
v. t. 1. To regard with suspicion; to hesitate at; to question. 2. To excite scruples in; to cause to scruple.	1. Others long before them ... scrupled more the books of hereties than of gentiles. (Milton) 2. [R.] Letters which did still scruple many of them. (E. Symmons)	NP NP

Table 5. *Scruple* in the *WRUD*.

The complementation patterns do not offer any new information as *to*-infinitives, *at* + NP complements and NP complements also appear in the *OED* quotations. Nevertheless, the *WRUD*'s definitions of the different meanings of *scruple* are more concise than the ones given in the *OED*, and they suggest that at least senses 4 and 5 of the *OED* could be combined. The discussion will next turn to the grammar findings, but the different senses of *scruple* and the complementation patterns that are connected to them will be summarised and divided into new and slightly simplified groups in Section 4.4.

4.3 *Scruple* in grammars

I looked at four major grammars – *A Grammar of Late Modern English: Part I, The Sentence* by Poutsma (1904), *A Comprehensive Grammar of the English Language* by Quirk et al. (1985),

Longman Grammar of Spoken and Written English by Biber et al. (1999) and *The Cambridge Grammar of the English Language* by Huddleston and Pullum (2002) – in order to see whether they make any comments on *scruple* and its complementation patterns. However, as *scruple* is a verb that has an undeniably old ring to it, Poutsma is the only one to give examples of its usage when he discusses verbs that are followed by either gerund-constructions or *to*-infinitives, or possibly both (1904, 629):

- (25) (a) He answered that he would **scruple** to lend him three guineas. (Fielding, *Joseph Andrews*)
 (b) A man who does not **scruple** to say or do as he pleases, will be an offensive companion, if not a dangerous member of society. (Crabb, *English Synonymes*)
 (c) He **scrupled** not to lay all the ill-consequences of Lydia's flight on her own folly alone. (Austen, *Pride and Prejudice*)

The only example of *scruple* + the gerund-construction provided by Poutsma is already familiar from the *DCVAN*:

- (26) Barnabas told him that he need not **scruple** trusting the sermons in the bookseller's possession. (Fielding, *Joseph Andrews*)

On the basis of these four examples Poutsma claims that “the gerund-construction seems to be somewhat rare” (ibid.) in connection with the verb *scruple*. Thus it can be said that Poutsma agrees with the information given in the *OED* and that *scruple* does indeed often seem to be followed by a *to*-infinitive.

4.4 Summary of the dictionary and grammar findings

All in all, the different complementation patterns recognised by the selected dictionaries and grammars are the following:

- | | | |
|--|--|-----------------------------|
| (a) <i>scruple</i> + NP | (d) <i>scruple</i> + <i>at</i> + NP | (g) <i>scruple</i> + gerund |
| (b) <i>scruple</i> + <i>whether/that</i> -clause | (e) <i>scruple</i> + NP (refl.) + <i>out of</i> + NP | |
| (c) <i>scruple</i> + Ø | (f) <i>scruple</i> + <i>to</i> -infinitive | |

The different senses of *scruple* recognised by the dictionaries can, in turn, be divided into slightly simpler groups than the ones given in the *OED*, although in some cases the differences are

quite subtle and thus the senses somewhat overlapping. These new meaning groups and the complementation patterns connected to them are presented in the table below, and they are the senses that will be used when analysing the corpus data.

Simplified senses	Patterns
1. <i>Transitive</i> . To hesitate, to have or make scruples, to regard with suspicion, or to question something.	NP <i>-ing</i>
2. <i>Transitive</i> . To hesitate to believe something, or to question the qualities of something.	NP <i>whether</i> -clause <i>that</i> -clause
3. <i>Transitive</i> . To excite scruples in someone, or to cause someone to feel scruples.	NP
4. <i>Intransitive</i> . To entertain scruples, to hesitate or to be reluctant to do something. Often negative.	<i>to</i> -infinitive <i>at</i> + NP Ø NP (refl.) + <i>out of</i> + NP <i>-ing</i>

Table 6. The simplified senses of *scruple* and the complementation patterns associated with them.

The new senses given in Table 6 resemble the *OED*'s senses very closely, but they are more concise and sense 5 has been combined with sense 4, as per the *WRUD*'s suggestion. Additionally, the gerundial complement is placed in two groups of complementation patterns: one connected to sense 1 of *scruple* for the reasons recounted in Section 4.2.3, and the other connected to sense 4 of *scruple* because it is a possibility that owing to the Great Complement Shift the gerundial complement – and as sense 4 is intransitive, especially the prepositional gerundial complement if such constructions are used with *scruple* – has replaced some of the infinitival complements.

5 Corpus analysis

In this chapter I will analyse the corpus data and discuss the findings. However, before moving on to the analysis, I will make a few comments on the methodology.

5.1 Methodology

The search string selected for the study was *[scruple].[v*]*⁴ in order to get all the forms of the verb *scruple*, but as few nouns as possible in the results. Another option would have been to search for the verb forms *scruple*, *scruples* and *scrupled* separately, but since *scruple* and especially *scruples* appear more often as nouns than as verbs, the majority of tokens would have needed to be discarded in the process of sorting through the tokens. The search string *scruples*, for example, produces 1,631 hits, but then the subsequent search for *[scruple].[nn2]*⁵ reveals that 1,562 of those hits are nouns, or at least tagged by the system as such.

Nevertheless, the search string *scrupling* was also used because the present participle was completely missing from the results produced by *[scruple].[v*]*. All in all, queries with these two search strings returned 608 tokens, but one of the tokens was subtracted as it was a duplicate. Thus the total number of the hits is 607.

Since all 607 tokens are analysed in this thesis, they have been divided into four segments: *scruple* in 1810-1859, 1860-1909, 1910-1959 and 1960-2009. As all the segments are fifty years in length, it is easy to make comparisons between them, and it also allows us to see how *scruple* and its complements have progressively changed in the course of the last two centuries.

At the beginning of each section I will discard tokens not deemed relevant to the study and give three examples of these irrelevant tokens. I will then discuss the complements found in the data on a more general level before proceeding to consider them in detail. The non-sentential complements (a section at the end of which zero complements are discussed if any are found) will

4 It is possible to use wildcards, i.e. the symbol *, for the part of speech tag and so [v*] = all verbs. If combined with, for instance, *walk* it searches for all the verbal uses of *walk*.

5 NN2 = plural common noun

be examined first, followed by a discussion on the sentential complements. As I present tokens from the corpus data in these sections, I will continue the practice of bolding the word *scruple*. Additionally, the complements of *scruple* and any other features that need to be paid special attention to will be underlined.

5.2 *Scruple* in COHA from 1810 to 1859

The searches in COHA returned 315 tokens that are from the years 1810-1859 which, all in all, comprise 54,422,694 words. 24 occurrences of *scruple*, i.e. 7.62% of the tokens, were deemed irrelevant to the study as *scruple* was used as a noun referring to “qualms”, or “second thoughts” in them. Sentences (1a)-(1c) exemplify the nominal use of *scruple*:

- (1) (a) ... [C]onvenient mental reservation, which the Jesuits, as is well known, made no **scruple** to put in practice when occasion required. (In *North American Review*, 1828)
 (b) Mary, therefore, resolved to forego all maidenly **scruples** and bravely perform her duty ... (John Kennedy, 1835, *Horse Shoe Robinson: A Tale of the Tory Ascendency...*)
 (c) Neither, to say the truth, had I any **scruples** against contending with the English standard under which I had formerly served. (John Motley, 1839, *Morton's Hope; or, The Memoirs of a Provincial, Volume 2*)

The remaining 291 relevant hits comprise 209 tokens of *scruple*, 11 tokens of *scruples*, 68 tokens of *scrupled* and 3 tokens of *scrupling*. The complementation patterns these verb forms take are listed in Table 7, along with the number of times each complementation pattern appears in this section of the corpus. The information is also presented as percentages and normalised frequencies (per million words).

Complement	<i>Scruple</i>	<i>Scruples</i>	<i>Scrupled</i>	<i>Scrupling</i>	Total	%	NF/pmw
<i>to</i> -infinitive	169	8	57	3	237	81.44	4.35
<i>at</i> + NP	14	1	4		19	6.53	0.35
∅	14		3		17	5.84	0.31
NP	2	1	2		5	1.72	0.10
<i>at</i> + <i>-ing</i>	4				4	1.37	0.07
<i>-ing</i>	3				3	1.03	0.06
<i>about</i> + NP	2				2	0.69	0.04
<i>about</i> + <i>-ing</i>	1				1	0.34	0.02

<i>in</i> + <i>-ing</i>			1		1	0.34	0.02
<i>in</i> + NP		1			1	0.34	0.02
<i>with</i> + NP			1		1	0.34	0.02
Total	209	11	68	3	291	~100	5.35

Table 7. The complements of *scruple* in COHA in the years 1810 to 1859.

As we can see from the table above, the item that *scruple* most frequently selects as its complement is the *to*-infinitive. However, several complements that are not mentioned in the literature on *scruple* at all – *at* + *-ing*, *about* + NP, *about* + *-ing*, *in* + *-ing*, *in* + NP and *with* + NP – also appear in the data. All of these complementation patterns found in the material will now be discussed in the following sub-sections.

5.2.1 Non-sentential complements

With 19 tokens, the *at* + NP complement is the most frequently occurring non-sentential complement in this set of data. As examples (2a)-(2c) show, the meaning of *scruple* in these constructions it appears in corresponds with sense 4 since the verb is used to convey hesitation and reluctance to do something:

- (2) (a) They have plotted your death, and will not **scruple** at its performance. (William Simms, 1834, *Guy Rivers: A Tale of Georgia*)
 (b) The rapacity of those called Christians, which has not **scrupled** at any means of conquest and extirpation, and the rum and diseases introduced, have laid my numerous population in the grave. (Sheldon Dibble, 1844, *Thoughts on Missions*)
 (c) ... [T]he conspirators, having gone too far to recede, would not **scruple** at the further crime which they threatened. (William Simms, 1850, *The Lily and the Totem; or, the Huguenots in Florida*)

As we can see, all of the sentences above involve negation and thus *scruple* actually expresses a lack of hesitation and a lack of reluctance. All in all, 15 out of the 19 instances of the *at* + NP pattern appear in negative contexts. The ones that do not are illustrated below:

- (3) (a) If he talk of bribes and stratagems, Think you he'd **scruple** at a gilded tale, To cheat us with false hopes? (E. F. Ellet, 1835, *Teresa Contarini*)
 (b) And wherefore should I **scruple** at this? (William Simms, 1840, *Border Beagles: A Tale of Mississippi, Volume 2*)
 (c) “True, but it is the base spirit only that **scruples** at the cost of its accomplishments.” (William Simms, 1856, *Confession, or, the Blind Heart; a Domestic Story*)

(d) "... [T]he British cause is desperate; thus making it essential to my safety that your father's daughter should be my wife; decide whether I will **scruple at anything** to effect my purpose! (William Simms, 1856, *Eutaw. A Sequel to The Forayers, or, The Raid of the Dog-Days. A Tale of the Revolution*)

As for the subjects of the verb *scruple*, the vast majority of them are semantically [+ HUMAN], often denoted by personal pronouns (*I, he, we, you* and *they*), proper names (*Colonel Blasinghame*) or titles (*General*). Only three of the subjects, i.e. *a tyranny, the rapacity* and *the base spirit*, cannot be as easily classified as such, although they are concepts connected with [+ HUMAN] entities in the sentences.

It is also possible to detect a theme in the NPs of the pattern since they are [- ANIMATE] and many of them have to do with distinctly unpleasant or, in many cases, even illegal matters:

- (4) (a) ... [S]uch that stern desire of justice which sometimes prompts us, in defence of our own rights, not to **scruple at unnecessary bloodshed**. (William Simms, 1835, *The Partisan: A Tale of Revolution, Volume 2*)
 (b) ... [T]he lurking-place of numerous hordes of robbers, who were continually crossing over at night for the sake of plunder, and who **scrupled** no more at murder than at robbery. (In *North American Review*, 1835)
 (c) A few days before he would not have **scrupled at the broadest equivocation**, or even at direct falsehood. (T. S. Arthur, 1852, *True Riches Or, Wealth Without Wings*)

Altogether 11 of the NPs are perceived to be negative in a similar manner, while four of them have to do with the *means* of doing something, or the NPs are simply *nothing* or *anything*. The remaining four NPs – *a gilded tale, the cost of its accomplishments, this* and *your wish* – are the only ones that are more ambiguous, or not as clearly negative in tone. The preposition can also be examined more closely, and for example Wesche (1986, 385) notes that “an NP to which *at* is attached should ideally refer to a (zero-dimensional) topological point.” While the NPs in the *scruple + at + NP* pattern cannot be seen as locations, according to Wesche (*ibid.*, 393) they can be seen as abstract targets instead, which appears to be a fitting interpretation for these 19 tokens.

