

**DANGLING PARTICIPLES IN
TECHNICAL BROCHURES AND
MANUALS**

An Empirical Analysis

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Hængende participier i tekniske brochurer og manualer – en empirisk analyse

Mere end 90 % af alle oversatte tekster har et teknisk indhold (Byrne, 2006, s. 2). Dette gør det vigtigt for især tekniske oversættere at have styr på tekstkonventionerne og de grammatiske regler. Men sproglig korrekthed er ikke kun vigtigt for oversættere men også for forfatterne af teksterne.

Denne afhandling undersøgte, hvilken påvirkning brugen af hængende participier kan have på tekniske brochurer og manualer. Det empiriske materiale omfattede 50 tekniske brochurer og manualer, som alle omhandlede energi eller hvordan man kan spare energi. Det empiriske materiale var skrevet på engelsk, idet afhandlingen undersøgte et fænomen i det engelske sprog. Derudover undersøgte afhandlingen også, om der kan opstilles nogle regler for, hvordan man kan undgå at bruge hængende participier. Graden af grammatikalitet og acceptabilitet af de diverse typer hængende participier blev også diskuteret.

Hele afhandlingen blev bygget op om en hypotese, som lød:

Hængende participier har en utilsigtet og uønsket virkning på tekniske brochurer og manualer.

For at bekræfte eller afkræfte hypotesen, blev eksempler af hængende participier analyseret og diskuteret på baggrund af teoretiske tekster om fænomenet.

De hængende participier blev fundet ved hjælp af konkordansprogrammet MonoConc. Derudover blev UCREL CLAWS7 Tagset-programmet brugt til at kortlægge hvilke ordklasser sætningerne med hængende participier indeholdte. Dette blev gjort for at konstatere, om det er muligt at lave en oversigt over, i hvilke ordklassekombinationer hængende participier mest sandsynligt vil forekomme, og dermed hvordan man kan undgå disse hængende participier.

Diskussionen af de forskellige typer hængende participier blev vanskeliggjort ved, at en type hængende participier forekom oftere end andre. Der var en overflod af hængende participier, som endte på –ing, hvorimod det var svært at finde participier, som endte på –ed. Derudover blev processen også vanskeliggjort af, at konkordansprogrammet MonoConc er begrænset i sine søgefunktioner. Det var derfor ikke muligt, at udelukke ord, som ikke var verbaler; og som resultat af dette, måtte flere tusinde sætninger analyseres.

Det blev hurtigt åbenlyst, at teoretikerne har meget forskellige syn på fænomenet 'hængende participier'. Nogle mener at hængende participier altid skal undgås, hvorimod andre er af den mening, at visse hængende participier er fuldt ud acceptable. Derudover var teoretikerne også uenige om, hvad definitionen af et hængende participium er. Derfor blev det også diskuteret i afhandlingen, hvordan et hængende participium defineres.

På baggrund af diskussionen af de autentiske eksempler fra det empiriske materiale, fik afhandlingen hurtigt afkræftet, at *alle* hængende participier kan siges at have en utilsigtet og uønsket virkning på tekniske brochurer og manualer, idet den forventede tvetydighed udeblev i de fleste eksempler. Det blev derimod konstateret, at hængende participier *kan have* en utilsigtet og uønsket virkning på de tekster, de forekommer i. Samtidig blev det også konstateret, at nogle hængende participier er mere acceptable end andre. Dette blev konstateret ved at diskutere de forskellige teoretikers syn på sagen. Derudover blev det også fastslået, at den eneste 'opskrift' på at undgå hængende participier er at være forsigtig med brugen af ledsætninger uden subjekt.

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1. Introduction

According to Byrne (2006, p. 2), more than 90 per cent of all translated texts is of the technical sort. Therefore, it is especially important for translators to be aware of the existing text conventions for technical texts. This is certainly also true for technical writers.

Furthermore, the English language is gaining ground and is becoming, if it not already is, a lingua franca. This makes it imperative for writers and translators to know the English grammar and sentence structure. However, as the English language is spreading across the world, variations of the language emerges; sometimes intentionally and sometimes unintentionally.

Are these features of ELF (English as a Lingua Franca)¹ variations of the English language or merely lack of knowledge of the language? Some may perceive such ELF features as being correct, if they are *spoken* in a non-educational context. However, if the ELF features are written down, they probably would be regarded as erroneous. But even native English speakers make mistakes as some natives are oblivious of some of the English grammar rules. But if a grammar rule is unknown to the vast majority of people, does it then matter whether the rule is upheld or not?

The objective of this thesis is to look at the occurrence of dangling participles in English technical texts. The thesis will examine which impact the various dangling participles have on the brochures and manuals in which they occur. Furthermore, this thesis will examine whether some dangling participles can be said to be more acceptable than others.

This thesis will look at both grammaticality and acceptability, and it will examine when a dangling participle can be said to be erroneous. Some theorists will argue that a dangling participle always should be avoided because of the ambiguity it entails. Furthermore, this thesis will examine which impact dangling participles have on technical brochures and manuals. I.e. the thesis will examine whether the dangling participles cause ambiguity and confusion, or whether they have no or no significant impact on the texts.

¹ ELF should not be confused with EFL which is an abbreviation for English as a Foreign Language (Dürmüller, 1983, p. 215).

1.1 Hypothesis

Dangling participles have an unintentional and adverse impact on technical brochures and manuals.

In order to confirm or disprove this hypothesis, the following sub-questions will also be answered in this thesis:

- Why do dangling participles occur in English technical written language when English normative written language prescribes that dangling participles are grammatically incorrect? Are technical writers generally of the opinion that dangling participles are acceptable – i.e. that there are some dangling participles which can be accepted if it is impossible to misinterpret the meaning of the sentence? Or do dangling participles occur as the writers do not know / are not aware of the grammatical rule concerning dangling participles?
- Which effect do the dangling participles have on the brochures and manuals in which they occur – do the texts appear less credible and/or professional?
- Is it likely that English written language in near future will regard dangling participles as part of English normative language, i.e. that the occurrence of dangling participles will be grammatically correct?

1.1.1 Relevance

The subject of this thesis is especially relevant for English technical writers. It is important for them to know how the language should be used, and to know whether any deviations from English normative language may have an unwanted impact on the text; e.g. grammatical errors and deviations from the English text conventions may have an impact on the outcome of the buying decision process as the customer may be less likely to buy a product presented in a brochure filled with errors, and any errors in a technical manual may leave the user of the product confused about how to operate the appliance.

1.2 Delimitations

This thesis will look at both present participles (-ing) and past participles (most often -ed), as well as prefixed and suffixed dangling participles. The thesis will not include participles used as adjectives. Moreover, neither misplaced participles nor infinitive dangling participles will be part of the empirical analysis.

Furthermore, in order to reduce the scope of this thesis, the thesis will focus only on technical brochures and manuals dealing with energy or how to save energy (see also *Chapter 7* for more information about these choices). This thesis will *not* deal *only* with brochures and manuals from English-speaking countries as most firms will translate their brochures and manuals into or even write them in English, therefore, texts from different countries will be subject to my examination.

2. Methodology

2.1 General Outline

In order to confirm or disprove the hypothesis of this thesis, a controlled survey of the occurrence of dangling participles in technical texts will be carried out by means of the concordance programme MonoConc.

The empirical study of this thesis will be based on 50 technical texts. The texts were either found on the Internet or distributed to me by various sources (three texts). The 50 texts are to meet three different criteria in order to be included in the empirical study.

The three criteria are that:

- the texts must be brochures and/or manuals
- the texts must be about energy or how to save energy
- the texts must be in English
- the texts must contain cohesive text.

This thesis views these 50 brochures and manuals as being exemplary for each their genre, and, therefore, this thesis will generalise on basis of these 50 technical texts.

When the 50 technical brochures and manuals are found, they will be converted into text files (i.e. if they not already are text files) and be POS-tagged with a view to making a grammatical analysis of the sentences in which the dangling participles occur. Subsequently, the texts will be analysed by means of the concordance tool MonoConc, and the following measuring points will be set up in order to assess the acceptability of specific examples of dangling participles in English written language:

- Which kind of dangling participle is it?
- Is the sentence understandable?
- Does the dangling participle cause any ambiguity?
- Does the sentence violate any English text and sentence structure conventions and/or does it violate any grammatical rules besides the one concerning dangling participles?
- What do the theorists say about that specific kind of dangling participle?

2.1.1 POS-tagging

POS-tagging (part-of-speech tagging) “is the commonest form of corpus annotation” (UCREL, n.d. (a)), and is a tool which determines which grammatical constituents a sentence consists of (in this case word class and number). Different sets of criteria may be used in order to classify words; e.g. word class (e.g. noun, verb etc.), number (singular or plural), and tense (present, past, future).

POS-tagging will be included in this thesis as dangling participles seem to occur most frequently in strings of certain word classes. POS-tagging will, therefore, be used as a tool in determining whether dangling participles are more likely to occur in certain kinds of sentences than others. This thesis will use CLAWS (the Constituent Likelihood Automatic Word-tagging System), which according to UCREL (n.d. (a)) has a 96-97 per cent accuracy.

In the following examples, x, y and z represent different tags (see *Appendix A* for an exhaustive list of the UCREL CLAWS7 tags).

E.g. EX1²: <x> + <y> + <z>
 when installing lamps

or EX2³: * <x> + <z> + <y>
 *when lamps installing

x = when = subordinating conjunction = CS

y = installing = -ing participle of lexical verb = VVG

z = lamps = plural common noun = NN2

By looking at these two examples, one can conclude that the CS + VVG + NN2 combination is possible, whereas the CS + NN2 + VVG combination is not.

The situation is different, however, if we add a subject in the main clause which the word ‘installing’ cannot modify.

² EX is an abbreviation for Example.

³ An asterisk (*) in front of a sentence means that the sentence is not correct, because of either non-compliance with the norms for English sentence structure or non-compliance with the English grammatical rules.

EX3: *when installing lamps, the electricity should be turned off.

In EX3, there is also a CS + VVG + NN2 combination. Nevertheless, the sentence is erroneous according to the grammar books as ‘installing’ modifies ‘the electricity’, and it is rather unlikely that the electricity is installing the lamps.

2.1.2 Dangling Participles and Word Class Combinations

By means of the inductive method, the thesis will also discuss whether dangling participles are more likely to appear in certain word class combinations than others. These findings are based on examples of dangling participles found in various grammar books (Borg, 2003, pp. 300-301; LePan, 2000, p. 15ff.; Pringle, n.d.; and Swan, 1995, p. 406) and also on examples the author of this thesis could come up with on top of her head.

The thesis argues that dangling participles are most likely to occur in one of the following combinations in the subordinate clause⁴:

DP1 ⁵ :	CS/II/RR	+	VVG	+	(II)	+
E.g.	When		operating		()	
	When		operating		()	
	By		clicking		on	
	(AT/AT1/II/APPGE)	+	(JJ)	+	NN/PPHOI	
	a		()		vehicle,	
	()		large		vehicles,	
	the		()		button,	

⁴ In this connection, it should be noted that the POS-tagging of some of the sentences in the above-mentioned books and articles by Borg, LePan, Pringle, and Swan possibly gave some other tags than the ones mentioned in DP1-5. This is due to the C7-tagset, which give certain verbs specific tags. E.g. the verb ‘have’ in its –ing form (having) is listed as VHG and not VVG (see also *Appendix A*). In this thesis, all the –ing participles in DP1-DP5 have been tagged ‘VVG’, and all the –ed participles in DP1-DP5 have been tagged ‘VVN’. In the rest of the thesis, the POS-tagging follows the C7-tagset.

⁵ DP is an abbreviation for Dangling Participle.

DP2:	CS/II/RR	+	VVN	+	(II)	+	
E.g.	If Once		installed, regarded		as		
	(RR)	+	(JJ)				
	() daringly		() modern, ⁶				
DP3:	VVG	+	(RP/II/RG/DD/IF)	+	(AT/DA/APPGE)	+	
E.g.	Operating Using Leaving		at () ()		() a ()		
	NN/PN						
	speeds (of up to 180 mm/s), regulator everything						
DP4:	VVN	+	II/AT	+	(AT/DD/APPGE)	+	
E.g.	Considered Born Avoided		from in by		his () her		
	(NN)	+	(IO)	+	NN/PN		
	point () ()		of () ()		view, France, mother,		
DP5:	VVG	+	VVN	+	(RR)	+	VVN
E.g.	Having		been		(properly)		informed ⁷

⁶ This example is taken from LePan (2000, p. 17).

⁷ This example is taken from Borg (2003, p. 300).

These sentence structure combinations in the subordinate clause may be preceded or followed by any number of word classes, or there may even be non-mandatory constituents in between the mandatory constituents (the high-lighted constituents above are the constituents which are considered to be mandatory by this thesis); there may be more non-mandatory constituents in the sentences than in the examples above (e.g. more adjectives could be added), but the mandatory constituents in the *subordinate clause* will most likely follow the structure of one of the DPs above. It should, however, be noted that these sentence constructions do not in themselves cause dangling participles. Only if the verb in the subordinate clause modifies a subject in the main clause (sometimes also referred to as the superordinate clause) which it cannot logically refer to, there is a dangling participle. Moreover, it should also be noted that the subordinate clause is not a ‘dangling participle’, it is only the verb (or in these cases the participle) which is said to be dangling. The examples above all show prefixed subordinate clauses, but the examples could easily have been suffixed subordinate clauses instead.

An example of the verb in the subordinate clause modifying the ‘wrong’ subject in the main clause:

EX4: When operating a vehicle, the safety belt must be used.

In EX4, the participle ‘operating’ modifies ‘the safety belt’, and the sentence is thereby implying that it is the safety belt which is operating the vehicle – which is rather unlikely.

In order to confirm or disprove this sub-hypothesis about which word class combinations dangling participles may occur in, it is imperative that other combinations than the above-mentioned will be typed into the search function, in that failure to do so will give a false confirmation of the hypothesis. However, as mentioned in the delimitation section, a VVG (present participle) or a VVN (past participle) must appear in the sentence.

2.1.3 MonoConc – a Concordance Programme

MonoConc is a concordance programme which can be used to analyse different corpora. In this thesis, the programme will be used to make a concordance listing of the dangling participles occurring in the 50 technical brochures and manuals. When the 50 texts have been converted, they will be placed in small groups, so that each search construction will be typed into the search

function only once per group. Thereby, each document will be searched for the same constructions (see *Figure 1*).