Leaving the discussion on zero complements to the end of this section, the second most frequently occurring non-sentential complement is the NP complement with five tokens. The meaning of *scruple* in these sentences appears to match the meaning of sense 1, i.e. “to hesitate, to

have or make scruples, to regard with suspicion, or to question something”:

- (5) (a) ... [T]hough even the sneer and ridicule of the licentious themselves must be borne by him who **scruples** it ... (Ashbel Green, 1822, *Discourses Delivered in the College of New Jersey*)
 (b) ... [A] woman of the sort that her mother must have been would not **scruple** a contrivance of that kind, which might induce some credulous fellow, as Caroline says, to marry her daughter. (Catharine Sedgwick, 1824, *Redwood: A Tale, Volume 2*)
 (c) Being armed for defence, I less **scrupled** a meeting with any thing in the shape of man. (Charles Brown, 1827, *The Novels...*)

Not unexpectedly, the subject of *scruple* in all of the five tokens is [+ HUMAN], although one of the sentences is in the passive form and thus it has to be analysed as if in the active form in order to draw any conclusions from it. The NPs, in turn, are more varied than in the *at* + NP pattern and they do not have any particular prominent feature that is common to them all except for the fact that they are all [- ANIMATE].

The *about* + NP pattern is the third most frequently occurring non-sentential complement, even though it appears only two times in the data:

- (6) (a) ... I do remember I heard the boys up in town saying, that our magistrates, at election did **scruple** about the oath and concluded to leave out that part which promises ... (Catharine Sedgwick, 1827, *Hope Leslie, Volume 1*)
 (b) They **scruple** now about the oath. (Catharine Sedgwick, 1827, *Hope Leslie, Volume 1*)

In (6a) and (6b) the subjects of *scruple* are [+ HUMAN] and in both of the sentences the NP is *the oath*, a rather [+ ABSTRACT] concept, but this is not surprising as they are excerpts from the same work of fiction. When it comes to the meaning of *scruple* in these sentences, the literature on *scruple* does not mention the *about* + NP pattern at all, but sense 4 is a fitting interpretation as the sentences could be read to mean that the people in the scenario “have hesitations about the oath.”

The *in* + NP and *with* + NP patterns both appear in the data once:

- (7) (a) ... Saint Lawrence and his isles of balm -- Made voluble the wooing air, Round holy Horicon with prayer, Nor **scrupled** with the cross and sword, To head a wild, barbaric horde. (William Hosmer, 1854, *The Poetical Works*)
 (b) But death, which **scruples** not in such matters, betrayed the secret, and sent the whole village into a fever. (Francis Adams, 1858, *The Life and Adventures of Maj. Roger Sherman Potter*)

In (7a) the *with* + NP construction is used to express the thought that someone, a [+ HUMAN] entity in this case, does not hesitate to wield the tools mentioned, which is an interpretation that matches sense 4, i.e. “to entertain scruples, to hesitate or to be reluctant to do something”, despite the fact that the *with* + NP pattern is not recognised in the literature. The *in* + NP pattern in (7b) is similar in meaning to the *at* + NP pattern and thus it also falls under sense 4. The *in* + NP pattern has even more in common with the *at* + NP pattern because in sentence (7b) *scruple* selects the subject *death* that is semantically [- HUMAN], even [- ANIMATE], although it is described anthropomorphically in the text, and the *at* + NP pattern is the only other pattern to take subjects that are not necessarily [+ HUMAN] as was observed in connection with *a tyranny*, *the rapacity* and *the base spirit*.

Finally, coming back to zero complements, there are 17 instances of them in the data. According to the dictionaries and grammars, the meaning of the zero complement pattern corresponds with sense 4, which holds true because *scruple* is in all of the sentences used to communicate hesitation or the idea of entertaining scruples, as examples (8a)-(8c) show. However, it should be noted that sentence (8b) is a special type of zero complement because it could also be analysed as having an *if*-clause complement, which means that the sentence would then possibly fit better under sense 2.

- (8) (a) The outlaw promised him all, and after this there was no further difficulty. The unconscious idiot **scrupled** no longer, and followed his conductors into -- prison. (William Simms, 1834, *Guy Rivers: A Tale of Georgia*)
 (b) ... [A]nd I **scruple** if the horse in the stable has a shred to his back. (Sylvester Judd, 1850, *Richard Edney and the Governor's Family: A Rus-Urban Tale...*)
 (c) ... [H]e refuses to do so, directly, in words, although he does not **scruple**, and is evidently anxious to do so, indirectly by actions ... (Edgar Allan Poe, 1855, *The Works of Edgar Allan Poe – Volume 4*)

As for the semantic properties of the subjects in these 17 tokens of the zero complement pattern, all of them are [+ HUMAN].

5.2.2 Sentential complements

Beginning with the rarest sentential complements, the *about* + *-ing* pattern and the *in* + *-ing* pattern

both appear in the data only once:

- (9) (a) "... Turenne would **scruple** little about sending a hundred such as you to the gallows on a mere suspicion! ..." (Henry Herbert, 1835, *The Brothers: A Tale of the Fronde, Volume 2*)
 (b) MR. EDGAR was a money-lender, and **scrupled** not in exacting the highest "street rates" of interest that could be obtained. (T. S. Arthur, 1853, *The Home Mission*)

The meaning of the *about* + *-ing* construction in sentence (9a) matches sense 4, and the subject NP *Turenne* is [+ HUMAN] semantically and it is coreferential with the understood subject PRO (applying the tests introduced in Section 3.5 proves the *about* + *-ing* pattern involves control, e.g. **It scrupled about raining* and **There scrupled about being a unicorn in the garden*). The construction could also be replaced with a *to*-infinitive, which means the pattern can be seen as an example of the Great Complement Shift. It should be noted, however, that the gerundial complement in the sentence does not seem to refer to an action that has already taken place as was suggested in Section 3.6.5, but instead it appears to refer to a hypothetical situation, emphasised by the auxiliary verb *would*, although this meaning is usually realised with the help of the infinitival construction. *Would* can, of course, also express habitual behaviour, so if we interpret sentence (9a) in this manner, then the gerundial complement does, as expected, refer to past events that have truly taken place.

Turning to consider sentence (9b) and the *in* + *-ing* construction (a control pattern, as **It scrupled in raining* and **There scrupled in being a unicorn in the garden* prove), it is first of all important to be aware of the fact that *in* + *-ing* sentences are often adverbial clauses, i.e. adjuncts, not complements, as Rudanko (1996, 10) points out. Sentences (10a) and (10b), taken from Rudanko (ibid., 10-11,) are similar on the surface and they both have PRO, but unlike in (10a), the *in* + *-ing* pattern in (10b) is not needed to complete the meaning of the verb.

- (10) (a) John delights in frustrating his opponents.
 (b) John stumbled in climbing the stairs.

Fortunately, there are some tests that help us separate the adverbial *in* + *-ing* clause from the *in* + *-ing* complement. With the help of examples (11a) and (11b) Rudanko (ibid., 11) explains that adverbial clauses answer questions of *when*, *how* and *why*, while the *in* + *-ing* complement tends to

answer questions beginning with the word *what*. He (ibid., 12) also notes that adverbial clauses cannot be made the focus of pseudocleft sentences, but complements can, as sentences (11c) and (11d) prove. McCloskey (1993, 500), in turn, claims that it is “impossible to move a phrase out of an adverbial (or adjunct) clause”, which then consequently means that items can be extracted out of complements more easily. This tendency is exemplified by sentences (11e) and (11f), taken from Rudanko (1996, 13).

- (11) (a) How did John stumble? He stumbled in climbing the stairs.
 * What did John stumble in? He stumbled in climbing the stairs.
 (b) What did John delight in? He delighted in frustrating his opponents.
 * How did John delight? He delighted in frustrating his opponents.
 (c) What John delighted in was frustrating his opponents.
 (d) * What John stumbled in was climbing the stairs.
 (e) Who did John delight in frustrating?
 (f) * What did John stumble in climbing?

These three tests are now applied to a simplified form of sentence (9b) to exclude the possibility that the *in + -ing* pattern is an adjunct.

- (12) (a) * How did Mr. Edgar **scruple**? He **scrupled** in exacting the highest street rates.
 What did Mr. Edgar **scruple** in? He **scrupled** in exacting the highest street rates.
 (b) What Mr. Edgar **scrupled** in was exacting the highest street rates.
 (c) What did Mr. Edgar **scruple** in exacting?

As we can see from sentences (12a)-(12c) above, the *in + -ing* construction is a complementation pattern in this context.

Now that (9b) has been established as a relevant instance of the *in + -ing* pattern, we can turn our attention to other features of the sentence. Its meaning corresponds with sense 4 and the subject of the sentence, *Mr. Edgar*, is [+ HUMAN]. The understood subject PRO is also coreferential with *Mr. Edgar*. Similarly to (9a), the prepositional gerund in (9b) could be replaced with a *to*-infinitive, but the participle is a fitting choice as the sentence expresses the idea that Mr. Edgar regularly exacts the highest possible street rates of interest and it is not merely a possibility that he might someday do such a thing.

There are three instances of the *-ing* pattern (again, a control pattern, as **It scrupled raining*

and **There scrupled being a unicorn in the garden* prove) in the data:

- (13) (a) “Few would **scruple doing** for a friend, Sarah, all you have done for Mr. Flavel, but I know few beside you that would have done it for a stranger.” (Catharine Sedgwick, 1830, *Clarence; or, A Tale of Our Own Times, Volume I*)
 (b) “... They don't **scruple showing** their hands dirty to us servants -- God forgive me, for myself calling me so here in America.” (Catharine Sedgwick, 1830, *Clarence; or, A Tale of Our Own Times, Volume I*)
 (c) Did any man **scruple taking** his word? It was sacred and inviolable as his oath. (Charles Moody, 1847, *Biographical Sketches of the Moody Family: Embracing Notices of Ten Ministers and Several Laymen from 1633 to 1842*)

In all of the sentences above the subject NPs are [+ HUMAN] semantically, which is logical as they are clearly entities that have the ability to express hesitation – or a lack of hesitation as in (13b) – against doing something. The meaning of *scruple* in these sentences matches sense 1 since the verb is transitive in them, and the *-ing* form of the verb in the complement is also a logical choice as they all appear to refer to habitual behaviour and past events that have taken place. However, it is noteworthy that these sentences would retain their meanings and, at least from the point of view of current English, they would possibly sound even better if they were constructed with the help of the *at + -ing* complement⁶, and thus it will be intriguing to observe whether the use of the *-ing* complement changes in the following decades.

Moving on to the *at + -ing* construction (also a control pattern, as **It scrupled at raining* and **There scrupled at being a unicorn in the garden* prove), it appears four times in the data:

- (14) (a) Yet I can not but think that your conscience will **scruple at enlisting** your services in behalf of a man, whom, when you are informed of the whole of his conduct, ... (James McHenry, 1824, *O'Halloran; or, The Insurgent Chief. An Irish Historical Tale of 1798, Volume I*)
 (b) Nor do his friends **scruple at consulting** him on matters of great importance to the State while in his prison sanctuary. (Francis Adams, 1856, *Justice in the By-Ways, a Tale of Life*)
 (c) The word of God, among these simple folks, was quite too important to make them **scruple at receiving** it from the lips of either Geneva, Rome, or Canterbury. (William Simms, 1856, *Charlemont; or, the Pride of the Village. A Tale of Kentucky*)
 (d) He had his own plans which we will not attempt to fathom; but we fear we shall be compelled to admit that he was not sufficiently a gentleman to **scruple at turning** scout in a time of peace ... (William Simms, 1856, *Charlemont; or, the Pride of the Village. A Tale of Kentucky*)

⁶ Rudanko (1989, 41) actually notes that native informants react very negatively to sentences such as “He did not scruple stretching a point”, while “He did not scruple at stretching a point” is more likely to elicit a positive reaction.

Again, as in the case of the *in* + *-ing* construction, it is important to keep in mind that the *at* + *-ing* construction can introduce adverbial clauses instead of sentential complements as Rudanko (1996, 95) reminds us. Luckily, tests such as the pseudocleft sentence test illustrated by (11c) and (11d) can also be applied to *at* + *-ing* sentences, and example (15) shows that the *at* + *-ing* construction in (14a)-(14d) is a complement by carrying out the test on simplified and shortened versions of these sentences.

- (15) What your conscience **scruples** at is enlisting your services in behalf of this man.
 What his friends do not **scruple** at is consulting him on matters of great importance to the State.
 What they did not **scruple** at was receiving the word of God from the lips of either Geneva, Rome, or Canterbury.
 What he did not **scruple** at was turning scout in a time of peace.

Scruple in this pattern selects subject NPs that are [+ HUMAN], or in the case of *your conscience* in (14a), concepts very closely related to [+ HUMAN] entities, and its meaning corresponds with sense 4. Additionally, according to Rudanko (ibid., 104), the central meaning that *scruple* and other similar verbs in this pattern carry is “that (the referent of) NP₁ feels or shows (a degree of) unwillingness toward doing whatever is expressed by S₂.” He (ibid., 106) also points out that the subjects – and PROs that are coreferential with them – have some control, or at least there is the potential of having control, over the realisation of the content of the lower clause. It is also worthwhile to consider the meaning of the preposition *at* as it can be seen to express “an abstract location, or, more precisely, a boundary or a line” so that “NP₁ draws the line at what S₂ expresses” (ibid., 109). This is true in the case of (14a) and, conversely, the subjects in (14b)-(14d) do not hesitate to cross this line and take the potentially questionable action expressed by the lower clause.

Finally, coming to the infinitival pattern, it is clear that it is overwhelmingly the most frequently occurring sentential complement with 237 instances in the data. Examples (16a)-(16c) illustrate the use of the *to*-infinitive complement in a sentence:

- (16) (a) You well know my rights, and I hope you won't scruple to acknowledge 'em; -- in short, that you will make no difficulties ... (John Payne, 1817, *Accusation*)

(b) She hid not her contempt from him; she **scrupled not to say** that it was dread of poverty and of a fall from high life, that made her yield to the man she despised; ... (Richard Dana, 1833, *Poems and Prose Writings...*)

(c) He sought me out, and **scrupled not to insult** me in the grossest manner. (Emerson Bennett, 1852, *Viola; or, Adventures in the Far South-West*)

What is striking about these sentences is the fact that all of them involve negation and both the *not* + *scruple* type and the *scruple* + *not* type are found as was predicted in Section 4.2.2. In fact, 91.14% of the tokens, i.e. 216 out of 237, are to some extent negative: in addition to *not* + *scruple* and *scruple* + *not* constructions, expressions such as *never* + *scruple* and *no longer* + *scruple* appear in the data. *Scruple* combined with *seldom* and *rarely* are also expressions that are included amongst the negative sentences as their tone can be perceived as such:

- (17) (a) Men of licentious habits, in most cases, select hotels as boarding-places; and such **rarely scruple to offer** to the ardent minds of young men, with whom they happen to fall in company, those allurements that are most likely to lead them away from virtue. (T. S. Arthur, 1853, *The Home Mission*)
 (b) The man who has committed one murder will **seldom scruple to commit** a second. (William O'Brien, 1856, *Principles of Government; or, Meditations in Exile*)

This leaves us with 21 tokens that are exceptional in that they do not involve negation. Three of the tokens are interrogatives that are reproduced in (18a)-(18c), and five of them have to do with religious matters, or they appear in religious contexts, as sentences (18d) and (18e) exemplify:

- (18) (a) Why then should I **scruple to lay down** my life in the cause of virtue and humanity? (Charles Brown, 1827, *The Novels...*)
 (b) My principles were true; my motives were pure; why should I **scruple to avow** my principles, and vindicate my actions? (Charles Brown, 1827, *The Novels...*)
 (c) There are two modes of drawing forth the secrets of another, by open and direct means and by circuitous and indirect. Why **scruple to adopt** the former mode? (Charles Brown, 1827, *The Novels...*)
 (d) When most of the Puritans **scrupled to apply** the latter word to the material house of worship, because in our version of the New Testament it belongs to the assembled worshipers, a spiritual house; ... (In *New Englander and Yale Review*, 1854)
 (e) ... [T]hey must “obey both” by keeping the law of man when it contradicts the law of God, for they can never be good Christians so long as they **scruple** to hang a Quaker for driving off a kidnapper; ... (Theodore Parker, 1855, *The Trial of Theodore Parker: for the “Misdemeanor” of a Speech in Faneuil Hall against Kidnapping, before the Circuit Court of the United States, at Boston, April 3, 1855, with the Defence*)

The remaining thirteen instances have more variation in their style and subject matters as sentences (19a)-(19c) show:

- (19) (a) With something like desperation in his manner, as if he **scrupled to commit** himself too far, yet had the will to contribute considerably to the object, the pedler replied: ... (William Simms, 1834, *Guy Rivers: A Tale of Georgia*)
 (b) "... [T]he royal order has come to my Lord to dismiss his Catholic servants from office -- every one. His Lordship **scruples to obey.**" (John Kennedy, 1838, *Rob of the Bowl: A Legend of St. Inigoe's, Volume 1*)
 (c) It's a business of a delicate nature, sir, and one in which you might **scruple to be** employed. (Cornelius Mathews, 1840, *The Politicians*)

The examples of the *to*-infinitival construction seen so far have been relatively straightforward, but there are altogether seventeen instances where the complexity principle may play a role in *scruple* selecting the *to*-infinitive as its complement, since there is additional material that has been inserted after the matrix verb. Eleven of them are simple insertions, along the lines of examples (20a)-(20c), that do not complicate the sentences much, but the *to*-infinitive complement is still chosen for clarity's sake:

- (20) (a) Thus stooping to the consideration of trifles, the poet does not **scruple entirely to pass by** matters of the most palpable consequence. (Robert Bird, 1835, *The Infidel; or, the Fall of Mexico, Volume 1*)
 (b) He could have grasped it with a sudden effort, and had there been but one soldier, and no other mode of entrance into the garden, he would not have **scrupled an instant to have done** so. (William Simms, 1845, *Count Julian; or, the Last Days of the Goth*)
 (c) ... Madame Mortimer sought to have everything her own way, and had not **scrupled occasionally to make** her husband feel he was her debtor for every luxury he enjoyed. (Emerson Bennett, 1849, *Leni-Leoti; or, Adventures in the Far West*)

These sentences, with the exception of (20b), cannot be interpreted to refer to hypothetical situations, although the *to*-infinitive is used in them. The situation is the same for sentences (21a)-(21c), but the insertions are longer and more complicated in them and thus there is even more reason to conclude that the complexity principle affects the choice of complement:

- (21) (a) Nor have I **scrupled, in so flagrant a case, to indulge** a severity of animadversion, little congenial with the general spirit of these papers. (Alexander Hamilton, James Madison and John Jay, 1817, *The Federalist, on the New Constitution*)
 (b) He considers all men, not yet arrived at middle age, as mere hair-brained boys; and does not **scruple, especially in matters of business, to treat** them accordingly. (John Kennedy, 1832, *Swallow Barn; or, a Sojourn in the Old Dominion, Volume 1*)
 (c) ... [H]e could not but see in him one who would not **scruple, if it needed, to strike** even at the bosom of royalty itself. (William Simms, 1845, *Count Julian; or, the Last Days of the Goth*)

There are also twenty examples where extractions have taken place, e.g. interrogation in

(22a), relativisation in (19c) and (22b), and topicalisation in (22c), but they alone do not explain the prevalence of the *to*-infinitives in the data.

- (22) (a) Why **scruple to adopt** the former mode? (Charles Brown, 1827, *The Novels...*)
 (b) The first opportunity which presented itself, and which (horresco referens) I did not in the least **scruple to seize**, occurred at the Church of the Reverend Doctor Drummummupp, where ... (Edgar Allan Poe, 1855, *The Works of Edgar Allan Poe – Volume 4*)
 (c) A great part of Prometheus, I do not **scruple to say**, is not only as good as the major part of ... (John Neal, 1823, *Randolph: A Novel, Volume 2...*)

Additionally, sentence (22a) is an example of the kind of ambiguous questions that Huang (1997, 128) is interested in as *why* may have originated either in the superordinate clause, or in the subordinate clause.

In three of the tokens the verb *scruple* is in its participle form and then followed by the infinitival complement:

- (23) (a) With this girl she shared the domestic duties, **scrupling** not to divide with her the meanest and most rugged, as well as the lightest offices. (Charles Brown, 1827, *The Novels...*)
 (b) The former pursues an object, whether it be good or evil, without **scrupling to employ** in its pursuit every agent that may serve it, whether right or wrong. (William Simms, 1845, *Count Julian; or, the Last Days of the Goth*)
 (c) “Aye, the charter is worthless and already annulled!” exclaimed Gardiner, **scrupling** not to hazard a falsehood, which he, however, believed would shortly become a truth, ... (John Motley, 1849, *Merry-mount: A Romance of the Massachusetts Colony, Volume 2*)

Scrupling in sentences (23a)-(23c) needs to be followed by the *to*-infinitive as the sentences would otherwise violate the *horror aequi* principle.

When it comes to the semantic properties of the subjects in the 237 tokens of the *to*-infinitive complement, the vast majority of them are semantically [+ HUMAN]. However, there are eleven instances that cannot be classified as such at first glance. After further consideration, two of them, i.e. *my lawless curiosity* and *mine* referring to *my heart*, are closely related to [+ HUMAN] entities, while eight of them, i.e. *it* referring to *the government*, *it* referring to *the Democratic party*, *any nation*, *the Lyncean Academy*, *the/our government* and *that demon-making institution* (possibly referring to the monarchy), are units that usually consist of [+ HUMAN] entities. This leaves us with

two tokens, (24a) and (24b):

- (24) (a) Even pagan history **scruples** not to connect this wonderful event with the prevalent prayers of those Christian soldiers, enforced, as they were, to follow ... (L.H. Sigourney, 1846, *Myrtis: With Other Etchings and Sketchings*)
 (b) Hence it has not **scrupled** to impart a meaning to the Scriptures, where it has failed to find one. (In *New Englander and Yale Review*, 1850)

In (24a) the subject of the sentence is *pagan history* and in (24b) the subject is *it* that refers to *science*. Both are [- ANIMATE], even [+ ABSTRACT], concepts that *scruple* does not usually select as its subject. In fact, for example Rudanko (1989, 21) includes *scruple* + *to*-infinitive in a class of constructions that require the NP₁ to be at least [+ ANIMATE] semantically, but perhaps it is then possible to interpret the subject and PRO in (24a) as referring to *writers of history* and in (24b) to “doers” of *science*, which would provide us with a sensible reading of these sentences.

5.2.3 Review

Not unexpectedly, *scruple* in sense 4 dominates in this set of data as 81.44% of the relevant tokens are *to*-infinitive complements. 85.19% of the other tokens also belong to sense 4, while the remaining 14.81% fall under sense 1. No instances of sense 2, or sense 3 were found in this section of the corpus, as we can see from Table 8 below.

Simplified senses	Number of tokens	Patterns
1. <i>Transitive</i> . To hesitate, to have or make scruples, to regard with suspicion, or to question something.	5	NP
	3	<i>-ing</i>
	Total: 8 (2.75%)	
2. <i>Transitive</i> . To hesitate to believe something, or to question the qualities of something.	-	-
3. <i>Transitive</i> . To excite scruples in someone, or to cause someone to feel scruples.	-	-
4. <i>Intransitive</i> . To entertain scruples, to hesitate or to be reluctant to do something.	19	<i>at</i> + NP
	2	<i>about</i> + NP
	1	<i>in</i> + NP

Often negative.	1	<i>with</i> + NP
	17	Ø
	1	<i>about</i> + <i>-ing</i>
	1	<i>in</i> + <i>-ing</i>
	4	<i>at</i> + <i>-ing</i>
	237	<i>to</i> -infinitive
	Total: 283 (97.25%)	

Table 8. The senses and the associated patterns in COHA in the years 1810 to 1859.

As for the semantic properties of the subjects *scruple* selects, they are mostly [+ HUMAN], concepts closely related to [+ HUMAN] actors, or units such as *the government* that consist of several [+ HUMAN] entities. The NP₂s in the non-sentential complements, in turn, are [- ANIMATE] semantically and no examples where the NP₂ is [+ HUMAN] were found.

5.3 *Scruple* in COHA from 1860 to 1909

The years 1860-1909 in COHA are made up of 100,332,732 words, and the searches returned 189 tokens that are from those years. 27, or 14.29%, of the tokens were discarded because *scruple* was clearly a noun that referred either to “qualms”, or “a small unit of weight” in them. The following examples illustrate both of these nominal uses of *scruple*:

- (25) (a) He thought it was some maidenly **scruple**, and though he smiled at it he respected it... (Louisa May Alcott, 1864, *Moods*)
 (b) ... [A]nd he still weighed in drachms and **scruples** in his delicate scales, though it seemed impossible, dealing with such minute quantities ... (James Fields, 1866, *Good Company for Every Day in the Year*)
 (c) Inferior men with greatest cunning and least **scruples** soon push their way to the front; all sight of good government is eventually lost ... (B. O. Flower, 1889, in *The Arena*)

The remaining 162 relevant hits comprise 107 tokens of *scruple*, 3 tokens of *scruples*, 50 tokens of *scrupled* and 2 tokens of *scrupling*. The complementation patterns these verb forms take are listed in Table 9, along with the number of times each complementation pattern appears in this section of the corpus. The information is also presented as percentages and normalised frequencies.

Complement	<i>Scruple</i>	<i>Scruples</i>	<i>Scrupled</i>	<i>Scrupling</i>	Total	%	NF/pmw
<i>to</i> -infinitive	94	2	43	1	140	86.42	1.40
<i>at</i> + NP	6	1	5		12	7.41	0.12
∅	4		1		5	3.09	0.05
<i>about</i> + NP			1	1	2	1.23	0.02
<i>at</i> + <i>-ing</i>	2				2	1.23	0.02
NP	1				1	0.62	0.01
Total	107	3	50	2	162	100	1.62

Table 9. The complements of *scruple* in COHA in the years 1860 to 1909.