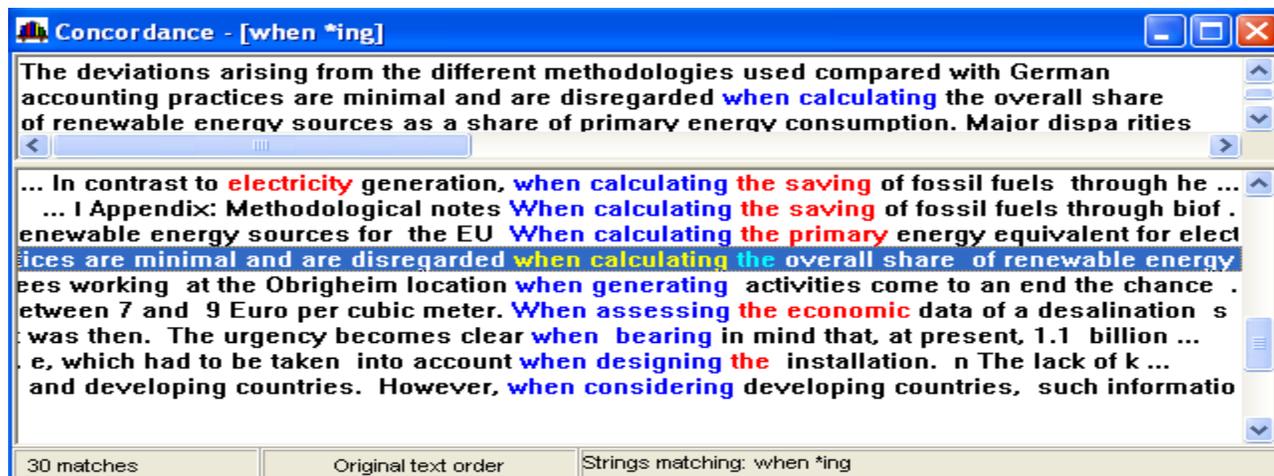


Figure 1

2.2 Outline of Chapter Structure and Contents

Chapter 3 takes the theoretical aspect of dangling participles in technical brochure and manuals as the point of departure. The chapter will discuss some of the theory on dangling participles, i.e. what dangling participles are as well as which impact dangling participles may have on a text seen from the theorist's point of view. In order to do this, the difference between normative and descriptive written language will be discussed.

In *Chapter 4*, the processing of the empirical material will be discussed.

In *Chapter 5*, the empirical material (the occurrences of dangling participles) will be analysed by means of the concordance programme MonoConc. Instances of dangling participles will be assessed based on various criteria, in order to assess the grammaticality and acceptability of each instance of the selected dangling participles. Both the theory (normative language) and the empirical data (descriptive language) will be taken into account in order to make these assessments. Furthermore, *Chapter 5* will discuss which impact the dangling participles have on the specific brochures and manuals in which they were found. Is the text less credible and/or professional, and could those occurrences of dangling participle cause ambiguity and thereby keep a possible buyer from purchasing the product(s) mentioned in the brochure or perhaps even make a user of a manual puzzled about how to use the product(s)?

Chapter 6 will deal with POS-tagging. By means of the inductive method, this thesis will discuss whether dangling participles are more likely to occur in certain word class combinations than in others. If it can be established that dangling participles occur in certain word class combinations, a set of rules which demonstrates how to avoid dangling participles will be set up.

Chapter 7 will reflect on the process and the empirical material employed in this thesis.

Chapter 8 will summarize the findings of this thesis.

2.3 Consideration of Sources

The empirical material was mostly found on the Internet, others were provided to me from various sources. As seen in the *Bibliography*, some of the technical brochures and manuals were downloaded from the same website (e.g. CADDET), but most of the CADDET texts stem from different countries, and are, therefore, most likely not written by the same person(s). Thus, grammatical errors found in one CADDET brochure do not necessarily occur in other CADDET brochures.

The theorists mentioned in this thesis have been chosen based on different criteria. The criteria were as follows:

- The theorists had to touch upon dangling participles in the ENGLISH language (as there are some languages that do not view that kind of language construction a grammatical error)
- The theorists had to elaborate on the subject. That is, they had to comment on for example any exceptions and/or how to recast sentences with dangling participles
- The theory had to be substantiated with examples
- The theory had to be written in English or Danish.

It was found that there was not a great deal of material on this subject and certainly not lengthy descriptions of the phenomenon. Instead most of the theory was found in grammar books (taking up only a few pages or less) and in articles posted on the Internet. No theorist has been excluded from this thesis due to his/her opinion on the subject. Instead, it is the theorists' different opinions that

make dangling participles an interesting subject, which has received only little attention from the general public.

As most of the theory came from valid grammar books and as not every theorist had set up the same grammar rules concerning dangling participles, it may be difficult for users of the English language to comply with all the various guidelines on this subject. Furthermore, the discrepancies in the grammar books also make it difficult to make a qualified definition of what a dangling participle is. So in this thesis, the definition of a dangling participle is based on the general perception of the two words.

3. Theory

3.1 Technical Texts

As previously mentioned, about 90 per cent of all translations has a technical content. Therefore, it is especially vital that writers and translators are aware of the technical text conventions. In this respect, it is important to be aware of the fact that technical writing and technical translation are not all about terminology, i.e. grammar mistakes and deviations from the conventional text structure and conventions may have serious implications on the text and the perception thereof. According to Byrne (2006, p. 4), “failing to comply with target language text conventions can undermine the credibility of the text, the author and the information in the text.” Furthermore, Byrne (2006, p. 4) argues that it is a misconception that style does not matter in technical translation:

But if we regard style as the way we write things, the words we choose and the *way* we construct sentences, the style is equally, if not more, important in technical translation than in other areas because it is there for a reason, not simply for artistic or entertainment reasons.

This thesis argues that this certainly is also true for technical writing, not just translation. Accuracy and compliance with text conventions in technical writing is of significant importance because of the content. If it is a manual, then the information in the manual can mean the difference between life and death as the main purposes of a manual are to instruct and inform. If the technical text is a brochure, then any deviations from the text conventions and any grammar mistakes can influence whether the reader decides to buy the product(s) mentioned in the brochure or not. As previously mentioned, this thesis will look at both technical brochures and technical manuals.

3.1.1 Characteristics of English Technical Language

This thesis will not mention all the characteristics of English technical language. It will focus on those characteristics that are relevant to the subject of this thesis. That is, it will look at only those features that might incur that dangling participles occur in technical texts.

Brevity is very popular among technical writers and translators. They want to get the message through to the reader(s) as quick and concisely as possible, so sentences will probably be reduced where possible.

One of the ways of reducing sentences is to remove or omit the subject, also called the agent or the 'doer'. When the subject is omitted in a subordinate clause, a dangling participle may occur if the intended subject in the subordinate clause is not the same as the one in the main clause.

EX5: When the chef is preparing food, the kitchen must be clean.

EX6: When preparing food, the kitchen must be clean.

In EX6, the subject has been omitted due to brevity. However, when the subject in the relative sentence is omitted, the meaning of EX5 is not preserved in EX6. It is no longer the chef who is preparing the food, but instead the kitchen.

Another feature of English technical language which may lead to the occurrence of a dangling participle is the use of the passive voice. It is often the case that the producer of a product wants to keep focus on the product and not the agent/'doer' in a brochure or manual. Therefore, the agent is often left out.

EX7: After depressing a button in the centre of the operating handle, the door
 can be opened from the inside. (Kirkman, 1992, p. 76)

If the main clause had been in an active voice, there would not have been a dangling participle:

EX8: After depressing a button in the centre of the operating handle, you can
 open the door from the inside.

Often, the agent is also left out to avoid sexism (Kirkman, 1992, p. 74). Writers often run into a problem when mentioning the agent. Diversity in the language is often a conscious choice from the writer's side in order to keep the reader's attention, and, therefore, the writer most often have to use personal pronouns when the agent is mentioned. But which solution should the writer then opt for?

Should the writer opt for “he”, “she”, “he/she” or “it” (“it” is often used in legal texts, in order to avoid a sexist word)?

Furthermore, another aspect of technical *writing* may lead to dangling participles, although it is not a feature of technical language.

English technical brochures may not always be written by language experts; and although the writer may have extensive knowledge about the subject, (s)he may have only superficial knowledge about English grammar. And as a great deal of people is oblivious of what a dangling participle is, it is not difficult to imagine that non-language experts overlook this specific grammatical rule.

3.1.2 Technical Brochures and Manuals

A technical brochure is a pamphlet or a booklet with a technical content which often is descriptive (brochure, n.d.). The content may be about anything from electricity to renewable energy. However, as it is a brochure, the main purpose of the brochure will in most cases be to persuade the reader to buy a product mentioned in the brochure. A brochure may also have other purposes, e.g. to inform.

A technical manual is a “document containing instructions for installation, operation, use, maintenance, parts list, support, and training requirements for the effective deployment of an equipment, machine, process, or system.” (technical brochure, n.d.). Also here the content may be very diverse, but most often the manual is about some sort of appliance. The main purpose of a technical manual is to instruct the reader how to use or assemble a specific product. The manual may also give instructions on any safety precautions which must be followed before use of the product(s). But a manual may also inform the reader about any alternative uses of the product or how to enhance the efficiency of the product.

3.2 Normative and Descriptive Written Language

Usually, there is one standard all people must adhere to when they speak a specific language. There are, however, some languages that are so widespread that differences are bound to occur. English is such a language. English is spoken all over the world and is the national language of several countries. Needless to say, there will be some differences in dialect and the use of words. There is one feature, however, which more or less is common for all the countries with English as the native

language, and that is grammar. The norms in general are based on various things. They may be based on social norms (Jacobsen & Skyum-Nielsen, 1996, p. 66ff.) and where you work, but it is also based on which generation you belong to. Normative language is the standard which is set out, so that all people who have the same native language, regardless of social norms, profession and generation, can speak together. The normative language rules are not always followed though, and this creates a language gap. The gap is especially large between people who come from different social layers, but the gap is also large between different generations. The gaps are sometimes so large that people with the same native language have difficulties understanding each other. Descriptive language is how the language is actually used regardless of how the norm is. Descriptive language encompasses both language which follow the normative language rules but also language which deviate from these rules.

But why is there a difference? Why do people not always follow the normative language rules? Often, as mentioned before, it is dependent on which social layer you ‘belong’ to, which profession you work in, which generation you ‘belong’ to etc. But there may also be another reason when it comes to the English language. The English language is becoming or already is a lingua franca, and often more deviations in a language occur when the language is widespread.

Dürmüller (1983, p. 34) argues that “Standard English is only one among many different varieties of English”, and thus one might argue that deviations from the grammatical rules in Standard English not necessarily are grammatical errors but rather variations of the language. But does that make such ‘variations’ grammatically correct? No. The normative rules are set out to be followed, and any deviation from these rules must be regarded as being incorrect. The deviations may be socially acceptable where you live and/or come from although they are incorrect. This is also the reason why some deviations are incorrect but still acceptable in the setting they are uttered.

Deviations from grammatical rules are more usual in spoken language as sentences are most likely not analysed before they are uttered. But no evidence suggests that grammatical rules only apply to some genres and not others. Therefore, grammatical rules should also be observed in technical texts.

3.2.1 Grammaticality and Acceptability

In this thesis, observance of the normative grammar rules will be referred to as grammaticality. The following definition of grammaticality will be used in this thesis:

Grammaticality refers to the grammatical correctness of a sentence. If the sentence is grammatically correct the grammaticality is high.

As mentioned before, the grammaticality and acceptability of a sentence does not necessarily follow each other. In this thesis, the following definition of acceptability will be used:

Acceptability is the degree to which a sentence is accepted by the general public.

3.3 Dangling Participles

When writing an English text, writers have to be aware of all the grammatical pitfalls which the English language contains. This is certainly also the case for *technical* writers. Nevertheless, mistakes, even severe ones, do occur. Are these grammatical inaccuracies due to unawareness of the grammatical rule about dangling participles, or are the occurrences of dangling participles in the English language a conscious choice made by the writer – a choice that may indicate that the users of the English language are moving away from regarding dangling participles as grammatical errors?

3.3.1 Definition of a Dangling Participle

In order to examine whether the occurrences of dangling participles in written texts can be said to be erroneous, this thesis must examine what a participle is.

A participle is a non-finite verb form which belongs to the verb class ‘verbals’. The two other types of verbals are infinitives and gerunds. This thesis will focus on the present participle – sometimes also referred to as the ‘-ing form’ – and the past participle⁸ – sometimes also referred to as the ‘-ed form’ although the participle does not necessarily end with –ed, e.g. broken or gone (Swan, 1995, p. 401).

A dangling participle – sometimes also called a ‘dangling modifier’ - occurs when the participle is “not clearly indentified with [the word(s) it modifies]” (Ehrlich, 2000, p. 73), an example of that could be when “the entity to be modified is implied rather than explicitly stated” (Stillman, 2004, p. 232), e.g.:

⁸ According to Swan, the names ‘present participle’ and ‘past participle’ are not very suitable as both forms can refer to the past, present and future (Swan, 1995, p. 401).

EX9: When installed, you should keep the appliance away from children.

In this example, it is not clearly stated what has been installed, although one might guess that it is the appliance which has been installed. Therefore, ‘installed’ is a dangling participle as it modifies the wrong entity in the main clause. ‘Installed’ modifies ‘you’ instead of the intended ‘appliance’.

According to Kirkman (1992, p. 75), “a participle [...] relates to the noun or the pronoun that precedes it”, and “if there is no noun or pronoun at the beginning of the sentence, the participial group is interpreted as relating to the subject of the main statement that follows”.

However, not all theorists agree on this definition of the linguistic phenomenon. Swan (1995, p. 406) argues that “normally the subject of an adverbial participle clause is the same as the subject of the main clause in a sentence.” This is substantiated by Bache & Davidsen-Nielsen (1997, p. 267), who in their book write the following: “In non-finite or verbless adverbial clauses without an overt subject, the ‘understood’ subject form normally has the same reference as the subject form of the superordinate clause [...]”, and by Greenbaum & Quirk (1990, p. 327), “when a subject is not present in a non-finite or verbless clause, the normal ATTACHMENT RULE for identifying the subject is that it is assumed to be identical in reference to the subject of the superordinate clause.”

This thesis will use the following definition of a dangling participle, and this definition is based on the above-mentioned quotes by Bache & Davidsen-Nielsen (1997, p. 267), Greenbaum & Quirk (1990, p. 327) and Swan (1995, p. 406):

Definition:

A dangling participle occurs when the participle of the subjectless subordinate clause is interpreted as not being related to the subject of the main (superordinate) clause.

3.3.2 Dangling Participles – Errors or Not?

Often, the acceptability of an English sentence is connected to its usability in the English language. If there is an unintentional ambiguity in the sentence, uncertainty about what was intended to be uttered may arise. This uncertainty, or ambiguity, may be an intentional choice by the writer. Often,

poetry contains ambiguous sentences which make the reader decide on an interpretation of those sentences. Therefore, poetry may be interpreted differently by two different people. This is an example of why ambiguity should not be regarded as a defect of the language, but rather as an option in the language which may be used in some instances and avoided in others. This is also the case with dangling participles. Dangling participles create an opportunity in the English language; writers may choose to opt for an ambiguous sentence when writing a text. However, ambiguity should be avoided in text pieces in which it is critical that the text will not be misunderstood. Technical writing is an example of this.

Does that mean that non-compliance with the grammatical rule about dangling participles is or should be considered erroneous in technical texts? According to Matthews & Matthews (2008, p. 146), dangling participles may mislead and confuse people. An example given by them in their book (2008, p. 146) is:

EX10: Being in poor condition, we were unable to save the animals.

Were they unable to save the animals because they themselves were in poor condition and, therefore, could not attend to the animals? Or were the animals in such a poor condition that they could not be saved? In a technical manual, this ambiguity could be life-threatening. Furthermore, Matthews & Matthews (2008, p. 146) also state that sentences containing a dangling participle may be perceived as ‘ludicrous’ by the reader. This is perhaps not the best starting point if you want to sell a product in a brochure.

However, Pringle (n.d., p. 1) argues that some participles are becoming prepositions and do, therefore, not modify the subject. Despite having a position as editor, she argues that sentences containing dangling participles do not have to be recast. She uses the following example:

EX11: These data were placed within a time frame of 5240 to 2585 yr BP using
 radiocarbon dating.

In EX11, the dangling participle is ‘using’ in the suffixed clause. ‘Using’ modifies ‘these data’ in this sentence, although it is implied that it is a person who uses the radiocarbon dating.

That sentence didn't really bother me as it was. It was perfectly understandable, and since I'm editing scientific material, many times I won't have the option of recasting in the active voice." (Pringle, n.d., p. 2).

In the same line of thought, Swan (1995, p. 406) argues that dangling participles are very common in some types of sentences. Dangling participles often occur in expressions which refer to the speaker's attitude but also in sentences where the main clause has a preliminary *there* or *it* as a subject. This may indicate that the users of the English language to some degree accept dangling participles or that they at least are heading in that direction.

This is substantiated by Borg (2003, p. 301), who argues that there already are some cases where it is acceptable that there is no concordance between the verb in the subjectless subordinate clause and the subject in the main clause. According to Borg, this type of sentence structure is acceptable when the non-finite construction in the subordinate clause expresses the writer's or the speaker's own attitude to the entire sentence. One of Borg's examples (2003, p. 301) is:

EX12: Considering how much it costs, this machine is certainly not a success.

Furthermore, it may be discussed whether dangling participles always should be avoided. A writer may include a dangling participle on purpose in order to create ambiguity. In addition to that, Kirkman (1992, p. 158) argues that ambiguity in a sentence does not necessarily mean that the sentence will be misinterpreted by the reader:

Normally, we do not decode messages by looking for the **least** likely meanings that can be attached to the signals we receive. We do not receive and interpret the signals in isolation: we take into account the whole context in which they are being used.

However, another statement by Kirkman suggests that technical writing may be a special case. According to Kirkman (1992, p. 123), "Specifications must, above all, be unambiguous. This requires writers to be explicit about who is to do what, where, when in what order, how, and with

what materials.” Therefore, one might conclude that any ambiguity in technical writing should be avoided.

4. Empirical Material

The empirical material consists of 50 technical brochures and manuals about energy or how to save energy. These brochures and manuals vary to a great extent in size ranging from 2 pages to 98 pages. The brochures were mostly found on the Internet as pdf-files, the rest (three texts) were provided to me by various sources. As MonoConc cannot load pdf-files, the files were converted into text-files. Only a few files were discarded in the selection process, and only if they had only of the following ‘flaws’:

- The text did not deal with energy or how to save energy
- The text was not written in English
- The text did not contain cohesive text, but only a few picture explanations.

It was important that the texts contained cohesive text, as dangling participles are more likely to occur in cohesive text rather than in a text written in staccato style.

When the 50 technical brochures and manuals were chosen and converted, the corpus of technical brochures and manuals was then loaded into the MonoConc programme in order to be able to make searches for dangling participles. The MonoConc programme does, however, have a limit as to how many matches it can register in one search (the limit is 500 matches), and, therefore, the corpus had to be split into smaller groups, which were then put into the programme one at the time in order to ensure that all matches would be registered by MonoConc and not just the first 500 matches.

The reason why the searches in most cases gave more than 500 matches at the time was that the searches had to be very broad in order to make sure that all word class combinations would be registered, so that the hypothesis about whether dangling participles are limited to appear in certain word class combinations (cf. 2.1.2) could be confirmed or disproved.

Therefore, the searches were very broad but limited in number. All in all, 176 searches with each corpus group were conducted. The search terms were as follows:

The first search term:

*ing

This first search term was used to find all the present participles (–ing participles). Of course, not all the matches contained an –ing participle as there are several words in the English language which contain the ending –ing. These sentences were ignored as the sentences were analysed.

The second search term:

*ed

The second search term was used to find the majority of the past participles. Again, there are also English words that contain the ending –ed without being an –ed participle. Sentences that did not contain an –ed participle were ignored. Most past participles end with an –ed. There are, however, a few exceptions, and that is the reason why the two previously mentioned search terms do not suffice. These exceptions are the irregular verbs in the English language. All in all, 174 English irregular verbs were searched for (see also *Appendix B*). Needless to say, the vast majority of the irregular past participles did not occur in any of the 50 technical brochures.

When the sentences containing dangling participles were found, they were POS-tagged.

The POS-tagging showed which word classes occurred in the various sentences (see *Figure 2*). Furthermore, Tagset C7 was used with the horizontal output style. The horizontal output style did not have an impact on the results as the output style only has an impact on how the computer lists its findings. The C7 Tagset did, however, have an impact on the results as C7 is larger than the other one available on the Internet, which is the C5 Tagset (UCREL, n.d. (a)).

```
You_PPY can_VM trace_VVI the_AT named_JJ circuits_NN2 by_II  
entering_VVG the_AT assigned_JJ circuit_NN1 name_NN1 or_CC  
by_II clicking_VVG on_II any_DD span_NN1 of_IO conductor_NN1  
along_II the_AT circuit_NN1 ._. 
```

*Figure 2*⁹

⁹ Figure 2 and 3 are modified versions of a sentence found in CenterPoint Energy (2002, p. 6).

Dangling Participles in Technical Brochures and Manuals

```
0000001 002 -----
0000003 010 You 93 PPY
0000003 020 can 93 [VM/100] VV0%/0
NN1%/0
0000003 030 trace 97 VVI
0000003 040 the 93 AT
0000003 050 named 93 [JJ@/100] VVN/0 VVD/0
0000003 060 circuits 03 NN2
0000003 070 by 93 [II/100] RP%/0
0000003 080 entering 03 VVG
0000003 090 the 93 AT
0000003 100 assigned 93 [JJ%/98] VVN/2 VVD@/0
0000003 110 circuit 93 NN1
0000003 120 name 93 [NN1/99] VV0@/1
0000003 130 or 93 CC
0000003 140 by 93 [II/100] RP%/0
0000003 150 clicking 93 [VVG/97] NN1@/2 JJ@/1
0000003 160 on 93 [II/80] RP@/20
0000003 170 any 93 [DD/100] RR%/0
0000003 180 span 93 [NN1/99] VV0/1 VVD@/0
0000003 190 of 93 IO
0000003 200 conductor 03 NN1
0000003 210 along 93 [II/95] RP/5
0000003 220 the 93 AT
0000003 230 circuit 93 NN1
0000003 231 . 03 .
```

Figure 3

Another way to list the results is the vertical output style (see *Figure 3*). This output style was, however, discarded in favour of the horizontal output style.

When the POS-tagging of the dangling participles was completed, the sentences were analysed (see also *Chapter 5*).

5. Dangling Participles – an Empirical Analysis of Grammaticality and Acceptability

The sentence structure combinations mentioned in section 2.1.2 have been deemed most likely to contain dangling participles by this thesis¹⁰. This chapter will analyse the dangling participles found in the empirical material (50 technical brochures and/or manuals on energy and energy saving) in order to assess the grammaticality and acceptability of the dangling participles. Not each instance of a dangling participle will be discussed, but rather examples that differ from each other. Furthermore, this chapter will discuss which impact the dangling participles have on the various brochures and/or manuals in which they occur.

5.1 Dangling Participles Containing the -ing Participle

EX13: Named circuits can be traced by entering the assigned circuit name or by clicking on any span of IO conductor along the circuit.

Named_JJ circuits_NN2 can_VM be_VBI traced_VVN **by_II**
entering_VVG **the_AT** **assigned_JJ** circuit_NN1 **name_NN1** or_CC
by_II **clicking_VVG** **on_II** **any_DD** span_NN1 of_IO **conductor_NN1**
along_II the_AT circuit_NN1 ._.

The first example (EX13) from the 50 technical brochures (CenterPoint Energy, 2002, p. 6) contains two DP1s (cf. section 2.1.2) as the subordinate clause contains the following combinations:

II + VVG + AT + JJ + NN(1)

II + VVG + II + DD + NN(1)

In this example, the subordinate clause is suffixed and contains two -ing participles. The main clause is written in the passive voice in order to leave out the agent, and, therefore, the dangling participles arise as there is no agent to do the ‘entering’ and the ‘clicking’ in the sentence.

¹⁰ Note that infinitive dangling participles are not within the scope of this thesis.

The second measuring point, comprehensibility (cf. section 2.1), is observed in EX13. No one doubts that it is a human being who is supposed to do the ‘entering’ and the ‘clicking’ in EX13. According to LePan (2000, p. 15), however, it does not make any difference that the main clause is in the passive voice and that it thus is implied that the one doing the ‘tracing’ in the main clause is also the one doing the ‘entering’ and the ‘clicking’ in the subordinate clause. He argues that the sentence still contains a dangling participle. Based on LePan’s findings, one can conclude that EX13 is grammatically incorrect and is, therefore, not an acceptable construction from a normative language perspective. A better and more correct version would be:

EX14: You can trace the named circuits by entering the assigned circuit name or by clicking on any span of conductor along the circuit.

You_PPY can_VM trace_VVI the_AT named_JJ circuits_NN2 by_II entering_VVG the_AT assigned_JJ circuit_NN1 name_NN1 or_CC by_II clicking_VVG on_II any_DD span_NN1 of_IO conductor_NN1 along_II the_AT circuit_NN1 ._.

In EX14, the main clause is no longer in the passive voice but instead in the active voice as ‘you’ has been inserted as the subject. Another acceptable version could be:

EX15: Named circuits can be traced if you enter the assigned circuit name or if you click on any span of conductor along the circuit.

Named_JJ circuits_NN2 can_VM be_VBI traced_VVN if_CS you_PPY enter_VV0 the_AT assigned_JJ circuit_NN1 name_NN1 or_CC if_CS you_PPY click_VV0 on_II any_DD span_NN1 of_IO conductor_NN1 along_II the_AT circuit_NN1 ._.

The one feature EX14 and EX15 have in common is the presence of an agent. The ‘entering’ and ‘clicking’ is performed by ‘you’ in both sentences. In EX13, which was the authentic example, the agent in second person was left out due to the style of the entire brochure. This assumption is based on a scan of the entire original text for the word ‘you’. The word ‘you’ was only present on the back page, which contained information on which offices the consumer could contact. This second

person agent could be avoided by the use of nouns instead of the VVGs, which can be seen in the following phrasing:

EX16: Named circuits can be traced by entry of the assigned circuit name or by a click on any span conductor along the circuit.

Named_JJ circuits_NN2 can_VM be_VBI traced_VVN **by_II entry_NN1 of_IO the_AT assigned_JJ circuit_NN1 name_NN1 or_CC by_II a_AT1 click_NN1 on_II any_DD span_NN1 conductor_NN1** along_II the_AT circuit_NN1 ._.

The word class combinations would then be:

II + NN(1) + IO + AT + JJ + NN(1)

II + AT1 + NN(1) + II + DD + NN(1)

Below the context in which EX13 occurs can be seen:

EX17: Electric Network Tracing tools allow tracing functionality customized for CenterPoint Energy's specific needs. **Named circuits can be traced by entering the assigned circuit name or by clicking on any span of conductor along the circuit.** Feeder sections can be traced by entering the section name. URD loops can be traced and zoomed to by entering the fuse identifier for the fuse feeding the loop or by entering the identifier for one of the transformers on the loop. Trace results identify OPEN URD transformer elbows and OPEN/CLOSED statuses of fuses and switches. These tools and the information they provide enable dispatchers to direct field activities, and they provide a method of checking for proper connectivity.

This section from *GIS: Technology for Your Enterprise* (CenterPoint Energy, 2002, p. 6) is a good example of the assumption that dangling participles seldom occurs alone. In this section alone, there are five dangling participles, all of which are –ing participles (all the –ing participles are underlined in EX17). All five dangling participles are characterised by their reference to a general ‘you’, and that does come across in the text. No one doubts that the ‘doer’ is not meant to be a specific person, but rather a specific kind of person, namely the user of the product. Thus, EX13 would be understood by the vast majority of English speakers, and, therefore, the comprehensibility criterion is observed. Moreover, the third criterion concerning ambiguity, or rather the lack thereof, is complied with. As there is no agent explicitly mentioned in the sentence, one may rightfully assume that it is the same person performing all the ‘actions’ mentioned in the sentence. However, if there had been two or more living beings (not necessarily *human* beings)¹¹ mentioned in EX13, the sentence could have been ambiguous (cf. EX9 in section 3.3.2).

EX13 does not violate any other grammatical rules and/or language conventions than the one concerning dangling participles.

Based on these findings, this thesis argues that although the sentence is grammatically incorrect, the sentence may be acceptable if spoken or if in an informal context. The dangling participle does not create ambiguity, and some people would probably not even opt for a recast sentence. But it should be noted, however, that a recast sentence without any dangling participles would be the better choice in order to avoid grammatical incorrectness and as there is a certain level of formality in the brochure, and as this kind of dangling participle is regarded as being incorrect by Borg (2003, pp. 300-301), LePan (2000, p. 15ff.), Pringle (n.d., pp. 1-4), and Swan (1995, p. 406).

In the next authentic example (EX18) from the 50 technical brochures (Wuppertal Institute for Climate, Environment and Energy, 2008, p. 14), the dangling participle is prefixed and contains an –ing participle (considering).

EX18: However, when considering developing countries such information needs
 to take the differences into account.

¹¹ It should be noted that actions not always are performed by living beings. A machine may also be able to perform an action, however, it is implied that it is a person who is performing the actions in EX13.

However_RR ,_, when_CS considering_VVG developing_JJ
countries_NN2 such_DA information_NN1 needs_VVZ to_TO take_VVI
the_AT differences_NN2 into_II account_NN1 ._.