Compared to the previous section, both the number of tokens and the number of different complementation patterns have decreased, and no new patterns have emerged. Nevertheless, these six patterns found in the material will now be discussed in Sections 5.3.1 and 5.3.2.

5.3.1 Non-sentential complements

The non-sentential complement that occurs in the data most often is the *at* + NP complement with twelve tokens. The meaning of *scruple* in these constructions corresponds with sense 4 as examples (26a)-(26c) show:

- (26) (a) Opposed to him were men who **scrupled at nothing**, and who knew every in and out of the money market. (Charles Adams, 1869, in *North American Review*)
 (b) ... [I]t sprang, with an impulse he did not stop to **scruple at**, to his lips. (A. D. T. Whitney, 1873, *The Other Girls*)
 (c) He found out and flattered its vanity, and **scrupled at very little** which lay in the path of his purpose at the time. (W. C. Brownell, 1875, in *Galaxy*)

Again, to be more accurate, *scruple* in the *at* + NP pattern expresses a lack of hesitation and a lack of reluctance as eleven out of the twelve tokens involve some degree of negation, (27) being the only example that is not as clearly negative.

- (27) [T]his every consideration of honor and of responsibility bound him to do at any cost and by all legal means, certain that, whatever he might **scruple at**, his opponents, once in control, would ... (Charles Adams, 1871, in *North American Review*)

It was pointed out in Section 5.2.1 that the vast majority of the subjects in this pattern are [+ HUMAN] semantically and the same holds true for these twelve sentences as only one of the

subjects, *a conscience*, cannot be categorised as such although it is a concept connected to [+ HUMAN] entities. The NPs are also again [- ANIMATE] and some of them quite negative in tone with mentions of crimes as in (28a), or *limbus infantium* 'the limbo of infants' (*Catholic Dictionary* s.v. *limbo*) as in (28c):

- (28) (a) ... [W]hich was so strong upon men that, to accomplish it, they **scrupled** not at the greatest crimes. (C. F. Peirce, 1869, in *Atlantic Monthly*)
 (b) He has a secret pity for Wilmarth, and yet he knows he has been Eugene's worst enemy, that he would not have **scrupled** at any ruin to attain his end. (Amanda Douglas, 1883, *Floyd Grandon's Honor*)
 (c) ... [A] limbus infantum [sic] which even Origen need not have **scrupled** at. (Henry Beers, 1891, *Initial Studies in American Letters*)

In addition to these three negative NPs, four of the NPs have to do with the *means* of doing something and two of the NPs are *nothing*, which leaves only three NPs out of twelve that are more ambiguous in nature: *whatever*, *an impulse* and *very little*.

The second and third most frequently occurring non-sentential complements are the *about* + NP complement with two tokens and the NP complement with one token:

- (29) (a) If there were not possibly, in this woman's keeping, the ordained and perfect answer? While he sat and **scrupled** about it, ... (A. D. T. Whitney, 1873, *The Other Girls*)
 (b) [U]nderstanding always that there must be no **scrupling** about a latitude of a few millions or perhaps tens of millions of years here and there. (Henry Williams, 1900, *The Story of Nineteenth-Century Science*)
 (c) Well, Mr. Jonathan, though I don't **scruple** your veracity, I have some reasons for believing you were there: pray, where were you about six o'clock? (Royall Tyler, 1887, *The Contrast*)

The meaning of *scruple* in the *about* + NP pattern corresponds with sense 4 as both sentences (29a) and (29b) have to do with hesitation, which is especially clear in connection with (29a) where a man is pondering on whether he should ask a lady a certain question or not. In both of the sentences the NPs are also [- ANIMATE]. The meaning of *scruple* + NP, then, matches sense 2, i.e. “to hesitate to believe something, or to question the qualities of something”, and sentence (29c) is actually already familiar to us from the *OED*'s illustrations, even though in this case the sentence probably comes from a later publication of Tyler's play as the *OED*'s quotation predates this one by a hundred years. The sentence, as was the case in Section 5.2.1, has a [+ HUMAN] subject and the NP itself is

[- ANIMATE].

The zero complement appears in the data five times and the meaning of *scruple* in these sentences is sense 4:

- (30) (a) And however many honest men may **scruple** as to law, there can be no doubt that we are put under bonds of honor by the President's proclamation. (In *North American Review*, 1864)
 (b) They would not **scruple**, lead he where he may. (Richard Hovey, 1898, *Launcelot and Guenevere*)
 (c) He welcomed the Restoration, and might have had a bishopric, but **scrupled**, and “went out” in 1662, his recalcitrance to the law being, of course, followed by some inconveniences ... (George Saintsbury, 1905, *A Short History of English Literature*)

The subject of *scruple* is in four of these zero complement constructions semantically [+ HUMAN] and the one token not included in this group is simply a one-word question that does not have a subject, although it does exemplify the verbal use of *scruple*:

- (31) **Scruple?** I am no coward; I would die to serve you. (Richard Hovey, 1898, *Launcelot and Guenevere*)

5.3.2 Sentential complements

Only two different types of sentential complements are found in this section of the corpus. The rarer of them is the *at* + *-ing* complement, which occurs twice in the data:

- (32) (a) So well, indeed, he liked it, when he had taken full possession, that he seemed to divine the favorite room must have been relinquished to him, and to **scruple at keeping** it quite solely to himself. (A. D. T. Whitney, 1863, *Faith Gartney's Girlhood*)
 (b) To **scruple at disarming** our deadliest foe, would be mere infatuation. (In *North American Review*, 1864)

Again, applying the pseudocleft sentence test to simplified and shortened versions of examples (32a) and (32b) proves that *at* + *-ing* is used as a sentential complement, not as an adverbial clause, in them:

- (33) What he **scruples** at is keeping the room solely to himself.
 What we do not **scruple** at is disarming our deadliest foe.

The meaning of *scruple* in the *at* + *-ing* pattern corresponds with sense 4, and the preposition *at* denotes a boundary that *he* in (32a) hesitates to cross and that the implied *we* in (32b) should not be

reluctant to cross. The idea that the subjects of these sentences, both semantically [+ HUMAN], have control over whether the content of the lower sentence becomes reality is also clear: *he* in (32a) can decide whether he wants to keep the room solely to himself or not, and *we* in (32b) can decide whether we want to take action against our deadliest foe or not.

The other sentential complement in this section of the corpus is the *to*-infinitive with 140 instances, illustrated by sentences (34a)-(34c):

- (34) (a) As the young men were not Lord Byrons, the young ladies did not scruple to eat in their presence, and flirtations were carried on with a chicken-bone in one hand and a piece of bread in the other. (Bayard Taylor, 1863, *Hannah Thurston: A Story of American Life*)
 (b) Hence the writers of the various annals of Ireland do not scruple to quote many poems or other tales as authority for the facts of history which they relate. (Augustus Thebaud, 1873, *Irish Race in the Past and the Present*)
 (c) Although her aunt loved her, she did not scruple to tell her that she was not to be either a beautiful or a brilliant woman; ... (Gertrude Atherton, 1898, *The Californians*)

As we can see from the examples above, negation is still closely connected to the *to*-infinitive complements. 131 out of 140 tokens, i.e. 93.57% of them, are negative in tone: constructions such as *scruple + not*, *not + scruple*, *never + scruple* and *no man + scruple* appear in the data frequently. Three of the nine tokens that do not involve negation are interrogatives as illustrated by (35a), and the remaining six tokens are sentences dealing with a wide variety of topics as (35b) and (35c) show:

- (35) (a) ... [A]nd do you, who are at best so sinful, **scruple to bear** such poor trials and petty inconveniences? (John Newman, 1868, *Parochial and Plain Sermons, Vol. VIII*)
 (b) Some compassionate guard, who before would have **scrupled to assist** her while under the ban of the Church, might ... (John Fiske, 1876, *The Unseen World and Other Essays*)
 (c) Claudia, under different circumstances, would have **scrupled to share** in this somewhat shabby conspiracy; but ... (Edith Wharton, 1901, *Crucial Instances*)

Another interesting feature of examples (35b) and (35c) is the fact that in both of them a modal verb precedes *scruple*, which is true of the four other non-interrogative sentences, too.

Moving on to consider the complexity principle, the extraction principle and the *horror aequi* principle, it is possible to say that all of them have a slight effect on *scruple* and thus they account

for some of the *to*-infinitives found in the data. Beginning with the complexity principle, there are altogether nine tokens where there is an insertion of material between the matrix verb and the lower clause. Four of them are simple, short insertions along the lines of (36a), but five of them are longer additions that complicate the sentences more significantly as examples (36b)-(36d) illustrate:

- (36) (a) She had not **scrupled** constantly to prefer her whims to the common advantage, and even safety; ... (William Kountz, 1899, *Billy Baxter's Letters*)
 (b) The freebooters who unctuously kissed his hand to-day, did not **scruple**, if opportunity favored, to plunder one of his towns tomorrow. (Lewis Wallace, 1893, *The Prince of India – Volume 2*)
 (c) ... [B]ut he would not have **scrupled**, even as his Majesty's servant, he said, to oppose the exercise of a power which had already cost ... (Woodrow Wilson, 1896, in *Harpers*)
 (d) ... [W]ho, jealous of Alvarado's favor and envious of his merits, had not **scrupled in** the face of his unknown origin to sneer, to mock, or to slight ... (Cyrus Brady, 1903, *Sir Henry Morgan, Buccaneer: A Romance of the Spanish Main*)

There are also some extractions such as the question extraction in (37a) and the relative extractions in (37b) and (37c), but they are not a frequent occurrence.

- (37) (a) Why do we **scruple to treat** human beings after the same fashion, to use them and use them up for our own good purposes? (J. E. Cabot, 1868, in *North American Review*)
 (b) For months he resisted my appeals, which I **scrupled** not to make in season and out of season. (John Cooke, 1873, *Her Majesty the Queen, a Novel*)
 (c) ... [F]or there were few of the hated upper class that they would have **scrupled to use** in their own way for their own purposes. (Margaret Potter, 1906, *The Genius*)

The effects of the *horror aequi* principle can be seen in examples (32a) and (32b) as *scruple* is used in them in its *to*-infinitive form which is then followed by a propositional gerund. This avoids the use of two successive *to*-infinitives and, especially in the case of (32a), a gerund is a fitting choice as the situation introduced in the sentence is not merely a hypothetical one. Additionally, there is one sentence where the participial form of *scruple* is followed by a *to*-infinitive:

- (38) ... [B]ut Mahommed, on foot, and whip in hand, was intolerant, and, not **scrupling to mix** with the workmen, urged them vehemently, now with threats, now with promises of reward. (Lewis Wallace, 1893, *The Prince of India – Volume 2*)

Example (38) does not describe a hypothetical situation, but the infinitival complement is still used so as to avoid the double *-ing* construction.

The subjects of *scruple* in the *to*-infinitive pattern are for the most part semantically

[+ HUMAN], but there are five exceptions. *Every loyal heart* is an NP closely related to [+ HUMAN] entities and *this corporation* is a unit that consists of [+ HUMAN] entities working on its behalf, but the subjects in examples (39a)-(39c) are more curious cases:

- (39) (a) It is impossible not to feel angry with these unconscionable insects, who **scruple** not to do such excessive mischief to me, with only the profit of a meal or two to themselves. (In *Atlantic Monthly*, 1866)
 (b) Compact, disciplined, and reckless, it knew its own power and would not **scruple to use** it. (Charles Adams Jr., 1869, in *North American Review*)
 (c) The Bible does not **scruple to tell** us of the failures of its noblest children: ... (F. B. Meyer, 1900, *John the Baptist*)

These unconscionable insects in (39a) actually refers to insects and the use of the expression is not metaphorical, so the subject is semantically [+ ANIMATE]. It is also reasonable to assume that anthropomorphic qualities are assigned to *these unconscionable insects* in the text, which further explains why it is used as a subject of *scruple*. *It* in (39b) is more problematic because it cannot be gleaned from the context to what *it* refers. Some sort of combination of political and financial forces appears to be the most likely explanation, which means there are [+ HUMAN] entities working behind the scenes of *it*. *The Bible* and PRO in (39c) then, again, could be interpreted as referring to *the writers and compilers of the Bible*, which would make it a more conventional subject of *scruple*.

5.3.3 Review

The *to*-infinitive complement, which comprises 86.42% of the relevant tokens, is still the most common complementation pattern and, consequently, sense 4 continues to dominate in this section of the corpus, especially as 95.45% of the other tokens also fall under sense 4. The remaining 4.55% belong to sense 2, while no instances of sense 1, or sense 3 were found in the data as we can see from Table 10.