The second example (EX18) from the 50 technical brochures contains a DP1 (cf. section 2.1.2) as the subordinate clause contains the following combination:

CS + VVG + JJ + NN(2)

According to examples given by LePan (2000, p. 16), ‘considering’ is a dangling participle in EX18. In comparison to EX17, LePan gives the following example of a dangling participle from his book *The Broadview Book of Common Errors in English – A Guide to Righting Wrongs*:

EX19: Considering all the above-mentioned studies, the evidence shows conclusively that smoking can cause cancer.

LePan’s example is very similar to EX18 as both sentences presupposes that the ‘considering’ is done by a general ‘we’ or ‘they’. LePan’s suggestion (2000, p. 16) for a better version of EX17 is:

EX20: Considering all the above-mentioned studies, we conclude that smoking causes cancer.

or a better version

EX21: These studies show conclusively that smoking can cause cancer.

In EX21, which LePan believes is the better one of EX20 and EX21, LePan has avoided the dangling participle by leaving the –ing participle out of the sentence. The thesis argues, however, that this may be a dangerous development of the language. By eliminating the –ing participle from the sentence altogether, LePan restricts the English language by suggesting that writers should avoid –ing participles in subjectless subordinate clauses.

If this thesis should follow LePan’s EX21, EX18 should be recast into the following:

EX22: However, when considering developing countries, we need to take the differences into account.

Moreover, EX18 does not cause any ambiguity as it is obvious that the expression refers to the speaker's attitude, and the sentence does not violate any other text or grammar conventions than the one concerning dangling participle.

This type of dangling participle, the one referring to the speaker's attitude, is probably the most acceptable one according to theorists. According to Swan (1995, p. 406) and Borg (2003, p. 301), dangling participles are quite normal in expressions that refer to the speaker's attitude. These differences in attitude to EX18 may reflect that the English language is developing towards acceptance of dangling participles, or at least some of them. What was unacceptable previously in English grammar may have become a natural part of the English language. Furthermore, the word 'considering' is a very interesting example as when the word is looked up in Longman's Dictionary of English Language and Culture (considering, 1998, p. 273) or Gyldendals Røde Engelsk-Dansk Ordbog (an English-Danish dictionary) (considering, 2003, p. 182), the books state that 'considering' may be a preposition. If the word is a preposition, the word is no longer a participle, and can, therefore, not be dangling. This is partly substantiated by UCREL (n.d. (a)). When the word 'considering' is tagged with the UCREL CLAWS7 Tagset, the word is tagged in various ways depending on its placement in the sentence. The tagging of EX18 states that the word 'considering' in that specific sentence is a VVG (a verb). But if "However, when" had been omitted, the tagging would have been as follows:

EX23: Considering developing countries such information needs to take the differences into account.

Considering_CS developing_JJ countries_NN2 such_DA information_NN1
needs_VVZ to_TO take_VVI the_AT differences_NN2 into_II
account_NN1 ._.

Thus, if we were to look upon the UCREL CLAWS7 Tagset as being 100 per cent accurate, then the status of the word 'considering' changes depending on its placement; it changes from being a VVG to being a CS. It is not unusual for a word to have different status depending on how it is

used, but in this case only the subordinating conjunction was removed (the word ‘however’ did not have an influence of the word’s status in the sentence). Therefore, there might be some truth in Pringle’s argument about ‘using’ becoming a preposition (see section 5.1.1).

Nevertheless, ‘considering’ is by most theorists regarded as being a participle and thus a verb (see also the discussion of the participle ‘using’ in section 5.1.1).

EX18 was taken from *Water for Energy and Energy for Water* (Wuppertal Institute for Climate, Environment and Energy, 2008, p. 14). The context in which the sentence with the dangling participle appeared can be seen below:

EX24: There is, therefore, an acute need for additional detailed and quality information to be available to the public, the media and in the financial sector. Short, transparent and customised pieces of information, as well as examples of successfully implemented technologies, are essential but often lacking. This holds true for the technology portfolio in both industrialized and developing countries.

However, when considering developing countries, such information needs to take the differences into account. Sophisticated technologies with high standards of delivery, as used in the developed world, do not necessarily satisfy the needs of countries with low-electrification and off-grid regions. In addition, the demand for energy services is often quite different in developing countries.

The brochure in which the dangling participle is occurring is a brochure on how resource efficiency has an impact on the climate and environment. The brochure is informative as it explains why water and energy are important and how the two resources are dependent on each other. The brochure is formal, but the word ‘we’ does occur in the brochure twice (p. 2 and p. 14). Therefore, the recast sentence displayed in EX22 could be an option for the writer of the brochure.

But ‘considering’ is one of those participles which are highly debatable. As previously mentioned, is not only one of those participles which may refer to the speaker’s/writer’s attitude to the entire sentence, evidence also suggests that ‘considering’ may be looked upon as a being a preposition. And, as mentioned, a preposition cannot dangle. Moreover, no other grammatical rule and/or text convention is violated in EX18. Based on these findings, this thesis argues that this so-called ‘dangling participle’ has no or no significant impact on this brochure as the reader in this

case probably would not even notice the dangling participle, as most people find this kind of dangling participle acceptable. The goal of this brochure, i.e. to inform, will, therefore, not be affected.

The next authentic example, which is taken from the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (2008, June, p. 55), contains a prefixed DP1.

EX25: When calculating the primary energy equivalent for electricity generated from hydropower, wind energy and photovoltaics, in agreement with Eurostat, primary energy is equated with the generation of electricity according to the physical energy content method.

When_CS calculating_VVG the_AT primary_JJ energy_NN1 equivalent_NN1 for_IF electricity_NN1 generated_VVN from_II hydropower_NN1 ,_, wind_NN1 energy_NN1 and_CC photovoltaics_NN2 ,_, in_II agreement_NN1 with_IW Eurostat_NP1 ,_, primary_JJ energy_NN1 is_VBZ equated_VVN with_IW the_AT generation_NN1 of_IO electricity_NN1 according_II21 to_II22 the_AT physical_JJ energy_NN1 content_NN1 method_NN1 ._.

This example (EX25) resembles other sentences from the same text which also contain dangling participles. Examples of these sentences are seen below:

EX26: In contrast to electricity generation, when calculating the saving of fossil fuels through heat generation from renewable, the upstream energy supply processes are also taken into account. (p. 53)

In_II contrast_NN1 to_II electricity_NN1 generation_NN1 ,_, when_CS calculating_VVG the_AT saving_NN1 of_IO fossil_NN1 fuels_NN2 through_II heat_NN1 generation_NN1 from_II renewables_NN2 ,_,

the_AT upstream_JJ energy_NN1 supply_NN1 processes_NN2 are_VBR
also_RR taken_VVN into_II account_NN1 ._.

EX27: When calculating the saving of fossil fuels through biofuels, the upstream energy supply processes are likewise taken into account. (p. 54)

When_CS calculating_VVG the_AT saving_NN1 of_IO fossil_NN1
fuels_NN2 through_II biofuels_NN2 ,_, the_AT upstream_JJ energy_NN1
supply_NN1 processes_NN2 are_VBR likewise_RR taken_VVN into_II
account_NN1 ._.

As EX25, EX26, EX27 are so similar to each other, they will be dealt with simultaneously in this thesis. All three examples contain a DP1 as seen below¹²:

DP in EX25: **CS + VVG + AT + JJ + NN(1) + NN(1) + IF + NN(1)**
 + VVN + II + NN(1)

DP in EX26: **CS + VVG + AT + NN(1) + IO + NN(1) + NN(2) + II**
 + NN(1) + NN(1) + II + NN(2)

DP in EX27: **CS + VVG + AT + NN(1) + IO + NN(1) + NN(2) + II**
 + NN(2)

Often, dangling participles are likely to occur more than once in a text, as writers who are oblivious of the grammar rule concerning dangling participles are likely to make more than one in a technical text, as brevity is a common feature in technical language. Therefore, it will not be uncommon that some of the 50 technical brochures and manuals contain no dangling participles at all and others will be filled with them. The occurrence of dangling participles in the brochures and manuals will thus depend on whether the writer of the text was aware of the grammatical rule concerning dangling participles when he or she wrote the text.

¹² Note that the highlighted constituents in the three examples are the highlighted constituents mentioned in DP1 in section 2.1.2.

Each example (EX25, EX26 and EX27) are understandable, however complex in structure, but this is not an untypical feature of technical language. The dangling participle is the word ‘calculating’ in each example. This type of dangling participle is also very common as it refers to a common ‘we’ or ‘they’. ‘When calculating’ does not refer to a certain person doing the task, but merely suggests that certain things have to be taken into account when calculation of a specific object is carried out, regardless of who is doing it. By the look of LePan’s examples in his book *The Broadview Book of Common Errors in English – A Guide to Righting Wrongs* (2000, p. 16), one can conclude that LePan also regards subordinate clauses referring to the speaker’s attitude or a general ‘we’ or ‘they’ as being incorrect, when the participle in the subordinate clause does not modify the correct subject (see also EX19-EX21 in this chapter). Further evidence suggests that this type of dangling participle is unacceptable; the subordinate clause does *not* refer to the speaker’s attitude to the entire sentence, but does instead refer to a general ‘we’ or ‘they’. And this type of dangling participle is not specifically mentioned as an exception to the grammatical rule about dangling participles by Borg (2003), LePan (2000), Pringle (n.d.) or Swan (1995).

All three authentic examples were taken from the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (2008, June). The dangling participle in EX25 was found in the first sentence in the paragraph below, and the brochure contains a lot of technical terminology which can be seen by the surrounding text in EX28 below. This makes it obvious that the brochure is meant for experts within this field.

Furthermore, the dangling participle in the subordinate clause is placed so far from the subject in the main clause that the reader probably would *not* connect the two words to each other. In this case, it is probably an advantage as the two words do not belong together. But if the participle had not been dangling, it would have been a disadvantage as the reader would miss the connection between the participle and the subject.

EX28: **When calculating the primary energy equivalent for electricity generated from hydropower, wind energy and photovoltaics, in agreement with Eurostat, *primary energy* is equated with the generation of electricity according to the physical energy content method.** Biomass and biofuels for electricity and heat generation are evaluated in accordance with their calorific value (in conformity with Eurostat, but deviating from the methodology used in this brochure for

Germany, cf. Appendix, para. 4). For geothermal electricity generation, an efficiency factor of 10 % is assumed, i.e. 1 GWh of electricity from geothermal energy is valued at 36 TJ primary energy. For heat generation from geothermal and solar thermal energy, final energy and primary energy are considered equal here. In both case the physical energy content method is applied [...].

The participle is underlined, and the subject in the main clause is in italics.¹³

Based on these findings, this thesis concludes that dangling participles referring to a general ‘we’ or ‘they’ are grammatically incorrect and unacceptable in formal settings.

5.1.1 Using – a Special Case?

Pringle (n.d., p. 2) argues that some verbs are becoming prepositions (cf. 3.3.2). One of the examples she gives in her article is:

EX29: Using a new sample preparation method involving freeze-drying, individual ash particles with diameters as small as 0.1 µm can be analyzed automatically in the ADEM.

She argues that whenever the word ‘using’ is used, it can be replaced with the word ‘with’. “I had replaced the participle with a preposition, and it worked just fine. I began to routinely replace *using* with *with* whenever I needed to. I also began to notice many examples where *using* performed the same function as *with*, and my writers seemed to perceive it as almost synonymous”. (Pringle, n.d., p. 2). She also argues that some participles have already become prepositions, for example ‘concerning’ and ‘regarding’. But is ‘using’ heading in the same direction?

The following examples are taken from the empirical material (Wuppertal Institute for Climate, Environment and Energy, 2008, p. 3 and eco hometech, 2002, August 4, p. 34), and both contain the participle ‘using’. ‘Using’ will now be replaced with the preposition ‘with’ in both examples and the outcome will be analysed.

¹³ The author of this thesis has underlined the participle, highlighted the entire sentence in question, and written the subject of the main clause in italics.

The first example:

EX30: Using a key number of internationally accepted criteria, the main consideration for the selection of the projects was energy and resource efficiency. (Water for energy, energy for water)

Using_VVG a_AT1 key_JJ number_NN1 of_IO internationally_RR
accepted_JJ criteria_NN2 ,_, the_AT main_JJ consideration_NN1 for_IF
the_AT selection_NN1 of_IO the_AT projects_NN2 was_VBDZ
energy_NN1 and_CC resource_VV0 efficiency_NN1 ._.

becomes

EX31: With a key number of internationally accepted criteria, the main consideration for the selection of the projects was energy and resource efficiency.

In EX30, the dangling participle is a DP3 and the subordinate clause contains the following word class combination:

VVG + AT(1) + JJ + NN(1) + IO + RR + JJ + NN(2)

Pringle's argument (n.d., pp. 1-4) is that the participle 'using' is becoming or has become a preposition as it in most cases can be replaced with the preposition 'with'. 'Using' in EX30 may very well be replaced with 'with' without making people confused about what is being said. Despite this, Pringle herself argues that some of the semantics of the participle 'using' is lost if it is replaced with the preposition 'with'. But if the word 'with' is looked up in Longman's Dictionary of English Language and Culture (with, 1998, p. 1533), it says that the word, inter alia, may mean "by means of" or "using". Therefore, the semantics of the word 'using' cannot be lost entirely, if at all. But what would then be the better choice?

- To replace the participle 'using' consistently with the preposition 'with'?
- To keep 'using' and thereby to keep the dangling participle?

- To recast the entire sentence – and thereby either do away with a verb in the subordinate clause or insert an agent in the main clause? In this case e.g.:

EX32: With the use of a key number of internationally accepted criteria, the main consideration for the selection of the projects was energy and resource efficiency.

This thesis argues that the various options pose each their problem(s). The first choice limits the English language as ‘using’ always will be discarded as an option.

The second choice poses the problem that a dangling participle is kept intentionally, and thus a grammatical rule is ignored. This could lead to ambiguity in the sentence and/or people who are aware of the grammar rule could look upon the text as being unprofessional and ludicrous. Perhaps not the best starting point if the writer wants to catch the reader’s attention.

The third choice does in some way also limit the English language. The writer either has to do away with the verb in the subordinate clause or insert an agent in the main clause. But perhaps the third choice is the only choice which does not either violate a grammatical rule or limit the writer to use only one specific word, namely the word ‘with’ and not the word ‘using’. The context of EX30 is seen below.

EX33: WISIONS presents good practice projects dealing with water and energy in Guatemala, Peru, Tunisia, the Philippines and Tanzania that have been successfully implemented, with the intention of further promoting the particular approaches used by these projects. **Using a key number of internationally accepted criteria, the main consideration for the selection of the projects was energy and resource efficiency.** The assessment of the projects also included the consideration of regional factors acknowledging different needs and potentials.