Simplified senses	Number of tokens	Patterns
1. <i>Transitive</i> . To hesitate, to have or make scruples, to regard with suspicion, or to question something.	-	-

2. <i>Transitive</i> . To hesitate to believe something, or to question the qualities of something.	1	NP
	Total: 1 (0.62%)	
3. <i>Transitive</i> . To excite scruples in someone, or to cause someone to feel scruples.	-	-
4. <i>Intransitive</i> . To entertain scruples, to hesitate or to be reluctant to do something. Often negative.	12	<i>at</i> + NP
	2	<i>about</i> + NP
	5	Ø
	2	<i>at</i> + <i>-ing</i>
	140	<i>to</i> -infinitive
	Total: 161 (99.38%)	

Table 10. The senses and the associated patterns in COHA in the years 1860 to 1909.

The subjects *scruple* selects are for the most part semantically [+ HUMAN] individuals and units of several [+ HUMAN] entities, or they are at least closely related to [+ HUMAN] entities. There is also one subject that is [- HUMAN], but nevertheless [+ ANIMATE]. As for the NP_{2S} in the non-sentential complements, they are without any exceptions semantically [- ANIMATE].

5.4 *Scruple* in COHA from 1910 to 1959

The years 1910-1959 in COHA contain 121,243,568 words, and the queries in this section of the corpus return 73 instances of the verb *scruple*. 16 tokens, i.e. 21.92% of the occurrences, were excluded from the analysis since they were used as nouns that referred to “qualms”, or “doubts” in the sentences in question. Examples (40a)-(40c) illustrate this type of usage:

- (40) (a) ... [N]or because he felt the least **scruple** about shooting one of the savages who were thirsting for his life ... (Edward Ellis, 1911, *The Lost Trail*)
 (b) Men are without compunction and **scruple** – always. (Zoë Akins, 1921, *Daddy's Gone A-Hunting*)
 (c) But **scruples** over water power were unheard of at this time. (Samuel Webster, 1944, in *The Atlantic Monthly*)

The remaining 57 relevant hits consist of 37 tokens of *scruple*, 2 tokens of *scruples*, 16 tokens of *scrupled* and 2 tokens of *scrupling*. The complementation patterns these verb forms take are listed in Table 11, along with the number of times each complementation pattern appears in this

section of the corpus. The information is also presented as percentages and normalised frequencies.

Complement	<i>Scruple</i>	<i>Scruples</i>	<i>Scrupled</i>	<i>Scrupling</i>	Total	%	NF/pmw
<i>to</i> -infinitive	30	2	15	2	49	85.96	0.40
NP	2				2	3.51	0.02
∅	1		1		2	3.51	0.02
<i>about</i> + NP	1				1	1.75	0.01
<i>at</i> + NP	1				1	1.75	0.01
<i>between</i> + NP + NP	1				1	1.75	0.01
<i>in</i> + <i>-ing</i>	1				1	1.75	0.01
Total	37	2	16	2	57	~100	0.47

Table 11. The complements of *scruple* in COHA in the years 1910 to 1959.

The number of tokens has again decreased when compared to the previous section, but the number of complementation patterns has increased and a new non-sentential complement, *between* + NP + NP, has emerged although it appears only once in the data. All of these non-sentential and sentential complementation patterns will now be discussed in the following sub-sections.

5.4.1 Non-sentential complements

With two tokens, the NP complement is the non-sentential complement that most often follows the verb *scruple* in this section of the corpus. The meaning of the *scruple* + NP pattern in both of the sentences matches sense 1:

- (41) (a) I know your goodness too well to **scruple** the giving this direction before I had asked your permission. (Katharine True, 1914, in *Harpers*)
 (b) ... Dell ane o' them has been bred up to **scruple** onething they're bidden to do. (Raymond Postgate and Aymer Vallance, 1937, *England Goes to Press*)

Not surprisingly, the subjects in (41a) and (41b) are semantically [+ HUMAN] and in both of the sentences the NPs are [- ANIMATE].

The *about* + NP, *at* + NP and *between* + NP + NP are all complementation patterns that occur only once in the data:

- (42) (a) “We shall not **scruple** about foreign lives at a time when such hard sacrifices are exacted from our own lives,” he declared, but did not amplify that statement. (In

Christian Science Monitor, 1943)

(b) ... [B]ut it requires a stiff backbone to stand up against onslaughts by those who have it in their power to end one's official career and **scruple** not at the means. (John Koren, 1916, in *The Atlantic Monthly*)

(c) "There's a Christian decency that does not **scruple** between black and white. There's a Christian decency that takes the hand of blacks and calls them brother. ..." (Henrietta Buckmaster, 1944, *Deep River*)

The meaning of the *about* + NP pattern in (42a) falls under sense 4, and its subject is [+ HUMAN] and its NP is [- ANIMATE] semantically. The meaning of the *at* + NP pattern in (42b) also represents sense 4, and its subject is [+ HUMAN] and its NP is [- ANIMATE]. Although there are no other examples of the *at* + NP pattern, it clearly continues a theme observed in the previous sections on non-sentential complements as the NP of the pattern does often deal with the *means* of doing something. The *between* + NP + NP pattern in (42c) is more peculiar: the item could also be analysed as *between* + AdjP, which would make it an adjunct, but as the topic of the text is racial issues and thus *black* and *white* can be interpreted to refer to groups of people, the *between* + NP + NP pattern was chosen. In this context the meaning of *scruple* appears to match sense 4.

Lastly, two tokens of the zero complement can be found in this section of the corpus and in both of these sentences the meaning of *scruple* corresponds with sense 4, although (43a) is more ambiguous because it is basically a one-word sentence:

- (43) (a) **Scruple**; ... (Raymond Postgate and Aymer Vallance, 1937, *England Goes to Press*)
 (b) Pop, if he wanted to, could help little; but Pop, if he demurred and **scrupled**, could hinder plenty. (James Cozzens, 1948, *Guard of Honor*)

The subject of the more complete sentence, (43b), is clearly [+ HUMAN] semantically.

5.4.2 Sentential complements

Two sentential complements, the *in* + *-ing* complement and the *to*-infinitive complement, can be found in this section of the corpus. The *in* + *-ing* complement is by far the rarer one with only one instance of it found in the data:

- (44) I am a friend of Watson. You need not **scruple** in making me out a bill of sale. (Homer Flint, 1951, *The Blind Spot*)

Applying the pseudocleft sentence test to a simplified and shortened version of sentence (44) shows us that *in + -ing* is a complement, not an adverbial clause, in it:

(45) What you do not need to **scruple** in is making out a bill of sale.

The meaning of *scruple* in the *in + -ing* pattern corresponds with sense 4 and the subject, *you*, is semantically [+ HUMAN]. Furthermore, the preposition *in* adds its own shade of meaning to the construction, too. In fact, Rudanko (1996, 41) suggests that in this pattern the preposition “possesses at least a trace of a meaning specific to it”, and as Schibsbye (1970, 324) notes, if *in* is used to express location, it refers to an area, unlike *at* which refers to a point as we have already observed in the previous sections when discussing the *at + -ing* complement. In example (44) it does indeed appear to be true that there is a sense of being inside the process of doing something.

The *to*-infinitive complement is the most frequently used sentential complement as it occurs 49 times in the data:

- (46) (a) Hence, when he entered office, he did not scruple to reward his friends at the expense of a service for which he had neither sympathy nor understanding. (In *The Atlantic Monthly*, 1914)
 (b) In a series of articles on psychology which she wrote for an American journal she had not scrupled to expose what she -- from her woman's point of view -- called Marakoff's ruthlessness. (Rayburn Crawley, 1931, *Chattering Gods*)
 (c) And therefore I **scruple not to propose** the Principles of Motion above-mentioned, they being of very general Extent, and leave their Causes to be found out. (F. Sherwood Taylor, 1949, *A Short History of Science and Scientific Thought*)

Sentences (46a)-(46c) all involve negation, but the way negation is expressed has changed in the first half of the 20th century: the only instance of *scruple + not* is (46c), while in the rest of the sentences the expressions used are *not + scruple*, *never + scruple* and *no man/no one + scruple*. It is also noteworthy that with the exception of one sentence, (47), that includes a modal verb, all of the tokens are negative.

(47) “Some people would have **scrupled to make** use of his Physic,” wrote Mr. Wakefield when all was over, ... (Christina Hole, 1953, *The English Housewife in the Seventeenth Century*)

Extractions such as the relative extraction in (48a) are not common, and there are only two

tokens, (48b) and (48c), that appear to be affected by the complexity principle to some extent:

- (48) (a) ... [A] quarter-mile steeplechase over low hurdles, won by a nimble, auburn-haired young woman whom shameless Berlin sports writers did not **scruple to call** “a chestnut filly” ... (In *Time Magazine*, 1928)
 (b) Max in my place would certainly not have **scrupled to act** as I did. (Abraham Cahan, 1917, *The Rise of David Levinsky*)
 (c) No man, he said, should **scruple for a moment to take up** arms against the threatened tyranny. (George Wrong, 1921, *Washington and His Comrades in Arms; a Chronicle of the War of Independence*)

The slightly lengthier subject in (48b) and the insertion of material between the higher clause and the lower clause in (48c) may have triggered the use of the *to*-infinitive.

The effects of avoiding the violation of the *horror aequi* principle can be seen in two tokens where *scrupling* is followed by a *to*-infinitive:

- (49) (a) Germany has gone a step Further in not **scrupling to destroy** non-contraband (enemy or neutral) lives outright, in her submarine warfare. (In *The New Republic*, 1918)
 (b) ... [W]hich he quaintly called “Anas,” and carefully revised it in his old age for publication after his death, not **scrupling to add** the most categorical and virulent calumnies. (John Corbin, 1919, in *North American Review*)

These sentences do not refer to hypothetical situations, so the *-ing* complement could be used in the place of the *to*-infinitives, but that would result in two gerunds being used successively.

As we can see from example (49a), some of the subjects that *scruple* selects are again units that are made up of [+ HUMAN] entities, although the vast majority of them are simply [+ HUMAN] individuals. A similar subject to *Germany* is *German press. Eagles*, a straightforwardly [+ ANIMATE] subject, makes an appearance, as do *sprites* and *the God of Hosts* that are also [+ ANIMATE], but not quite [+ HUMAN] subjects. The ambiguous *it* occurs four times as the subject of *scruple*:

- (50) (a) Nor does it **scruple to employ** the agent provocateur. (H. N. Brailsford, 1920, in *The New Republic*)
 (b) It never **scruples to use** it. (H. N. Brailsford, 1920, in *The New Republic*)
 (c) But without a doubt it does rely on force: it represses and polices ruthlessly, and it does not **scruple to shoot** a plotter. (H. N. Brailsford, 1921, in *The New Republic*)
 (d) The East used every weapon at its command, and when fair means failed, it did not **scruple to use** foul. (James Cain, 1941, *Mildred Pierce*)

In (50d) it is clear that *it* refers to Eastern European countries, but figuring out the reference of *it* in (50a)-(50c) requires a closer examination of the surrounding text. Interestingly enough, *it* in the first

three examples – all by the same author, which has to be kept in mind – actually appears to refer to the Soviet Union and communism, and thus *it* has something do with Eastern Europe in all of these texts. These subjects can again be interpreted similarly to *Germany* in (49a), referring especially to *the leaders of the Soviet union and communists*.

5.4.3 Review

As 85.96% of the relevant tokens are infinitival complements, sense 4 continues to be the most common meaning in which *scruple* appears in the data. In 75.00% of the other complementation patterns the meaning of *scruple* also matches sense 4, while the remaining 25.00% fall under sense 1. *Scruple* does not appear in sense 2, or sense 3 in this section of the corpus as we can see from Table 12 below.

Simplified senses	Number of tokens	Patterns
1. <i>Transitive</i> . To hesitate, to have or make scruples, to regard with suspicion, or to question something.	2	NP
	Total: 2 (3.51%)	
2. <i>Transitive</i> . To hesitate to believe something, or to question the qualities of something.	-	-
3. <i>Transitive</i> . To excite scruples in someone, or to cause someone to feel scruples.	-	-
4. <i>Intransitive</i> . To entertain scruples, to hesitate or to be reluctant to do something. Often negative.	1	<i>about</i> + NP
	1	<i>at</i> + NP
	1	<i>between</i> + NP + NP
	2	∅
	1	<i>in</i> + <i>-ing</i>
	49	<i>to</i> -infinitive
	Total: 55 (96.49%)	

Table 12. The senses and the associated patterns in COHA in the years 1910 to 1959.

The subjects of *scruple* are mostly [+ HUMAN] entities, or concepts closely related to them,

although there are some cases where the subject is [+ ANIMATE], but [- HUMAN]. There are also subjects such as *German press* which refer to large groups of individuals that are [+ HUMAN] semantically. It could be said that in some instances the subjects are almost metonymic expressions, i.e., as Yule (2006, 108) explains, there is a container-contents relation, a whole-part relation or a representative-symbol relation, and a word from one group is used when referring to something that belongs to the other group, so that for example *Downing Street* stands for *the British Prime Minister*. In COHA one such subject is *Germany* which clearly does not refer to Germany as a geographical area, but to the decision makers of the nation. As for the NP₂s that can be found in the non-sentential complements, they are generally [- ANIMATE], although the NPs in the rather peculiar *between + NP + NP* pattern can actually be interpreted as [+ HUMAN].