The brochure is written in an impersonal style, and, therefore, pronouns are limited in number in this brochure. Thus, if EX30 were to be recast, insertion of an agent could interfere with the overall style of the brochure. Such matters, as e.g. style, also have to be taken into account when a text is being proofread. Grammatically correctness is not always enough. Therefore, a recast sentence where ‘using’ is replaced with the preposition ‘with’ would be the better choice in this case, in order

for the grammaticality of the sentence not to have an impact on how the reader perceives this specific brochure.

The same is also true for the second example containing a ‘using’ participle (eco hometech, 2002, August 4, p. 34). In this example the subordinate clause has the following word class combination (DP3):

VVG + NN(1) + **NN(1)** + IO + AT + NN(1)

The second example:

EX34: Using speed regulation of the pump, it is attempted to maintain a transfer temperature at the collector sensor TKO.

Using_VVG speed_NN1 regulation_NN1 of_IO the_AT pump_NN1 ,_,
it_PPH1 is_VBZ attempted_VVN to_TO maintain_VVI a_AT1
transfer_NN1 temperature_NN1 at_II the_AT collector_NN1 sensor_NN1
TKO_NN1 ._.

becomes

EX35: With speed regulation of the pump, it is attempted to maintain a transfer temperature at the collector sensor TKO.

The substitute ‘with’ does not create confusion or ambiguity in EX35 either, and perhaps this solution is better than keeping the sentence as it was in EX34 as that solution is grammatically incorrect (or is at least perceived as being grammatically incorrect by some theorists). The context of EX34 is seen below.

EX36: The solar pump is switched on when the difference in temperature at the collector sensor **TKO** and the hot water sensor **TBU** is larger than the given set point **dTE**. The solar pump is switched off when the difference in temperature at the collector sensor **TKO** and the hot water sensor **TBU** is smaller than the given set point **dTA**. Using speed regulation of the

pump, it is attempted to maintain a transfer temperature at the collector sensor TKO. The set point *xs* is given by the following formula:
 $xs \text{ TKO-DHS-Tank} = \text{TBU} + 1/2 \times (\text{dTE} + \text{dT A})$

As seen in this paragraph, the style of the installation manual is very impersonal and the content of the manual is very technical. The technical equations seen above suggest that accuracy is very important in this brochure. Furthermore, any ambiguity could interfere with how the manual is getting its point(s) across. No other grammatical rule and/or text convention is violated in either EX30 or EX34. But, as previously stated, accuracy is imperative in highly technical texts, and EX35 could, therefore, be a suitable substitute for the original sentence.

5.1.2 – ing Participles with a Preparatory ‘It’ or ‘There’ in the Main Clause

The next type of dangling participle is the one which occurs in a sentence with a preparatory *it* as the subject in the main clause. The sentence is taken from eco hometech (2002, August 4, p. 5):

EX37: When working on the final system it is the Users/Installers responsibility to ensure that any necessary personal protective clothing or equipment is worn appropriate to parts that could be considered as being hazardous to Health and Safety.

When_CS working_VVG on_II the_AT final_JJ system_NN1 it_PPH1
is_VBZ the_AT Users/Installers_NN2 responsibility_NN1 to_TO
ensure_VVI that_CST any_DD necessary_JJ personal_JJ protective_JJ
clothing_NN1 or_CC equipment_NN1 is_VBZ worn_VVN appropriate_JJ
to_II parts_NN2 that_CST could_VM be_VBI considered_VVN as_CSA
being_VBG hazardous_JJ to_II Health_NN1 and_CC Safety_NN1 ._.

EX37 contains a prefixed DP1 with the following word class combination:

CS + VVG + II + AT + JJ + NN(1) + PPH1 + VBZ

This piece of text is taken from an eco hometech manual (eco hometech, 2002, August 4, p. 5), and the context of the sentence is seen below. Actually, the piece of text below contains two different

sentences with dangling participles. This also substantiates the assumption that writers are likely to make the same mistake more than once in a text. On the other hand, some might argue that the participle in the last sentence is not dangling as the main clause starts with a preparatory ‘it’ (the sentence with the dangling –ed participles is discussed further on in this thesis):

EX38: **eco hometec takes every reasonable care to ensure that these products are designed and constructed to meet these general safety requirements, when properly used and installed.** To fulfil this requirement each panel is comprehensively tested before despatch.
When working on the final system it is the Users/Installers responsibility to ensure that any necessary personal protective clothing or equipment is worn appropriate to parts that could be considered as being hazardous to Health and Safety.

According to Swan (1995, p. 406), “[...] sentences with ‘misrelated participles’ are common and often seem quite natural, particularly when the main clause has preparatory *it* or *there* as a subject.” Sentences containing a preliminary ‘it’ or ‘there’ are interesting examples. Because if we look at Swan’s above-mentioned quote, we may deduce that he believes that participles are misrelated if the main clause has a preparatory ‘it’ or ‘there’, although the sentences may be considered acceptable. This is, however, not the case. Writers have to look at the *real* subject in the main clause in order to determine whether the participle is dangling or not. In this example, the participle is dangling as the subject is ‘the Users/Installers responsibility’ and not just ‘the Users/Installers’, and *responsibility* cannot *work*. Furthermore, the sentence does violate another text and/or grammar convention than the one concerning dangling participles, and this is the rule about the possessive ’s . Based on these findings, this thesis concludes that EX37 is grammatically incorrect and unacceptable and thus have to be recast. Therefore, a better and more correct version would be:

EX39: When working on the final system, the Users/Installers are responsible for ensuring that any necessary personal protective clothing or equipment is worn appropriate to parts that could be considered as being hazardous to Health and Safety.

The same reasoning may also be true for the next example (EX40), in which the subject in the main clause is a preparatory *there*. This example is taken from Sedgemoor Solar (n.d., p. 10):

EX40: Having said this though, there are many companies who use poor quality raw material and make short cuts on engineering requirements.

Having_VHG said_VVN this_DD1 though_CS ,_, there_EX are_VBR many_DA2 companies_NN2 who_PNQS use_VV0 poor_JJ quality_NN1 raw_JJ material_NN1 and_CC make_VV0 short_JJ cuts_NN2 on_II engineering_NN1 requirements_NN2 ._.

In EX40, there are two specific features in play. Firstly, as mentioned before, the preparatory subject in the main clause is a preparatory *there*. Secondly, the prefixed subordinate clause which contains the dangling participle is expressing the writer's attitude.

In EX40, the *real* subject is 'many companies'. Had the subordinate clause, therefore, not been referring to the speaker's attitude, the participle in the subordinate clause would have been dangling. It is, however, important to note that this finding has nothing to do with the fact that the main clause contains a preparatory *there*. A sentence with a preparatory *there* in the main clause could just as easily contain a dangling participle in the subordinate clause:

EX41: When installed, there are many provisions which must be taken.

In this example, the participle is dangling although the main clause contains a preparatory *there*.

EX40 is fully comprehensible and due to the fact that the subordinate clause refers to the speaker's attitude, the dangling participle in EX40 is fully acceptable.

5.2 Dangling Participles Containing the -ed Participle

The -ed participle, although the participle does not always end with -ed, may also be a dangling participle. The first example of this type of dangling participle from the 50 technical brochures is seen in EX42 (Sedgemoor Solar, n.d., p. 14). This participle is an irregular verb, and the sentence was found when the 50 brochures were searched for the irregular verbs found in *Appendix B*.

EX42: Once a hot enough temperature is reached the ball will have totally melted and there will be no sound if shaken.

Once_RR a_AT1 hot_JJ enough_DD temperature_NN1 is_VBZ
reached_VVN the_AT ball_NN1 will_VM have_VHI totally_RR
melted_VVN and_CC there_EX will_VM be_VBI no_AT sound_NN1
if_CS shaken_VVN ._.

EX42 contains the following word classes in the subordinate clause (DP2):

CS + VVN

The dangling participle in EX42 would probably not have been noticed by the vast majority of people. But if the definition of a dangling participle by Kirkman (1992, p...) is followed, this sentence should be regarded as a dangling participle (see also section 3.3.2). The definition says that “a dangling participle occurs when a participle does not relate to the noun or pronoun that precedes it [...]”. In EX42 the noun or pronoun preceding the participle is the noun “sound”. As a sound cannot be shaken, the participle must be dangling according to Kirkman. The definition used in this thesis is, however, not entirely the same as the one in Kirkman’s book. The definition of dangling participle in this thesis is that a dangling participle occurs when the participle does not relate to the subject of the main clause. Nevertheless, the participle in EX42 may still be regarded as a dangling participle as there are two main clauses in EX42. The two coordinated sentences are “the ball will have totally melted” and “there will be no sound”. None of the grammar books referred to in this thesis discusses which main clause the participle modifies if there are two of them. However, the proximity rule must be taken into account here, and the logical conclusion would, therefore, be that the participle modifies the subject of the main clause which is placed right in front of the subordinate clause. The paragraph in which EX42 was found is seen below:

EX43: As the evacuated tube provides heat along the full length of the heat pipe, rapid “melting” of the ball and subsequent heat transfer will occur at temperatures as low as 30deg C. As you expose the heat pipe to hotter and hotter temperatures, the ball will continue to melt and contribute to the

heat transfer process. **Once a hot enough temperature is reached the ball will have totally melted and there will be no sound if shaken.**

The manual is written to non-professionals, and the pronoun ‘you’ occurs several places in the manual which may also be seen in the paragraph above. This does not, however, necessarily have an impact on how the sentence could be recast. Because an insertion of a pronoun would not suffice in this case:

EX44: *Once a hot enough temperature is reached the ball will have totally melted and there will be no sound if you shaken.¹⁴

Nevertheless, the dangling participle could easily have been avoided in this example. The sentence could have been recast into the following:

EX45: Once a hot enough temperature is reached the ball will have totally melted, and there will be no sound if the ball is shaken.

Once_RR a_AT1 hot_JJ enough_DD temperature_NN1 is_VBZ
reached_VVN the_AT ball_NN1 will_VM have_VHI totally_RR
melted_VVN and_CC there_EX will_VM be_VBI no_AT sound_NN1
if_CS the_AT ball_NN1 is_VBZ shaken_VVN ._.

By addition of a subject (the ball) and the auxiliary verb ‘be’ in the subordinate clause, the participle is no longer dangling. EX42 does not violate any other grammatical rules and/or text conventions, although some commas in the sentence could have been desirable. Nevertheless, this thesis argues that this type of dangling participle should be avoided. The participle is too far away from the *intended* subject, and the connection is thus lost, as the *intended* subject and the participle are divided by another main clause. This thesis, therefore, argues that the dangling participle in EX42 is unacceptable.

¹⁴ An asterisk (*) in front of a sentence means that the sentence is not correct, because of either non-compliance with the norms for English sentence structure or non-compliance with the English grammatical rules.

EX46 (eco hometech, 2002, August 4, p. 5) contains two suffixed DP2s. EX46 is a classic example of a dangling participle. Often writers fill in so much information in one single sentence that the subject and the verb(s) are placed too far from each other. In this example, ‘used’ and ‘installed’ were meant to modify ‘products’:

EX46: eco hometec takes every reasonable care to ensure that these products are designed and constructed to meet these general safety requirements, when properly used and installed.

eco_NN1 hometec_NN1 takes_VVZ every_AT1 reasonable_JJ care_NN1
to_TO ensure_VVI that_CST these_DD2 products_NN2 are_VBR
designed_VVN and_CC constructed_VVN to_TO meet_VVI these_DD2
general_JJ safety_NN1 requirements_NN2 ,_, when_CS properly_RR
used_VVN and_CC installed_VVN ._.

The subordinate clause contains the following word classes:

CS + RR + VVN + CC + VNN

But the participles do not modify the intended word no matter which definition of a dangling participle you may follow. If Kirkman’s definition of a dangling participle (Kirkman, 1992, p. 75) is followed, the participles modify the noun or pronoun that precedes them (see also 3.1.1). Therefore, ‘used’ and ‘installed’ actually modify ‘requirements’ in this sentence. Perhaps it is possible to *use* a requirement, but it is certainly not possible to *install* a requirement. If Swan’s (1995, p. 406) or Bache & Davidsen-Nielsen’s definition in followed, the participles modify the subject of the main clause which in this case is ‘eco hometech’, and it is rather unlikely that the reader is supposed to *use* and *install* a business. This might lead some to reach the conclusion that the two verbs were supposed to modify another word in the sentence, but others may not make this connection. This kind of dangling participle should be avoided as people may be puzzled about what is being said, even though this is the only grammatical error in the sentence. A mere rotation of the words and an insertion of the word ‘they’ could avoid this problem:

EX47: eco hometec takes every reasonable care to ensure that these products, when they are properly used and installed, are designed to meet these general safety requirements.

eco_NN1 hometec_NN1 takes_VVZ every_AT1 reasonable_JJ care_NN1 to_TO ensure_VVI that_CST these_DD2 products_NN2 ,_, when_CS they_PPHS2 are_VBR properly_RR used_VVN and_CC installed_VVN ,_, are_VBR designed_VVN and_CC constructed_VVN to_TO meet_VVI these_DD2 general_JJ safety_NN1 requirements_NN2 ._.

By placing the verbs in an interposed sentence, the writer may avoid any kind of ambiguity in this sentence as the participles now only can refer to ‘these products’ as ‘they’ cannot logically refer to eco hometech, as eco hometech is singular (this can be seen by the verb *takes*); the participles do, therefore, no longer modify the subject of the main clause, but rather the noun or pronoun right in front of the interposed sentence.¹⁵ The context of EX45 is seen below:

EX48: **eco hometec takes every reasonable care to ensure that these products are designed and constructed to meet these general safety requirements, when properly used and installed.** To fulfil this requirement each panel is comprehensively tested before despatch.

When working on the final system it is the Users/Installers responsibility to ensure that any necessary personal protective clothing or equipment is worn appropriate to parts that could be considered as being hazardous to Health and Safety.¹⁶

There is, however, another possible way of recasting the sentence. The personal pronoun ‘you’ is used 17 times in the manual. Therefore, a recast sentence containing the personal pronoun ‘you’ would not interfere with the overall style of the manual. But because of the structure of this specific sentence, a ‘you’ cannot be inserted without making other alterations in the sentence, as seen below:

¹⁵ It should be noted that post-modifying clauses in noun phrases do not have to be recast as such uses of participles are not grammatically incorrect. An example: I want the book **lying** on the table.

¹⁶ In truth, this text does not appear to be written by language experts. Several other mistakes, such as spelling mistakes, are present in this small piece of text.

EX49: eco hometec takes every reasonable care to ensure that these products are designed to meet these general safety requirements, when you use and install the products properly.

But in order to avoid demeaning the reader by suggesting that the reader not necessarily use or install the products properly, focus should be removed from the agent and placed on the products instead. Therefore, a passive subordinate clause with ‘the products’ as the subject would perhaps be a better choice:

EX50: eco hometec takes every reasonable care to ensure that these products are designed to meet these general safety requirements, when the products are used and installed properly.