5.5 *Scruple* in COHA from 1960 to 2009

The years 1960-2009 in COHA form a 130,233,030-word sub-corpus, but the searches in it retrieve only 30 tokens of *scruple*. Ten of those tokens, or 33.33% of them, were deemed irrelevant to the study as *scruple* is used as a noun in them. It refers to “qualms”, or “moral and ethical principles” in them as sentences (51a)-(51c) show:

- (51) (a) ... [S]ince wars apparently represent the breakdown of all **scruple**. (James Stevenson, 1973, in *New Yorker*)
 (b) Where I am taking you, the queenly and maidenly **scruples** which you have upheld so well may be relaxed ... (James Tiptree Jr., 1988, *Crown of Stars*)
 (c) Smarter than its paymasters, the army knows that human rights **scruples** no longer impede the flow of dollars. (Amy Wilentz, 1989, in *The Nation*)

The remaining 20 relevant hits consist of 19 tokens of *scruple* and 1 token of *scrupled*. For the first time the verb forms *scruples* and *scrupling* do not appear in the data at all. The complementation patterns that *scruple* and *scrupled* take are listed in Table 13, along with the number of times each complementation pattern appears in this section of the corpus. The information is also presented as percentages and normalised frequencies.

Complement	<i>Scruple</i>	<i>Scruples</i>	<i>Scrupled</i>	<i>Scrupling</i>	Total	%	NF/pmw
<i>to</i> -infinitive	12		1		13	65.00	0.10
∅	4				4	20.00	0.03
<i>about</i> + NP	1				1	5.00	0.01
<i>at</i> + <i>-ing</i>	1				1	5.00	0.01
<i>at</i> + NP	1				1	5.00	0.01
Total	19		1		20	100	0.15

Table 13. The complements of *scruple* in COHA in the years 1960 to 2009.

As we can see from the table above, from the year 1960 onwards *scruple* appears in COHA extremely infrequently, which is why I conducted queries in the Corpus of Contemporary American English (hereafter COCA), a 464,020,256-word corpus, with the same two search strings and, after excluding the instances in which *scruple* was used as a noun, in which it was unclear whether *scruple* was a noun or a verb, or which were already found in COHA⁷, analysed 19 tokens out of 33. The complementation patterns found and their percentages and normalised frequencies are presented in Table 14.

Complement	<i>Scruple</i>	<i>Scruples</i>	<i>Scrupled</i>	<i>Scrupling</i>	Total	%	NF/pmw
<i>to</i> -infinitive	11		3	1	15	78.95	0.03
∅	1				1	5.26	< 0.01
<i>at</i> + <i>-ing</i>			1		1	5.26	< 0.01
<i>at</i> + NP	1				1	5.26	< 0.01
NP			1		1	5.26	< 0.01
Total	15		5	1	19	~100	0.04

Table 14. The complements of *scruple* in COCA in the years 1990 to 2012.

Tables 13 and 14 prove that the findings from COHA and COCA support each other as the *to*-infinitive is still the most frequently occurring complement in both of them, and except for the *about* + NP complement in COHA and the NP complement in COCA, the other complementation patterns found match as well. All these tokens from both COHA and COCA will now be discussed in the following sub-sections.

⁷ All in all five duplicates were found, but only two of them were relevant tokens where *scruple* was used as a verb.

5.5.1 Non-sentential complements

The *at* + NP pattern occurs once in both COHA and COCA, so with two tokens it is the most frequently found non-sentential complement in the data. The meaning of *scruple* in both of these instances of the *at* + NP pattern corresponds with sense 4, and a lack of hesitation and a lack of reluctance are clearly communicated:

- (52) (a) “The Israelis will not **scruple** at the fact that I am seventy-six. The death-penalty is still very much in favor over there, you know, especially when the man in the dock is a Nazi war criminal associated with the camps.” (Stephen King, 1982, *Different Seasons*)
 (b) Never ones to **scruple** at such charming niceties as logic, fairness, intellectual honesty, or any of the other stains they wanted washed out of their concept of a proper society, they and their darlings immediately began ... (Stephen Burns, 2010, *Bug Trap*)

The subjects of (52a) and (52b) are semantically [+ HUMAN] and the NPs are [- ANIMATE], or even more accurately, [+ ABSTRACT]. It is also noteworthy that for the first time none of the NPs found in the pattern deal with the means of doing something and neither *fact* nor *charming niceties* (which refers to *logic*, *fairness* and *intellectual honesty*) is negative in tone.

The *about* + NP complement appears once in COHA, and one instance of the NP complement can be found in COCA:

- (53) (a) “... How can I state it more clearly than I have done? I will not not marry you, under any circumstances!” His eyes flashed with anger. “Don't **scruple** about my feelings! Let me have it, madam!” (Ann Downer, 1993, *The Books of the Keepers*)
 (b) “Oh, I don't know. I have one scruple,” Cliff said, “maybe a couple of scruples. Scruple, scruple. Have you ever been **scrupled**?” “I am sorry, Mr. Yeats, but this is making me uncomfortable.” (Joan Connor, 2005, *The Folly of Being Comforted*)

In the *about* + NP pattern in (53a) the meaning of *scruple* falls under sense 4, and the subject of the sentence is [+ HUMAN], while the NP is [- ANIMATE]. But it is the NP pattern in (53b) – a rather playful token – that is exceptional: the sentence could be rephrased as *Has anyone ever scrupled you?* In this sentence both the subject and the NP are [+ HUMAN] and, as defined by Haegeman (1991, 41-42), the theta roles of agent (“the one who intentionally initiates the action expressed by the predicate”) and theme (“the entity affected by the action or state expressed by the predicate”) can be assigned to them, respectively. Thus the meaning of *scruple* in (53b) actually corresponds

with sense 3, i.e. “to excite scruples in someone, or to cause someone to feel scruples”⁸ – a sense that was not expected to be found in the data at all⁹.

Some instances of the zero complement can also be found in the data: it appears four times in COHA and once in COCA. The meaning of *scruple* in all of these sentences fits sense 4 as (54a)-(54c) exemplify:

- (54) (a) Jonas didn't **scruple** out of fear. It was the brazenness that bothered him. (Seymour Epstein, 1967, *Caught in That Music*)
 (b) Hardly less grotesque is that the Bush administration feels obliged to defer in this matter to regimes that never **scruple** when they feel a massacre is justified by *raison d'etat*. (In *New Republic*, 1990)
 (c) “My dear, you **scruple** too much. What else is marriage? What else is a dowry? What else is the entire ridiculous custom but bribery, deceit, and civilized indentureship?” (Ann Downer, 1993, *The Books of the Keepers*)

The subjects in the zero complement clauses are also [+ HUMAN], or as in the case of (54b), units such as *regimes* that have several [+ HUMAN] entities working behind the scenes.

5.5.2 Sentential complements

The *at + -ing* complement is found once in both COHA and COCA:

- (55) (a) Had anyone really thought that this gang would **scruple at making** scrap metal out of one lousy airplane from the annoying little country of South Korea? (Suzanne Garment, 1983, in *Wall Street Journal*)
 (b) Would a government thus proved to be hell-bent on sacrificial murder (we are asked) have **scrupled at framing** two innocents? (Jacob Cohen, 1993, in *National Review*)

The pseudocleft test is once again carried out on simplified and shortened versions of these sentences, and it proves that they are relevant instances of the *at + -ing* complement and not adverbial clauses:

- (56) What the gang does not **scruple at** is making scrap metal out of an airplane.
 What a government like that would not have **scrupled at** is framing two innocents.

The meaning of *scruple* in (55a) and (55b) matches sense 4 and the subjects, *this gang* and *a*

⁸ As native speakers, Kevin McGinley and Paul Rickman (personal communication) also see this as a possible interpretation.

⁹ Additionally, the seeming defamiliarisation of *scruple* through repetition is worth mentioning. The unfamiliarity of this archaic verb combined with the defamiliarising repetition may even make the question seem slightly indecent, e.g. “Have you ever been V-ed?”, or the sentence may simply have been meant to be read as “Has anyone ever had doubts or reservations about you?” (Kevin McGinley, personal communication)

government, are groups of several [+ HUMAN] individuals. The pattern itself combined with *scruple* emphasises that these subjects have the control over the decision whether they want to cross the line denoted by *at* and take the action expressed in the lower clause, or not, although in both of these sentences the content of the lower clause has clearly become reality.

The *to*-infinitive, still the most frequently occurring sentential complement, appears thirteen times in COHA and fifteen times in COCA, so altogether 28 instances of it are found in the data:

- (57) (a) So Chat did **not scruple to use** his press facilities to extract a little something extra. (In *Time Magazine*, 1969)
 (b) Rousseau's enemies did **not scruple to tell** the most fantastic lies about him, and his own copious memoirs can be evasive or unreliable. (Richard Brookhiser, 1983, in *Wall Street Journal*)
 (c) Two options thus exist: Juana's marriage to a man who does **not scruple to acquire** her hand by military force, or Naples' destruction; ... (Christopher Weimer, 2001, in *Hispanic Review*)
 (d) "... He would **not scruple to torch** this city of Tardocco if he thought he would regain his shade by doing so." (Fred Chappell, 2010, *Thief of Shadows*)

Examples (57a)-(57d) all involve negation and it appears to have been firmly established as one of the features of the infinitival pattern as only one sentence that does not involve negation, an indirect question, was found in COHA:

- (58) And yet the feat is only so evidently feasible that the sole wonder is why men have **scrupled to attempt** it before. (Stephen Coonts, 2003, *On Glorious Wings: the Best Flying Stories of the Century*)

On the basis of these observations and the ones made in the previous sections, it appears that the behaviour of *scruple* nowadays bears some similarities to the behaviour of negatively-oriented polarity-sensitive items, i.e. "items which prefer negative contexts over positive ones" as Huddleston and Pullum (2002, 822) explain, especially considering that such items can easily occur, for example, in positive interrogative and conditional clauses in addition to negative declarative ones (ibid.). Another factor which makes *scruple* slightly similar to NPIs is the fact that while NPIs accept rhetorical *why* questions because they convey a negative suggestion, *why not* questions are unacceptable since they have a positive implicature (ibid., 835). It certainly seems to be true that *Why scruple to do this?* is a perfectly acceptable question, but somehow *Why not scruple to do this?*

does not sound quite as good.

Additionally, it is worth noting that the *scruple* + *not* type of negation has disappeared completely despite the old-fashionedness of the verb, and only the *not* + *scruple* type and the *never* + *scruple* type of expressions are found in the data.

The extraction principle, the complexity principle and the *horror aequi* principle do not appear to have a significant effect on *scruple* selecting the *to*-infinitive complement, but some instances of them can be found in the data:

- (59) (a) "... But our Vincent is a lively lad, and what the ladies will not proffer to hint freely, he does not **scruple to buy.** ..." (Sue Grafton, 1988, "*E*" *Is for Evidence*)
 (b) I do not **scruple here also to follow** Richter in recognizing Christ in this Child. (Leo Steinberg, 1992, in *Art Bulletin*)
 (c) ... [A] gentleman who would resent to death, an imputation of falsehood from his equal, will not **scruple, without proof, to accuse** his servant of it, in the grossest terms. (C. Hemphill, 1996, in *Journal of Social History*)
 (d) Not **scrupling to lay** waste an entire city, Alexander nevertheless manifested a solicitousness for the poet's house that passes modern understanding. (Elizabeth Samet, 2002, in *Armed Forces & Society*)

Sentence (59a) is an example of topicalisation, and in (59b) and (59c) there are insertions between the matrix verb and the following clause, which may have triggered the use of the *to*-infinitive, even though the insertions are not very long and complicated. However, especially sentence (59c) is rather complex in other ways, too, and thus using the infinitival complement makes it slightly easier to read. In (59d) there is the *-ing* form of *scruple* followed by a *to*-infinitive, which conforms to the *horror aequi* principle.

As for the semantic properties of the subjects *scruple* selects in the *to*-infinitive pattern, each and every one of them is for the first time unambiguously [+ HUMAN].

5.5.3 Review

Because 65.00% of the relevant tokens in COHA and 78.95% of the relevant tokens in COCA are *to*-infinitive complements, the meaning of *scruple* corresponds with sense 4 frequently even in the last period of (approximately) fifty years that is examined in this thesis. In 90.91% of the tokens

representing other complementation patterns the verb's meaning also coincides with sense 4 as we can see from Table 15. Surprisingly, the remaining 9.09%, i.e. just one token in this case, fit under sense 3, a sense that was assumed to be obsolete and thus completely missing from the results.