No other text conventions and/or grammatical rules are violated in the sentence.

5.3 Dangling Participles – Often a Matter of Context

The next authentic example may be a dangling participle, it does, however, depend on the context in which it is written. In EX51, which is taken from CenterPoint Energy (2002, p. 6), it says “When finished, the user can confirm [...]”. This structure does not in itself cause a dangling participle. It may very well be the case that it is the user who has to be finished with something, before he or she can confirm that the new transformers are connected to the network. But if something or somebody else has to be finished, for example a machine, then a dangling participle is present in the sentence, as ‘finished’ now is modifying the wrong agent. ‘Using’ in “by using” is not a dangling participle in this sentence as using modifies ‘the user’.

EX51: When finished, the user can confirm that the new transformers are connected to the network by using the trace tool [...].

When_CS finished_VVN ,_, the_AT user_NN1 can_VM confirm_VVI
that_CST the_AT new_JJ transformers_NN2 are_VBR connected_VVN
to_II the_AT network_NN1 **by_II using_VVG** the_AT trace_NN1
tool_NN1 [...] ._.

Therefore, in order to establish whether EX51 contains a dangling participle or not, we have to look at the context. The following sentence preceded EX51 in the brochure, “Third, the user selects the transformers to be connected and then decides on a search distance, whether to rotate the transformer symbols to align parallel to the connected URD primary, and whether the transformer will move from a fixed distance from the conductor line.” In this sentence, it is stated that the user also is the agent, and, therefore, we can conclude that it is ‘the user’ who has to be finished before he or she can confirm that the new transformers are connected to the network. Thus, EX51 does not contain a dangling participle. But it was only possible to establish this after we had looked at the context.

5.4 Grammaticality and Acceptability of Dangling Participles – an Overview

In the following, the theorists’ and editor’s (Pringle) views on the various dangling participles (cf. section 2.1.2) have been interpreted based on the examples mentioned in their books or articles:

Grammaticality

DP/ Theorist	DP1	DP2	DP3	DP4
Borg	Incorrect, with one exception*	Incorrect, with one exception*	Incorrect, with one exception*	Incorrect, with one exception*
LePan	Incorrect	Incorrect	Incorrect	Incorrect
Pringle	Depends on the participle	Not explicitly mentioned in her article	Depends on the participle	Not explicitly mentioned in her article
Swan	Incorrect, with one exception**	Incorrect, with one exception**	Incorrect, with one exception**	Incorrect, with one exception**

DP/ Theorist	DP5
Borg	Incorrect, with one exception*
LePan	Incorrect
Pringle	Depends on the participle
Swan	Incorrect, with one exception**

Information retrieved from Borg (2003, pp. 300-301), LePan (2000, p. 15ff.), Pringle (n.d., pp. 1-4), and Swan (1995, p. 406).

* The one exception mentioned by Borg (2003, p. 301) is subordinate clauses that express the speaker's attitude to the entire sentence. An example given by him is, "To be honest with you, you are likely to make a fool of yourself if you don't accept this proposal." This kind of sentence should, according to Borg, be regarded as grammatically correct.

** The one exception mentioned by Swan (1995, p. 406) is subordinate clauses that express the speaker's attitude to the entire sentence.

Acceptability

DP/ Theorist	DP1	DP2	DP3	DP4
Borg	Normally unacceptable, with one exception*			
LePan	Unacceptable	Unacceptable	Unacceptable	Unacceptable
Pringle	Depends on the participle	Not explicitly mentioned in her article	Depends on the participle	Not explicitly mentioned in her article
Swan	Normally unacceptable, with few exceptions**			

DP/ Theorist	DP5
Borg	Normally unacceptable, with one exception*
LePan	Unacceptable
Pringle	Depends on the participle
Swan	Normally unacceptable, with few exceptions**

Information retrieved from Borg (2003, pp. 300-301), LePan (2000, p. 15ff.), Pringle (n.d., pp. 1-4), and Swan (1995, p. 406).

* The one exception mentioned by Borg (2003, p. 301) is subordinate clauses that express the speaker's attitude to the entire sentence. An example given by him is, "To be honest with you, you are likely to make a fool of yourself if you don't accept this proposal." This kind of sentence is, according to Borg, fully acceptable.

** The few exceptions mentioned by Swan (1995, p. 406) are subordinate clauses that express the speaker's attitude to the entire sentences, and sentences with a preparatory *it* or *there* in the main clause. Note that under grammaticality, it was only subordinate clauses that express the speaker's attitude which were correct, according to Swan. But he believes that despite the fact that sentences with a preparatory *there* or *it* are grammatically incorrect, they are normal and, therefore, acceptable.

Based on these tables, one can conclude that the theorists, as well as the users of the English language, have very different views on dangling participles. Some of them believe that dangling participles are acceptable if they can function as a preposition; others believe that only some of the dangling participles are acceptable; and then again others believe that a dangling participle will always be an incorrect use of the English language.

Based on these differences of opinion, it may be difficult to know whose guidelines on dangling participles to follow as the guidelines changes depending on whose guidelines you are reading. Perhaps these different views are reflecting the developments in the English language. Descriptive language does not always follow normative language, and as a lot people seem to be unaware of the grammar rule concerning dangling participles, the English language may be headed towards extinction of that specific grammatical rule. Another feature of the English language that may have an impact on the development of the language is that the language is so widespread that it has become a lingua franca. Therefore, most people around the world have some knowledge of the English language but do not necessarily know all the various grammar rules and subtleties of the language. Thus people may settle for an incorrect use of the language, as they themselves do not know what is correct and what is incorrect. But if some theorists claim that dangling participles are acceptable and others claim that they are not, is the use of dangling participles then an incorrect use of the language? In order to answer this, the phenomenon has to be qualified by some national institution which is responsible for upholding the English language and its grammar. It is not enough to look at the grammar books available as they have different definitions of what a dangling participle is.

Nevertheless, this thesis will set up its own guidelines on grammaticality and acceptability of various types of dangling participles based on the findings in *Chapter 5*:

-ing participles: Incorrect and unacceptable if the subordinate clause does not refer to the speaker's attitude to the entire sentence.

-ed participles: Incorrect and unacceptable if the subordinate clause does not refer to the speaker's attitude to the entire sentence.

Sentences with a preparatory 'it' or 'there': Depends on the *real* subject in the main clause.

Speaker's attitude: If the subordinate clause refers to the speaker's attitude to the entire sentence, the sentence is fully acceptable, although the participle may be dangling.

Implicit general 'we' or 'they': Incorrect and unacceptable

5.5 Dangling Participles in Technical Brochures - Generalisations

Although the examples in this thesis do not create a lot of ambiguity, this thesis will briefly touch upon what the consequences of ambiguity in technical brochures may be. Dangling participles in technical brochures may entail loss of customers due to lack of a professional appearance. But do customers care about spelling mistakes and grammatical errors? Probably. Professionalism is very important in certain situations. Most adult people would never send a job application without checking it for spelling mistakes or the like. And they do it although they know that only a few people will see this application. But they do it because it makes them appear detail-oriented and professional. Why would it be any different for a brochure or manual that goes out to hundreds, perhaps thousands of people? A brochure or manual containing serious mistakes, no matter whether they are pertaining to spelling or grammar, does not only seem ridiculous but may also confuse people as to what is being said. Both are situations that could keep people from buying the product.

There are, however, also brochures that do not try to sell a product but rather to persuade the reader to do something specific or to inform the reader. This type of brochure is also present in some technical brochures which along with the manuals constitute the empirical material in this thesis. One example of this type of technical brochure is *Iowa Energy Savings Guide*. This is a guide produced by Iowa Weatherization and Community Action Agencies (2003, October); a guide which encourages the public to save energy where possible. Ambiguity in such a manual could keep the reader from taking action.

Dangling Participles in Technical Brochures and Manuals

A manual is often not seen until the product already has been purchased, and any mistakes in a technical manual will, therefore, probably not affect the purchase of the product. Mistakes may, however, confuse the reader about what is being said, and the reader may thus handle or install the product incorrectly. Mishandling of a product could lead to life-threatening situation as a worst case scenario.

6. Recipe for Avoidance of Dangling Participles?

Based on the POS-tagging of the examples of dangling participles found in the empirical material, this chapter will determine whether there is a recipe for how to avoid dangling participles.

In section 2.1.2, the following word class combinations were deemed most likely to contain a DP (dangling participle)¹⁷:

DP1:	CS/II/RR	+	VVG	+	(II)	+	
	(AT/AT1/II/APPGE)		+	(JJ)	+	NN/PPHOI	
DP2:	CS/II/RR	+	VVN	+	(II)	+	
	(RR)	+	(JJ)				
DP3:	VVG	+	(RP/II/RG/DD/IF)	+	(AT/DA/APPGE)	+	
	NN/PN						
DP4:	VVN	+	II/AT	+	(AT/DD/APPGE)	+	
	(NN)	+	(IO)	+	NN/PN		
DP5:	VVG	+	VVN	+	(RR)	+	VVN

As previously mentioned, these combinations were found by a look in various grammar books and articles on the subject. Furthermore, combinations which the author of this thesis could come up with on the top of her head were also added.

The truth is, however, that the word class combinations in English are endless. Several examples of possible dangling participles that did not fit into the above-mentioned DPs were found, when thousands of sentences from the empirical material were analysed.¹⁸ One of the combinations was (CADDET Centre, 2003, June, p. 4):

EX52: seeking_VVG to_TO improve_VVI the_AT way_NN1 they_PPHS2
 do_VD0 business_NN1

¹⁷ As previously mentioned, it is important to be aware that these constructions do not in themselves create a dangling participle. It is only if the participle modifies the wrong noun or pronoun in the main clause that a dangling participle arises.

¹⁸ The reason why 'possible' is added here is that the sentence did not actually have to contain a dangling participle in order to show a word class combination which *could* contain a dangling participle.

This subordinate clause is suffixed and did *not* contain a dangling participle as seen by the look at the entire sentence:

EX53: The UK Government's Construction Best Practice provides support to the construction industry, seeking to improve the way they do business.

EX53 clearly does not contain a dangling participle as the participle 'seeking' modifies the intended subject 'The UK Government's Construction Best Practice'. Had the main clause, however, been constructed in a different manner (with another subject), the participle could be dangling:

EX54: Seeking to improve the way they do business, the construction industry is supported by the UK Government's Construction Best Practice.

Neither the subordinate clause nor the main clause has changed in meaning. Nevertheless, the participle in the subordinate clause is suddenly dangling. The order of the word class constituents in the subordinate clause have not even changed place. Therefore, although the authentic example (EX53) did not contain a dangling participle, a subordinate clause with these word class combinations could easily contain a dangling participle (EX54).

Other examples of subjectless subordinate clauses which differ from the word class combinations mentioned in section 2.1.2 are:

EX55: First_ORD printed_VVN 1997_CRD ,_, [...] (CADDET Centre, 1997, p. 4)

EX56: [...] , , having_VHG become_VVN more_AV0 attractive_AJ0 under_PRP the_AT0 new_AJ0 EEG_NN1 2004_CRD ._. (Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (2008, June, p. 9)

In truth, only a VVN or a VVG has to be present in the subordinate clause:

EX57: Decomposed, the waste is driven to a landfill.

This could have been a dangling participle if the sentence had been constructed otherwise:

EX58: Decomposed, the landfill receives the waste.

Recipe

The word class combinations mentioned in section 2.1.2 might be the most likely ones as those are the combinations which first come to mind. But the truth is that the possibilities are endless. Therefore, there can only be one recipe for avoidance of dangling participles, and that is to be extra careful when the sentence contains a subjectless subordinate clause. Because the example above (EX58) proves that a subordinate clause can consist of only a participle.

7. Reflection on the Process and the Empirical Material

The Process

The process of finding the dangling participles in the technical texts was eased by the use of the concordance programme MonoConc. The process could, however, have been eased even more. The first hurdle to overcome was the fact that MonoConc is not able to register more than 500 hits at the same time. The texts, therefore, had to be divided into different groups in order to be able to register all the hits. This problem may have been avoided in two different ways. The first possibility was to come up with a concordance programme that could register more than 500 hits at the time. The second possibility was to come up with a concordance programme that had more search options. The hits would have been limited in number if it had been possible to make a search only for verbs containing the search terms mentioned in *Chapter 4*. But such programmes were, unfortunately, not at hand, and thus thousands of sentences had to be scrutinised for dangling participles.

The Material

The empirical material in this thesis did contain several dangling participles. It did, however, become evident at some point that one type of dangling participle did occur more than the other types dealt with in this thesis, and that was the –ing participle, and most examples contained a DP1 participle. The occurrences of dangling –ing participles were so many that not all the instances of this type of dangling participle could be dealt with in this thesis. There were, however, only few instances of the –ed participle, which made it difficult to discuss this type of dangling participle in depth. The theory behind each type of dangling participle could be discussed, but the dangling –ed participles' impact on the technical brochures in which they occurred was difficult as the examples were very few in number. Therefore, this thesis had to generalise based on very few examples of –ed participles.

The focus of this thesis, which was dangling present and past participles, could have been expanded to encompass infinitive dangling participles. But it has been my experience that dangling infinitive participles do not occur as often as present and past participles, and this type of dangling participle was, therefore, excluded from the scope of this thesis from the very beginning. Furthermore, the lack of ambiguity in the dangling participles found in the 50 technical brochures and manuals made it difficult to emphasize the importance of avoiding such a grammatical error.

This could reflect that ambiguous dangling participles still are not acceptable in society and, therefore, do not occur as often as unambiguous dangling participles.

The content of the technical brochures and manuals was not chosen based on the assumption that brochures and manuals dealing with energy or how to save energy contain more dangling participles than any other types of brochures and manuals. The subject was chosen because the theme ‘energy’ is very current and as there is a lot of focus on this subject. Brochures and manuals dealing with something else could easily have given the same results.

This thesis was originally thought only to deal with technical brochures. But it was found that businesses often combine their selling brochures with a quick run-through about how easy it is to install their product(s). Furthermore, businesses do not always distinguish between a brochure and a manual. When the Internet was searched for technical brochures, several manuals popped up among the brochures. It was, therefore, decided that manuals also should be included in the empirical material.

8. Summary and Conclusion

Some may view grammar as being rigid and restrictive. The truth is, however, another. Grammar is the building blocks of a language. Often the rules are very firm, but in other cases the grammatical rules are up for debate. And that is part of what makes language so interesting; it is under constant development.

New words are implemented in the language; others are outdated and, therefore, discarded. The same is also true for grammatical rules. As words gain new meanings, the status of those words may also change, and thus new possibilities arise. Dangling participles in the English language is an example of this. Pringle (n.d., pp. 1-4) argues that some words which previously were regarded as being participles may now have the status of prepositions. If this is true, it will create new possibilities for sentence constructions. Will this change in perception have an impact on technical brochures? Certainly. Brevity has always been favoured by technical writers, and the possible new status of certain participles may open up for this. But writers still have to be careful. Ambiguity should always be avoided in technical writing, no matter whether dangling participles are perceived as being grammatically correct or incorrect.

Despite this, most teaching institutions still teach that dangling participles are incorrect. And as long as those teachers still view dangling participles as being incorrect, people should be cautious about their use of them. Furthermore, dangling participles may have an unintentional and adverse effect on a technical brochure and/or manual. As previously mentioned, dangling participles may create ambiguity. But in other cases, sentences may even become comical to the reader. Comical inputs in a technical brochure may not be the best selling argument, because the reader may have trouble taking the message of the brochure seriously as the brochure seems less professional.

The theorists mentioned in this thesis did not completely agree on dangling participles' impact on a text or even how a dangling participle is defined. This may make it difficult for users of the English language to avoid dangling participles. This is, *inter alia*, substantiated by the various dangling participles found in the empirical material of this thesis. But the problem may not be as large as first anticipated. Most of the authentic dangling participles mentioned in this thesis do not create ambiguity or even seem ludicrous; in most cases the reader probably would not even notice them.

This thesis has established that although dangling participles are most likely to occur in some word class combinations than other, the possibilities of word class combinations are

endless. Moreover, the thesis has also established that some types of dangling participles are more acceptable than others. Therefore, the hypothesis that dangling participles have an unintentional and adverse impact on technical brochures and manuals has not been confirmed; it has rather been established that dangling participles *may* have an unintentional and adverse impact on technical brochures and manuals.

But if you want to be certain to avoid any form of dangling participles, you need to be aware every time you use a participle in a subjectless subordinate clause as that is the only truly way to avoid a dangling participle. Furthermore, it is important to be aware of the fact that dangling participles may also be suffixed and not only prefixed.

The occurrences of dangling participles probably occur due to different reasons. Some may be unaware of the grammatical rules about dangling participles, but others may simply ignore them as they believe that there are exceptions to these specific grammatical rules. Whether this is true is difficult to say as even the theorists do not agree on this subject. Some of the theorists mentioned in this thesis believe that some of the so-called ‘dangling participles’ in this thesis are not or should not be perceived as being dangling. Pringle (n.d., p. 2) argues that some participles have turned into prepositions, and Borg (2003, p. 301) and Swan (1995, p. 406) argue that when the participle expresses the speaker’s attitude to the entire sentence, it cannot be said to be dangling. LePan, on the other hand, considers all the authentic examples of dangling participles mentioned in this thesis for being grammatically incorrect and, therefore, unacceptable.

No one can predict the future, so it is impossible to say whether dangling participles someday will be regarded as being grammatically correct. But it seems as though unambiguous sentences containing dangling participles have become more acceptable not only in society, but also among theorists. Perhaps these changes in attitude signal that dangling participles will be perceived as being grammatically correct someday in the future.

Bibliography

Air Force Civil Engineer Support Agency (n.d.). *U.S. Air Force – Renewable Energy Program*. Retrieved July 28, 2008, from <http://www.andrews.af.mil/shared/media/document/AFD-060627-012.pdf>

American Society of Mechanical Engineers et al (n.d.). *America's Own Energy Source – Clean, Renewable, Safe, and Economical*. Retrieved July 28, 2008, from http://www.swana.org/pdf/swana_pdf_634.pdf

Ampair (2006, April 15). *Clean, free energy for your home*. Retrieved July 28, 2008, from [http://www.boast-energy.com/UserFiles/Downloads/Ampair_600_8pp_brochure_\(screen_res\).pdf](http://www.boast-energy.com/UserFiles/Downloads/Ampair_600_8pp_brochure_(screen_res).pdf)

Bache, Carl & Davidsen-Nielsen, Niels (1997). *Mastering English – An Advanced Grammar for Non-native and Native Speakers*. Berlin, New York: Mouton de Gruyter.

bmf conferences (2004). *Irish Renewable Energy – Summit 2004*. Retrieved July 28, 2008, from http://www.energyireland.ie/Irish_Renewable_Energy_Summit_2004/Irish_Renewable_Energy_Summit_2004.pdf

Borg, Torben (2003). *Engelsk Grammatik – med comparative aspekter*. Aalborg: Institut for Sprog og Internationale Kulturstudie.

brochure (n.d.). In *Encyclopaedia Britannica*. Retrieved February 18, 2008, from <http://search.eb.com.esc-proxy.lib.cbs.dk/dictionary?va=brochures&query=brochures>

Byrne, Jody (2006). *Technical Translation – Usability Strategies for Translating Technical Documentation*. Dordrecht: Springer.

CADDET Centre (1997). *A Biphase Turbine at a Geothermal Well: Economic Benefits*. Retrieved July 28, 2008, from <http://www.retscreen.net/download/php/ang/494/3/CHP08-C.pdf>

CADDET Centre (1998). *Windfarm on a Disused Airfield, Haverigg, UK*. Retrieved July 28, 2008, from <http://www.caddet.org/public/uploads/pdfs/Brochure/no1.pdf>

CADDET Centre (2000, March). *Combined Solar Systems for Residential Buildings*. Retrieved July 28, 2008, from <http://lib.kier.re.kr/caddet/retb/no127.pdf>

CADDET Centre (2002, March). *The First Solar-powered House in the South-west of England*. Retrieved February 26, 2008, from <http://www.caddet.org/public/uploads/pdfs/Brochure/no163.pdf>

CADDET Centre (2003a, March). *High-performance Industrial Furnace Based on High-temperature Air Combustion Technology – Application to a Heat Treatment Furnace*. Retrieved July 5, 2008, from <http://www.caddet.org/public/uploads/pdfs/Brochure/R447.pdf>

CADDET Centre (2003b, March). *High-performance Industrial Furnace using High-temperature Air Combustion – Application to a Heating Furnace*. Retrieved July 5, 2008, from <http://www.caddet.org/public/uploads/pdfs/Brochure/D053.pdf>

CADDET Centre (2003c, March). *Mini Co-generation Based on Landfill Gas*. Retrieved July 5, 2008, from <http://www.caddet.org/public/uploads/pdfs/Brochure/RE175.pdf>

CADDET Centre (2003, April). *Wind Farm on Remote Island Reduces Grid Losses*. Retrieved July 5, 2008, from <http://www.caddet.org/public/uploads/pdfs/Brochure/RE177.pdf>

CADDET Centre (2003, June). *Energy Efficiency in Petrol Station Lighting*. Retrieved July 5, 2008, from <http://www.caddet.org/public/uploads/pdfs/Brochure/R453.pdf>

CADDET Centre (2003a, October). *Single Compressor Fridge-freezer Cuts Energy Consumption by 30 %*. Retrieved July 5, 2008, from <http://www.caddet.org/public/uploads/pdfs/Brochure/R445.pdf>

CADDET Centre (2003b, October). *Sustainable Design for a Primary School with Building-integrated PV Cells*. Retrieved July 5, 2008, from <http://www.caddet.org/public/uploads/pdfs/Brochure/TB176.pdf>

CADDET Centre (2005). *Saving energy with Energy Efficiency in Hospitals*. Maxi brochure. Retrieved July 28, 2008, from http://www.fire_italia.it/eell/ospedali/energy_efficiency_in_hospitals_maxi_brochure_5_CADDET.pdf

CenterPoint Energy (2002). *GIS: Technology for Your Enterprise*. Retrieved July 5, 2008, from <http://www.esri.com/industries/electric/success-stories/userstories/centerpoint-energy.pdf>

Centre for Renewable Energy Sources (CRES) – European Commission (2002). *Wave energy Utilization in Europe – Current Status and Perspectives*. Retrieved July 28, 2008, from <http://www.wave-energy-centre.org/pages/WaveEnergyBrochure.pdf>

Centre for Renewable Energy Sources (CRES) – European Commission (2006). *Ocean Energy Conversion – Recent advancements and prospects*. Retrieved July 28, 2008, from http://www.wave-energy.et/index_files/documents/CA-OEBROCHURE.pdf

Clean Air – Cool Planet (n.d.). *Clean Air – Cool Planet*. Retrieved July 28, 2008, from http://www.cleanair-coolplanet.org/information/pdf/CACP_brochure.pdf

considering (1998). In *Longman Dictionary of English Language and Culture*. 2nd edn. Essex: Longman.

considering (2003). In *Gyldendals Røde Engelsk-Dansk Ordbog*. 13th edn. Essex: Longman.

Distributed Energy Systems Corp. (2007). *Mpower Systems – Energy Solutions for Oil & Gas Applications*. Retrieved July 28, 2008, from http://des.coreonix4.com/data/Unsorted/web_Mpower_oilgas-20326-1.pdf

Dürmüller, Urs (1983). *Towards a Varieties Grammar of English*. Berne: Peter Lang Publishers Inc.

eco hometech (2002, June 30). *World Class Solar Hot Water Heating Systems*. Doncaster: eco hometech.

eco hometech (2002, August 4). *World Class Solar Hot Water Heating Systems*. Doncaster: eco hometech.

eco hometech (n.d.) *Tomorrow's energy efficient heating technology today*. Doncaster: eco hometech.

Efficiency Analysts International (n.d.). *Energy Cost Reduction Assessment – Interactive Decision Support*. Retrieved August 16 2008 from <http://www.waterandenergyconsulting.com/EAI.pdf>

Ehrlich, Eugene (2000). *Schaum's Outline of Theory and Problems of English Grammar (Schaum's outline series)*. 3rd edn. New York, San Francisco, Washington, D.C., Auckland, Bogotá, Caracas, Lisbon, London, Madrid, Mexico City, Milan, Montreal, New Delhi, San Juan, Singapore, Sydney, Tokyo, Toronto: McGraw-Hill.

Energie Baden-Württemberg AG (2006, May). *Fossil Energy – The conventional power stations of EnBW*. Retrieved July 5, 2008, from http://www.enbw.com/content/en/group/_media/_pdf/fossil_energy.pdf

Energie Baden-Württemberg AG (2007, June). *Uranium is Energy – The Nuclear Power Plants of EnBW*. Retrieved July 5, 2008, from http://www.enbw.com/content/en/group/_media/_pdf/kernenergiebrosch_re_englisch.pdf

Energy Information Administration – U.S. Department of Energy (2007, July). *Renewable Energy Trends in Consumption and Electricity, 2005*. Retrieved July 5, 2008, from <http://www.eia.doe.gov/fuelrenewable.html>

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (2008, June). *Renewable energy sources in figures – national and international development*. Retrieved July 5, 2008, from http://www.bmu.de/files/english/renewable_energy/downloads/application/pdf/broschuere_ee_zahlen_en.pdf

Greenbaum, Sidney & Quirk, Randolph (1990). *A Student's Grammar of the English Language*. Essex: Longman.

International Electrotechnical Commission (2007, April). *Renewable Energies*. 2nd edn. Retrieved July 28, 2008, from http://www.iec.ch/news_centre/onlinepubs/pdf/renewable_energies_2.pdf

Iowa Weatherization and Community Action Agencies (2003, October). *Iowa Energy Savings Guide – Saving Energy Saves You Money*. Retrieved July 5, 2008, from http://www.dcaa.iowa.gov/bureau_weath/pdfs/EnergyBrochure.pdf

Jacobsen, Henrik Galberg & Skyum-Nielsen, Peder (1996). *Dansk Sprog – En Grundbog*. Viborg: Det Schønbergske Forlag.

Kirkman, John (1992). *Good style – Writing for science and technology*. London, New York: Spon Press.

LePan, Don (2000). *The Broadview Book of Common Errors in English – A Guide to Righting Wrongs*. 4th edn. Ontario: Broadview Press Ltd.

Matthews, Janice R. and Matthews, Robert W. (2008). *Successful Scientific Writing*. 3rd edn. Cambridge: Cambridge University Press.

Ministry of Energy, Water and Communications Malaysia (n.d.). *Energy Performance of LEO Building*. Retrieved July 28, 2008, from <http://www.ktak.gov.my/leo/images/performance.pdf>

National Renewable Energy Laboratory (1999, September). *Solar Water Heating*. Retrieved February 26, 2008, from <http://www.eere.energy.gov/>

NHBC (2007, May). *NHBC guide to renewable energy*. Retrieved July 28, 2008, from <http://www.nhbc.co.uk/NHBCpublications/LiteratureLibrary/SelfBuildInfo/filesdownload,30641,en.pdf>

NRECA (n.d.). *Electric Cooperatives and Energy Efficiency – Putting Our Members First*. Retrieved July 5, 2008, from <http://www.touchstoneenergysavers.com/pdfs/EnergyEfficiencyBrochure.pdf>

OECD & IEA (2003). *CO² Capture at Power Stations and Other Major Point Sources*. Retrieved July 28, 2008, from http://www.iea.org/textbase/papers/2003/CO2_Power_Fossil_Fuels.pdf

Pall Corporation (2007, April). *Pall Solutions for Wind Turbine Gearbox Reliability*. Retrieved July 28, 2008, from http://www.pall.com/pdf/Wind_Energy_Gen_BROFINAL.pdf

Pringle, Mary M. (n.d.). *Participles Becoming Prepositions – Some Arcane Information for Editors*. Retrieved February 12, 2008, from uweb.und.nodak.edu/~mary.pringle/UsingPaper.rtf

Sedgemoor Solar (n.d.). *Technical Brochure & Assembly Guide*. Retrieved July 28, 2008, from <http://www.sedgemoorsolar.co.uk/Sedgemoor%20Solar%20Tech%20Brochure.pdf>

SLP Energy (2008, May). *SLP – optimised solutions for renewable energy*. Retrieved July 28, 2008, from <http://www.slp-energy.com/Downloads/SLP-Energy-Corporate-Brochure.pdf>

Stilman, Anne (2004). *Grammatically Correct – The Writer’s Essential Guide to punctuation, spelling, style, usage and grammar*. Cincinnati, Ohio: Writer’s Digest Books.