Simplified senses	Number of tokens	Patterns
1. <i>Transitive</i> . To hesitate, to have or make scruples, to regard with suspicion, or to question something.	-	-
2. <i>Transitive</i> . To hesitate to believe something, or to question the qualities of something.	-	-
3. <i>Transitive</i> . To excite scruples in someone, or to cause someone to feel scruples.	1	NP
	Total: 1 (2.56%)	
4. <i>Intransitive</i> . To entertain scruples, to hesitate or to be reluctant to do something. Often negative.	2	<i>at</i> + NP
	1	<i>about</i> + NP
	5	∅
	2	<i>at</i> + <i>-ing</i>
	28	<i>to</i> -infinitive
	Total: 38 (97.44%)	

Table 15. The senses and the associated patterns in COHA in the years 1960 to 2009, and in COCA in the years 1990 to 2012.

The subjects *scruple* selects in both non-sentential and sentential complementation patterns are semantically [+ HUMAN] entities, or units that clearly consist of several [+ HUMAN] entities. The NP₂s in the non-sentential complements are, in turn, [- ANIMATE] or [+ ABSTRACT], although remarkably in connection with sense 3 the NP is [+ HUMAN].

5.6 Summary and further comments

In the preceding sections all the tokens of *scruple* from COHA are analysed and, additionally, I have taken a look at some data from COCA in order to get more information about the current behaviour of *scruple* and its complements. *Scruple* has not been a particularly commonly used verb in the past two centuries as even at the height of its popularity in the years 1810-1859 its frequency was merely

5.35 instances per million words. The next segment of fifty years, the time period from 1860 to 1909, witnesses a rather stark decrease in the frequency of *scruple*: it drops to 1.62 instances pmw. In the years 1910-1959 the frequency of *scruple* continues to decline steadily as there are only 0.47 instances pmw, and as we come to the most recent period of fifty years, 1960-2009, it has further dropped to 0.15 instances pmw. In COCA the frequency is even lower, 0.04 instances pmw, but if the data from COCA – excluding the duplicates – is combined with the last segment from COHA, the new frequency of *scruple* is 0.08 instances pmw.

There are altogether twelve different complementation patterns, including the zero complement, that were found in the data. The patterns are listed in Table 16 below, with checkmarks that indicate the time periods in which they appear.

Pattern	1810-1859	1860-1909	1910-1959	1960-2012
<i>at</i> + NP	✓	✓	✓	✓
<i>about</i> + NP	✓	✓	✓	✓
<i>between</i> + NP + NP			✓	
<i>in</i> + NP	✓			
NP	✓	✓	✓	✓
<i>with</i> + NP	✓			
∅	✓	✓	✓	✓
<i>about</i> + <i>-ing</i>	✓			
<i>at</i> + <i>-ing</i>	✓	✓		✓
<i>in</i> + <i>-ing</i>	✓		✓	
<i>-ing</i>	✓			
<i>to</i> -infinitive	✓	✓	✓	✓
Total	11	6	7	6

Table 16. The occurrences of the different complementation patterns in the selected time periods.

As we can see, the time period from 1810 to 1859 is the richest one when it comes to the number of different complementation patterns: eleven out of twelve patterns can be found in this section of the corpus. In the three following segments the number of complementation patterns settles to around half of it. Several of the patterns found are not recognised in the literature on *scruple*: namely the *about* + NP, *between* + NP + NP, *in* + NP, *with* + NP, *about* + *-ing*, *at* + *-ing* and

in + -ing patterns. There are also patterns that are mentioned in the literature, but cannot be found in the corpus data: the *whether/that* clause and NP (refl.) + *out of* + NP complements. This leaves us with five familiar and seven new patterns in the data. However, it is worth remembering that some of these novel patterns, e.g. *in + NP*, appear in just one segment, and there are actually only seven patterns that appear relatively consistently in the data throughout the years: the *at + NP*, *about + NP*, NP, *at + -ing*, *in + -ing*, *to*-infinitive and zero complements.

Similarly to the frequency of *scruple*, the frequencies of all these complementation patterns have decreased, too, but as their number of instances per million words is very low, we will not take a closer look at their frequencies here¹⁰. On a more general level, though, the developments in the frequencies of non-sentential and sentential complements are presented in Figure 1.

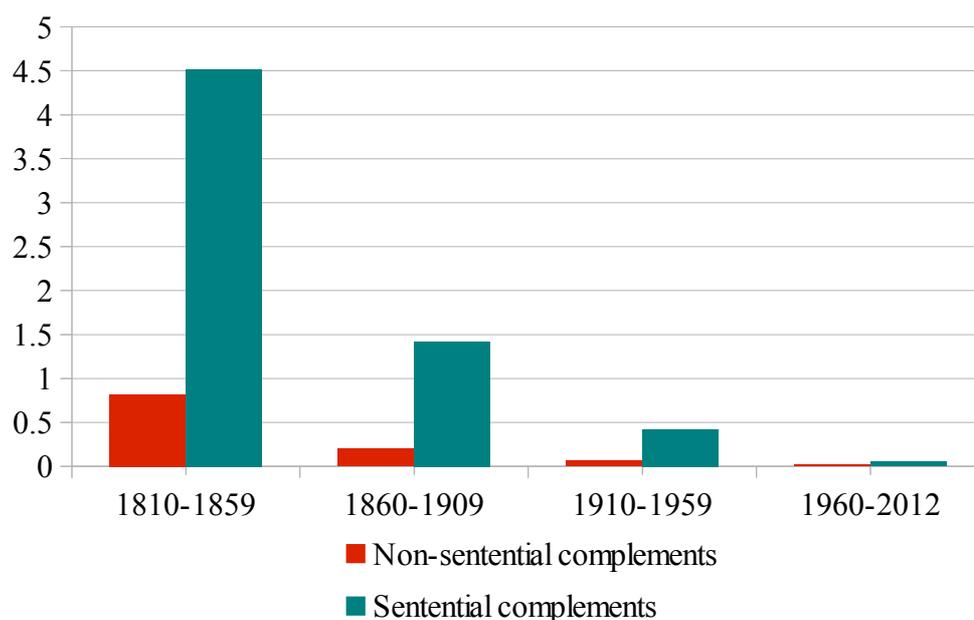


Figure 1. The normalised frequencies of non-sentential and sentential complements in the selected time periods.

In the figure above the normalised frequencies per million words are represented by the y-axis and the time periods are represented by the x-axis, and it shows us very clearly that *scruple* selects sentential complements more frequently than non-sentential complements, which is not surprising considering how many infinitival complements were found in the analysis sections.

¹⁰ The normalised frequencies can, however, be found in the tables presented at the beginning of Sections 5.2-5.5.

The aforementioned prevalence of the *to*-infinitive complements also partly explains why sense 4 is so much more frequently used than any of the other senses, as we can see from Figure 2 below.

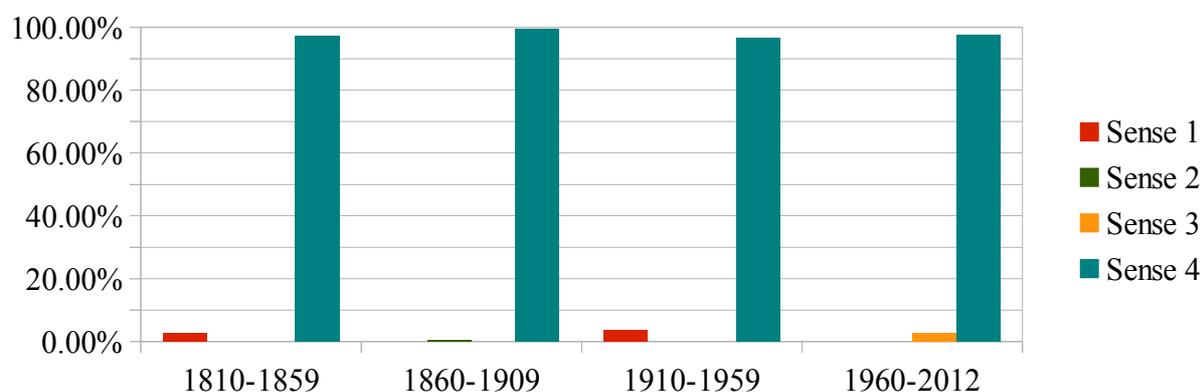


Figure 2. The percentages of the different senses in the selected time periods.

Another factor that gives us a reason for why sense 4 is so widespread in the data is the fact that *scruple* is used as an intransitive verb in the vast majority of the tokens. All four senses and the patterns associated with them in the data are listed in Table 17, along with the number and the percentage of tokens that belong to each sense.

Simplified senses	Number of tokens	Patterns
1. <i>Transitive</i> . To hesitate, to have or make scruples, to regard with suspicion, or to question something.	7	NP
	3	<i>-ing</i>
	Total: 10 (1.82%)	
2. <i>Transitive</i> . To hesitate to believe something, or to question the qualities of something.	1	NP
	Total: 1 (0.18%)	
3. <i>Transitive</i> . To excite scruples in someone, or to cause someone to feel scruples.	1	NP
	Total: 1 (0.18%)	
4. <i>Intransitive</i> . To entertain scruples, to hesitate or to be reluctant to do something. Often negative.	6	<i>about</i> + NP
	34	<i>at</i> + NP
	1	<i>between</i> + NP + NP
	1	<i>in</i> + NP

	1	<i>with</i> + NP
	29	Ø
	1	<i>about</i> + <i>-ing</i>
	8	<i>at</i> + <i>-ing</i>
	2	<i>in</i> + <i>-ing</i>
	454	<i>to</i> -infinitive
	Total: 537 (97.81%)	

Table 17. The senses and the associated patterns in the years 1810 to 2012.

These findings presented so far have some features that require further commentary: mainly the gerundial complements and the *to*-infinitive complements should be considered in even more detail. Firstly, in the literature directly linked gerunds are recognised as a complement that *scruple* selects, but on the basis of the corpus data it is possible to conclude that they have not been truly used since the mid-19th century. Instead, prepositional gerunds not recognised in the literature are complements that *scruple* selects to this day, and the meaning of those constructions is affected by the meanings that especially prepositions *at* and *in* carry.

And secondly, although the idea that the *-ing* complements refer to events that have already taken place explains the use of some gerundial complements in the data, the assumption that the *to*-infinitive complements refer to hypothetical situations is not quite enough to account for the abundance of infinitival complements in COHA and COCA, because in sentences such as (60a)-(60d) there is no need to question whether the writers are describing past events, or hypothetical situations.

- (60) (a) "... [T]hough you know she did not **scruple to say** she hated the old man while he was alive." (Catharine Sedgwick, 1836, *The Poor Rich Man and the Rich Poor Man*)
 (b) ... [A]nd they did not **scruple to call** them by words which hurt John Callendar's honor like a sword-thrust. (Amelia Barr, 1883, *Scottish Sketches*)
 (c) He feels strongly that the British and Dutch ar[e] not only traders but also monopolists who have not **scrupled to squeeze** the United States in times past with regard to prices for rubber, quinine, etc. (C. Grattan, 1941, in *Harpers*)
 (d) My parents did not **scruple to put up** a Christmas tree and hide Easter eggs. To their mind, both of these holidays were simply secular; their Christian trappings struck them as superficial decor. (Peter Gay, 1998, in *American Scholar*)

As there is an ample number of similar tokens in the data, the meaning of the *to*-infinitive

complement calls for further explication.

The key to the meaning of the infinitival complements appears to be the preposition *to*. As Duffley (2000, 234) notes, in the case of expressions such as *wanted to talk*, it is logical to interpret the infinitival complement as expressing “something hypothetical, potential, nonentailed, or future.” However, he (ibid.) continues, a construction such as *managed to talk* implies that the event expressed by the *to*-infinitive complement, and consequently the lower clause, is actually realised. This interpretation is possible if *to* is regarded not merely as an infinitival marker that is empty of meaning, but instead as a construction that derives some of its meaning from the preposition *to* as Smith (2009, 369) suggests¹¹. A helpful starting point in such cases is the source-path-goal image schema presented in Figure 3.

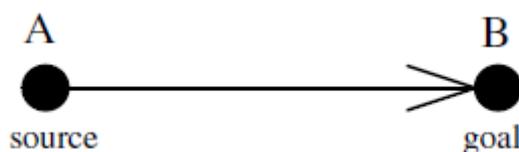


Figure 3. Source-path-goal image schema, from Smith (2009, 369).

Smith (ibid.) notes that although a prototypical example of the source-path-goal image schema is a sentence such as *John walked to the store* where John moves around in our everyday world towards a very concrete goal, there is no reason to assume it could not be applied to more abstract situations. According to Smith (ibid., 371), the preposition *to* can, for example, lack the idea of movement, but still evoke the sense of purpose as in (61a), or evoke intention and volition, but not purpose as in (61b):

- (61) (a) Jim stayed home to work on his dissertation.
 (b) Mary expects to write her thesis next year.

Thus taking into account the preposition *to* and the source-path-goal image schema sheds light on the meaning of examples (60a)-(60d) and other similar sentences as they can now be interpreted to

¹¹ Smith (2009, 369), however, takes no position when it comes to the syntax of the infinitival *to*, but for example Chomsky (1981, 18) analyses the infinitival *to* as belonging to the inflectional, or auxiliary, node and thus differing from the prepositional *to* that introduces prepositional phrases, and Denison (1998, 266) notes that the character of the *to*-infinitive has changed from nominal to verbal and at the same time the infinitival *to* has moved further away from the prepositional *to*. Thus it is clear no consensus on this issue has been reached.

convey a certain sense of completeness. And, as Smith (*ibid.*, 370) points out, regarding *to* as a preposition instead of a simple infinitival marker does not by any means exclude the possibility to interpret the construction as referring to hypothetical situations, because reaching the goal requires moving along the path first and this may then evoke “the notions of futurity or potentiality.”

One additional point of interest is the text types in which the gerundial (both directly linked and prepositional gerunds) complements and the *to*-infinitive complements appear in COHA and COCA.

Text type	1810-1859	1860-1909	1910-1959	1960-2012
Fiction	172	68	16	14
Non-fiction ¹²	36	29	16	9
Popular magazines	29	36	15	4
Newspapers	-	7	2	1

Table 18. The occurrences of the *to*-infinitive in different text types throughout the years.

As we can see from Table 18 in which the distribution of the infinitival complements is presented¹³, during the first segment of fifty years the *scruple* + *to*-infinitive pattern is used 172 times in fictional works, but only 65 times in non-fiction (in this discussion popular magazines and newspapers are grouped together with works of non-fiction). Similarly, the *scruple* + gerund pattern appears eight times in fictional works, but only once in non-fiction. Surprisingly, however, from the second time period onwards the situation is dramatically different, especially in terms of the *to*-infinitives: in 1860-1909 the infinitival pattern appears 68 times in fiction and 72 times in non-fiction, in 1910-1959 it appears 16 times in fiction and 33 times in non-fiction, and in 1960-2012 it appears 14 times in fiction and 14 times in non-fiction. Thus *scruple*, despite its old-fashionedness, is not actually only used in works of historical fiction in the 20th and 21st centuries, but together with the infinitival complement it is almost more likely to be used by writers of various kinds of non-fiction. The progress of the gerundial complements follows along the same vein, although the

¹² Academic journals form a separate genre in COCA, but as they are included in the realm of non-fiction in COHA, the same approach is adopted here.

¹³ No similar table is given for the gerundial complements, because their number of occurrences in the data is so low.

differences between the text types are not as noticeable since *scruple* selects gerundial complements much less frequently than infinitival complements.

6 Conclusion

In this thesis I have studied the verb *scruple* and its complementation patterns in American English, specifically written American English. The main source of the corpus data was COHA, but additional data was drawn from COCA in order to get more information on the most recent developments in the complementation of *scruple*. All in all, the data covered the time period from the year 1810 to the year 2012.

As was stated in the introduction, in addition to identifying all the different complementation patterns *scruple* has selected in the course of the past two centuries, I set out to examine how the use of these different complementation patterns has changed and whether some patterns have disappeared, while new ones have emerged. Although altogether twelve complementation patterns were found in the data, there is no doubt that *to*-infinitives are the dominating construction and have been since the beginning of the 19th century. A few new patterns not mentioned in the literature on *scruple* have also emerged, but they have been rather short-lived. The most interesting of the patterns that have disappeared is the *-ing* complement as it is identified in one grammar as a potential pattern of complementation for *scruple* and it is indeed encountered in the first half of the 19th century, but it then falls out of use. Possibly these directly linked gerunds have later been replaced by the *at* + *-ing* constructions (and, to some extent, by the *in* + *-ing* constructions) as they can be found in the data to this day, and it has been established in earlier works that native speakers of English tend to respond more favourably to *scruple* + *at* + *-ing* constructions than to *scruple* + *-ing* constructions.

It was also noted that while the complexity principle, the extraction principle and the *horror aequi* principle as well as the Great Complement Shift bear an effect on the complementation selection of *scruple*, especially in the case of the *to*-infinitives these principles are not sufficient to account for their prevalence in the data. Thus our attention needs to be turned to the preposition *to* itself. While analysing the tokens it became overwhelmingly obvious that *to* cannot be regarded as a

semantically empty infinitival marker, but instead its basic meaning as a preposition affects the meanings the infinitival complements carry, even though these meanings are often more abstract in nature.

As for the senses in which *scruple* is most frequently used, simplified sense 4, i.e. “to entertain scruples, to hesitate or to be reluctant to do something”, is the most popular one since 97.81% of all the tokens belong to this sense. In addition to the large number of the infinitival complements, the use of *scruple* mainly as an intransitive verb that attracts a wide variety of non-sentential and sentential complements explains why simplified sense 4 is so prominent and the three other senses so rare. The emergence of this sense as the most commonly used one, however, supports the information given in the *OED*, and also in other more recent dictionaries which may often completely ignore all the other possible meanings of *scruple*.

7 Works cited

Primary sources

Davies, Mark. 2008-. *The Corpus of Contemporary American English: 450 million words, 1990-present*. Available from <<http://corpus2.byu.edu/coca/>>. [Accessed 3 April 2014]

Davies, Mark. 2010-. *The Corpus of Historical American English: 400 million words, 1810-2009*. Available from <<http://corpus.byu.edu/coha/>>. [Accessed 20 August 2013]

Secondary sources

Dictionaries

Barnhart, Robert K., ed. 2006. *Chambers Dictionary of Etymology*. Edinburgh: Chambers Harrap Publishers Ltd.

Hardon, John. 2013. *Catholic Dictionary: An Abridged and Updated Version of Modern Catholic Dictionary*. New York: Random House LLC.

The Oxford English Dictionary. 2nd ed. Oxford University Press. Available from <www.oed.com>. [Accessed 9 April 2014]

Poutsma, H. n.d. *Dictionary of Constructions of Verbs, Adjectives and Nouns*. Unpublished.

Stevenson, Angus, ed. 2010. *Oxford Dictionary of English*. 3rd ed. Oxford: Oxford University Press.

Turnbull, Joanna, ed. 2010. *Oxford Advanced Learner's Dictionary of Current English*. 8th ed. Oxford: Oxford University Press.

Webster, Noah. 1913. *Webster's Revised Unabridged Dictionary*. C & G Merriam Co. Available from <www.gutenberg.org>. [Accessed 16 October 2013]

Other works cited

Ball, C. N. 1994. "Automated Text Analysis: Cautionary Tales." *Literary and Linguistic Computing* 9, 4: 295-302.

Biber, Douglas. 2010. "Corpus-Based and Corpus-Driven Analyses of Language Variation and Use." In *The Oxford Handbook of Linguistic Analysis*, ed. Bernd Heine and Heiko Narrog, 159-192. Oxford: Oxford University Press.

Biber, Douglas, Susan Conrad and Randi Reppen. 1998. *Corpus linguistics. Investigating language structure and use*. Cambridge: Cambridge University Press.

Bolinger, Dwight. 1968. "Entailment and the Meaning of Structures." *Glossa* 2: 119-127.

Carnie, Andrew. 2002. *Syntax. A Generative Introduction*. Oxford: Blackwell Publishers.

- Chomsky, Noam. 1981. *Lectures on Government and Binding: The Pisa Lectures*. Dordrecht: Foris.
- Davies, William D. and Stanley Dubinsky. 2004. *The Grammar of Raising and Control. A Course in Syntactic Argumentation*. Oxford: Blackwell Publishing.
- Denison, David. 1998. "Syntax." In *The Cambridge History of English Language, Volume IV 1776-1997*, ed. Suzanne Romaine, 92-329. Cambridge: Cambridge University Press.
- Duffley, Patrick J. 2000. "Gerund versus Infinitive as Complement of Transitive Verbs in English: The Problems of 'Tense' and Control'." *Journal of English Linguistics* 28: 221-248.
- Fillmore, Charles J. 1968. "The Case for Case." In *Universals in Linguistic Theory*, ed. Emmon Bach and Robert T. Harms, 1-88. London: Holt, Rinehart and Winston.
- Haegeman, Liliane. 1991. *Introduction to Government and Binding Theory*. Oxford: Basil Blackwell.
- Herbst, Thomas, David Heath, Ian F. Roe and Dieter Götz. 2004. *A Valency Dictionary of English. A Corpus-Based Analysis of the Complementation Patterns of English Verbs, Nouns and Adjectives*. Berlin: Mouton de Gruyter.
- Huang, James. 1997. *Introduction to Syntax*. Linguistic Institute.
- Huddleston, Rodney and Geoffrey K. Pullum. 2002. *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.
- Jespersen, Otto. 1961. *A Modern English Grammar on Historical Principles: Part V Syntax (Fourth Volume)*. London: George Allen & Unwin Ltd.
- Leech, Geoffrey. 1968. "Some Assumptions in the Metatheory of Linguistics." *Linguistics* 39: 87-102.
- Leech, Geoffrey and Jan Svartvik. 2002. *A Communicative Grammar of English, Third Edition*. London: Longman.
- Lindquist, Hans. 2009. *Corpus Linguistics and the Description of English*. Edinburgh: Edinburgh University Press.
- McCloskey, James. 1993. "Constraints on Syntactic Processes." In *Syntax. Ein internationales Handbuch zeitgenössischer Forschung/An International Handbook of Contemporary Research*, ed. Joachim Jacobs, Arnim von Stechow, Wolfgang Sternefeld and Theo Vennemann, 496-505. Berlin: Walter de Gruyter.
- Pollard, Carl and Ivan A. Sag. 1987. *Information-Based Syntax and Semantics: Volume 1, Fundamentals*. Stanford: SCLI Publications.
- Postal, Paul M. 1994. "Contrasting extraction types." *Journal of Linguistics* 30, 1: 159-186.

- Poutsma, H. 1904. *A Grammar of Late Modern English: Part I, The Sentence*. Groningen: P. Noordhoff.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech and Jan Svartvik. 1985. *A Comprehensive Grammar of the English Language*. London: Longman.
- Radford, Andrew. 1988. *Transformational Grammar*. Cambridge: Cambridge University Press.
- Rohdenburg, Günter. 1996. "Cognitive complexity and increased grammatical explicitness in English." *Cognitive Linguistics* 7, 2: 149-182.
- Rohdenburg, Günter. 2003. "Cognitive complexity and *horror aequi* as factors determining the use of interrogative clause linkers in English." In *Determinants of Grammatical Variation in English*, ed. Günter Rohdenburg and Britta Mondorf, 205-250. Berlin: Mouton de Gruyter.
- Rohdenburg, Günter. 2006. "The Role of Functional Constraints in the Evolution of the English Complementation System." In *Syntax, Style and Grammatical Norms*, ed. Christiane Dalton-Puffer, Dieter Kastovsky, Nikolaus Ritt and Herbert Schendl, 143-165. Berlin: Peter Lang.
- Rudanko, Juhani. 1989. *Complementation and Case Grammar. A Syntactic and Semantic Study of Selected Patterns of Complementation in Present-Day English*. Albany: State University of New York Press.
- Rudanko, Juhani. 1996. *Prepositions and Complement Clauses. A Syntactic and Semantic Study of Verbs Governing Prepositions and Complement Clauses in Present-Day English*. Albany: State University of New York Press.
- Schibsbye, Knud. 1970. *A Modern English Grammar with an Appendix on Semantically Related Prepositions*. London: Oxford University Press.
- Smith, Michael B. 2009. "The semantics of complementation in English: A cognitive semantic account of two English complement constructions." *Language Sciences* 31: 360-388.
- Somers, Harold L. 1984. "On the validity of the complement-adjunct distinction in valency grammar." *Linguistics* 22: 507-530.
- Svartvik, Jan. 1992. "Corpus linguistics comes of age." In *Directions in Corpus Linguistics. Proceedings of Nobel Symposium 82 Stockholm, 4-8 August 1991*, ed. Jan Svartvik, 7-16. Berlin: Mouton de Gruyter.
- Tognini-Bonelli, Elena. 2001. *Corpus Linguistics at Work*. Amsterdam: John Benjamins Publishing Company.
- Vosberg, Uwe. 2003a. "Cognitive Complexity and the Establishment of *-ing* Constructions with Retrospective Verbs in Modern English." In *Insights into Late Modern English*, ed. Marina Dossena and Charles Jones, 197-220. Berlin: Peter Lang.
- Vosberg, Uwe. 2003b. "The role of extractions and *horror aequi* in the evolution of *-ing* complements in Modern English." In *Determinants of Grammatical Variation in English*, ed. Günter Rohdenburg and Britta Mondorf, 305-327. Berlin: Mouton de Gruyter.

Vosberg, Uwe. 2009. "Non-finite complements." In *One Language, Two Grammars? Differences between British and American English*, ed. Günter Rohdenburg and Julia Schlüter, 212-227. Cambridge: Cambridge University Press.

Wesche, Birgit. 1986. "At Ease With 'At'." *Journal of Semantics* 5: 385-398.

Yule, George. 2006. *The Study of Language*. Cambridge: Cambridge University Press.