Sustainable Energy Authority Victoria (2002, November). *Insulating Your Home*. Retrieved July 28, 2008, from http://www.energy_toolbox.vic.gov.au/dmdocuments/schools_information/secondary/secondary_su pppt_matls/Insulate_yr_home.pdf

Swan, Michael (1995). *Practical English Usage*. 2nd edn. Oxford: Oxford University Press.

technical brochure (n.d.). In *Business Dictionary.com*. Retrieved September 14, 2008, from <http://www.businessdictionary.com/definition/technical-manual.html>

The Nuclear Energy Agency (2001). *The Nuclear Energy Agency*. Retrieved July 28, 2008, from <http://www.nea.fr/html/pub/neabrochure.pdf>

The State University of New York (2007, November). *Energy Research at The State University of New York*. Retrieved July 5, 2008, from <http://www.suny.edu/GovtRelations/federal/pdf/Energy%20Research%20Brochure%2007.pdf>

UCREL (n.d. (a)). *CLAWS part-of-speech tagger for English*. Retrieved January 27, 2008, from <http://ucrel.lancs.ac.uk/claws/>

UCREL (n.d. (b)). *UCREL CLAWS7 Tagset*. Retrieved February 14, 2008, from <http://ucrel.lancs.ac.uk/claws7tags.html>

United Nations Environment Programme (n.d.). *The UNEP Sustainable Energy Programme*. Retrieved July 28, 2008, from http://www.unep.fr/energy/publications/pdfs/energy_brochure.pdf

U.S. Department of Energy (1999, February). *Technical Assistance: Cost-saving technology for today – bringing practical energy-efficient and pollution preventing solutions to U.S. industry*. Retrieved July 28, 2008, from <http://costkiller.net/tribune/Tribu-PDF/cost-saving-energy.pdf>

U.S. Department of Energy (2003, December). *A Consumer's Guide – Get Your Power from the Sun*. Retrieved July 5, 2008, from <http://www.nrel.gov/docs/fy04osti/35297.pdf>

with (1998). In *Longman Dictionary of English Language and Culture*. 2nd edn. Essex: Longman.

Wuppertal Institute for Climate, Environment and Energy (2004). *Water for Energy – Precious Resources*. 2. issue. Retrieved July 5, 2008, from http://www.wisions.net/Download_Dateien/PREP_2nd_issue_High.pdf

Wuppertal Institute for Climate, Environment and Energy (2006). *Energy in Schools – Energy Education and Projects for Reducing Energy Demand in Schools*. 2. issue. Retrieved July 28, 2008, from http://www.wisions.net/Download_Dateien/PREP_brochure_No6_short.pdf

Wuppertal Institute for Climate, Environment and Energy (2007). *Renewable Energy in the Food Supply Chain*. 1. issue. Retrieved July 28, 2008, from http://www.wisions.net/Download_Dateien/%20PREP_brochureNo9.pdf

Wuppertal Institute for Climate, Environment and Energy (2008). *Water for Energy and Energy for Water*. 1. issue. Retrieved July 5, 2008, from http://www.wisions.net/Download_Dateien/PREP_brochure_No12.pdf

WWF-Canada & Pembina Institute (n.d.). *Renewable is doable – A Smarter Energy Plan for Ontario*. Retrieved July 5, 2008, from <http://pubs.pembina.org/reports/renew-doable-brochure.pdf>

Appendix A - UCREL CLAWS7 Tagset

APPGE	possessive pronoun, pre-nominal (e.g. my, your, our)
AT	article (e.g. the, no)
AT1	singular article (e.g. a, an, every)
BCL	before-clause marker (e.g. in order (that), in order (to))
CC	coordinating conjunction (e.g. and, or)
CCB	adversative coordinating conjunction (but)
CS	subordinating conjunction (e.g. if, because, unless, so, for)
CSA	as (as conjunction)
CSN	than (as conjunction)
CST	that (as conjunction)
CSW	whether (as conjunction)
DA	after-determiner or post-determiner capable of pronominal function (e.g. such, former, same)
DA1	singular after-determiner (e.g. little, much)
DA2	plural after-determiner (e.g. few, several, many)
DAR	comparative after-determiner (e.g. more, less, fewer)
DAT	superlative after-determiner (e.g. most, least, fewest)
DB	before determiner or pre-determiner capable of pronominal function (all, half)
DB2	plural before-determiner (both)
DD	determiner (capable of pronominal function) (e.g. any, some)
DD1	singular determiner (e.g. this, that, another)
DD2	plural determiner (these, those)
DDQ	wh-determiner (which, what)
DDQGE	wh-determiner, genitive (whose)
DDQV	wh-ever determiner, (whichever, whatever)
EX	existential there
FO	Formula
FU	unclassified word
FW	foreign word
GE	germanic genitive marker - (' or's)
IF	for (as preposition)
II	general preposition
IO	of (as preposition)
IW	with, without (as prepositions)
JJ	general adjective
JJR	general comparative adjective (e.g. older, better, stronger)
JJT	general superlative adjective (e.g. oldest, best, strongest)
JK	catenative adjective (able in be able to, willing in be willing to)

MC	cardinal number,neutral for number (two, three..)
MC1	singular cardinal number (one)
MC2	plural cardinal number (e.g. sixes, sevens)
MCGE	genitive cardinal number, neutral for number (two's, 100's)
MCMC	hyphenated number (40-50, 1770-1827)
MD	ordinal number (e.g. first, second, next, last)
MF	fraction,neutral for number (e.g. quarters, two-thirds)
ND1	singular noun of direction (e.g. north, southeast)
NN	common noun, neutral for number (e.g. sheep, cod, headquarters)
NN1	singular common noun (e.g. book, girl)
NN2	plural common noun (e.g. books, girls)
NNA	following noun of title (e.g. M.A.)
NNB	preceding noun of title (e.g. Mr., Prof.)
NNL1	singular locative noun (e.g. Island, Street)
NNL2	plural locative noun (e.g. Islands, Streets)
NNO	numeral noun, neutral for number (e.g. dozen, hundred)
NNO2	numeral noun, plural (e.g. hundreds, thousands)
NNT1	temporal noun, singular (e.g. day, week, year)
NNT2	temporal noun, plural (e.g. days, weeks, years)
NUU	unit of measurement, neutral for number (e.g. in, cc)
NUU1	singular unit of measurement (e.g. inch, centimetre)
NUU2	plural unit of measurement (e.g. ins., feet)
NP	proper noun, neutral for number (e.g. IBM, Andes)
NP1	singular proper noun (e.g. London, Jane, Frederick)
NP2	plural proper noun (e.g. Browns, Reagans, Koreas)
NPD1	singular weekday noun (e.g. Sunday)
NPD2	plural weekday noun (e.g. Sundays)
NPM1	singular month noun (e.g. October)
NPM2	plural month noun (e.g. Octobers)
PN	indefinite pronoun, neutral for number (none)
PN1	indefinite pronoun, singular (e.g. anyone, everything, nobody, one)
PNQO	objective wh-pronoun (whom)
PNQS	subjective wh-pronoun (who)
PNQV	wh-ever pronoun (whoever)
PNX1	reflexive indefinite pronoun (oneself)
PPGE	nominal possessive personal pronoun (e.g. mine, yours)
PPH1	3rd person sing. neuter personal pronoun (it)
PPHO1	3rd person sing. objective personal pronoun (him, her)
PPHO2	3rd person plural objective personal pronoun (them)

PPHS1	3rd person sing. subjective personal pronoun (he, she)
PPHS2	3rd person plural subjective personal pronoun (they)
PPIO1	1st person sing. objective personal pronoun (me)
PPIO2	1st person plural objective personal pronoun (us)
PPIS1	1st person sing. subjective personal pronoun (I)
PPIS2	1st person plural subjective personal pronoun (we)
PPX1	singular reflexive personal pronoun (e.g. yourself, itself)
PPX2	plural reflexive personal pronoun (e.g. yourselves, themselves)
PPY	2nd person personal pronoun (you)
RA	adverb, after nominal head (e.g. else, galore)
REX	adverb introducing appositional constructions (namely, e.g.)
RG	degree adverb (very, so, too)
RGQ	wh- degree adverb (how)
RGQV	wh-ever degree adverb (however)
RGR	comparative degree adverb (more, less)
RGT	superlative degree adverb (most, least)
RL	locative adverb (e.g. alongside, forward)
RP	prep. adverb, particle (e.g. about, in)
RPK	prep. adv., catenative (about in be about to)
RR	general adverb
RRQ	wh- general adverb (where, when, why, how)
RRQV	wh-ever general adverb (wherever, whenever)
RRR	comparative general adverb (e.g. better, longer)
RRT	superlative general adverb (e.g. best, longest)
RT	quasi-nominal adverb of time (e.g. now, tomorrow)
TO	infinitive marker (to)
UH	interjection (e.g. oh, yes, um)
VB0	be, base form (finite i.e. imperative, subjunctive)
VBDR	were
VBDZ	was
VBG	being
VBI	be, infinitive (To be or not... It will be ..)
VBM	am
VBN	been
VBR	are
VBZ	Is
VD0	do, base form (finite)
VDD	did
VDG	doing

VDI	do, infinitive (I may do... To do...)
VDN	done
VDZ	does
VH0	have, base form (finite)
VHD	had (past tense)
VHG	having
VHI	have, infinitive
VHN	had (past participle)
VHZ	has
VM	modal auxiliary (can, will, would, etc.)
VMK	modal catenative (ought, used)
VV0	base form of lexical verb (e.g. give, work)
VVD	past tense of lexical verb (e.g. gave, worked)
VVG	-ing participle of lexical verb (e.g. giving, working)
VVGK	-ing participle catenative (going in be going to)
VVI	infinitive (e.g. to give... It will work...)
VVN	past participle of lexical verb (e.g. given, worked)
VVNK	past participle catenative (e.g. bound in be bound to)
VVZ	-s form of lexical verb (e.g. gives, works)
XX	not, n't
ZZ1	singular letter of the alphabet (e.g. A,b)
ZZ2	plural letter of the alphabet (e.g. A's, b's)

NOTE: "DITTO TAGS"

Any of the tags listed above may in theory be modified by the addition of a pair of numbers to it: eg. **DD21, DD22** This signifies that the tag occurs as part of a sequence of similar tags, representing a sequence of words which for grammatical purposes are treated as a single unit. For example the expression *in terms of* is treated as a single preposition, receiving the tags:

in_II31 terms_II32 of_II33

The first of the two digits indicates the number of words/tags in the sequence, and the second digit the position of each word within that sequence.

Such *ditto tags* are not included in the lexicon, but are assigned automatically by a program called **IDIOMTAG** which looks for a range of multi-word sequences included in the **idiomlist**. The following sample entries from the idiomlist show that syntactic ambiguity is taken into account, and also that, depending on the context, ditto tags may or may not be required for a particular word sequence:

at_RR21 length_RR22
a_DD21/RR21 lot_DD22/RR22
in_CS21/II that_CS22/DD1

UCREL CLAWS7 Tagset

Retrieved February 14, 2008, from <http://ucrel.lancs.ac.uk/claws7tags.html>

Appendix B – English Irregular Verbs

Base Form	Simple Past Tense	Past Participle
awake	awoke	awoken
be	was, were	been
bear	bore	born
beat	beat	beat
become	became	become
begin	began	begun
bend	bent	bent
beset	beset	beset
bet	bet	bet
bid	bid/bade	bid/bidden
bind	bound	bound
bite	bit	bitten
bleed	bled	bled
blow	blew	blown
break	broke	broken
breed	bred	bred
bring	brought	brought
broadcast	broadcast	broadcast
build	built	built
burn	burned/burnt	burned/burnt
burst	burst	burst
buy	bought	bought
cast	cast	cast
catch	caught	caught
choose	chose	chosen
cling	clung	clung
come	came	come
cost	cost	cost
creep	crept	crept
cut	cut	cut
deal	dealt	dealt
dig	dug	dug
dive	dived/dove	dived
do	did	done
draw	drew	drawn

Dangling Participles in Technical Brochures and Manuals

dream	dreamed/dreamt	dreamed/dreamt
drive	drove	driven
drink	drank	drunk
eat	ate	eaten
fall	fell	fallen
feed	fed	fed
feel	felt	felt
fight	fought	fought
find	found	found
fit	fit	fit
flee	fled	fled
fling	flung	flung
fly	flew	flown
forbid	forbade	forbidden
forget	forgot	forgotten
forego (forgo)	forewent	foregone
forgive	forgave	forgiven
forsake	forsook	forsaken
freeze	froze	frozen
get	got	gotten
give	gave	given
go	went	gone
grind	ground	ground
grow	grew	grown
hang	hung	hung
hear	heard	heard
hide	hid	hidden
hit	hit	hit
hold	held	held
hurt	hurt	hurt
keep	kept	kept
kneel	knelt	knelt
knit	knit	knit
know	knew	know
lay	laid	laid
lead	led	led
leap	leaped/leapt	leaped/leapt
learn	learned/learnt	learned/learnt
leave	left	left

Dangling Participles in Technical Brochures and Manuals

lend	lent	lent
let	let	let
lie	lay	lain
light	lighted/lit	lighted
lose	lost	lost
make	made	made
mean	meant	meant
meet	met	met
misspell	misspelled/misspelt	misspelled/misspelt
mistake	mistook	mistaken
mow	mowed	mowed/mown
overcome	overcame	overcome
overdo	overdid	overdone
overtake	overtook	overtaken
overthrow	overthrew	overthrown
pay	paid	paid
plead	pled	pled
prove	proved	proved/proven
put	put	put
quit	quit	quit
read	read	read
rid	rid	rid
ride	rode	ridden
ring	rang	rung
rise	rose	risen
run	ran	run
saw	sawed	sawed/sawn
say	said	said
see	saw	seen
seek	sought	sought
sell	sold	sold
send	sent	sent
set	set	set
sew	sewed	sewed/sewn
shake	shook	shaken
shave	shaved	shaved/shaven
shear	shore	shorn
shed	shed	shed
shine	shone	shone

Dangling Participles in Technical Brochures and Manuals

shoe	shoed	shoed/shod
shoot	shot	shot
show	showed	showed/shown
shrink	shrank	shrunk
shut	shut	shut
sing	sang	sung
sink	sank	sunk
sit	sat	sat
sleep	slept	slept
slay	slew	slain
slide	slid	slid
sling	slung	slung
slit	slit	slit
smite	smote	smitten
sow	sowed	sowed/sown
speak	spoke	spoken
speed	sped	sped
spend	spent	spent
spill	spilled/spilt	spilled/spilt
spin	spun	spun
spit	spit/spat	spit
split	split	split
spread	spread	spread
spring	sprang/sprung	sprung
stand	stood	stood
steal	stole	stolen
stick	stuck	stuck
sting	stung	stung
stink	stank	stunk
stride	strode	stridden
strike	struck	struck
string	strung	strung
strive	strove	striven
swear	swore	sworn
sweep	swept	swept
swell	swelled	swelled/swollen
swim	swam	swum
swing	swung	swung
take	took	taken

Dangling Participles in Technical Brochures and Manuals

teach	taught	taught
tear	tore	torn
tell	told	told
think	thought	thought
thrive	thrived/throve	thrived
throw	threw	thrown
thrust	thrust	thrust
tread	trod	trodden
understand	understood	understood
uphold	upheld	upheld
upset	upset	upset
wake	woke	woken
wear	wore	worn
weave	weaved/wove	weaved/woven
wed	wed	wed
weep	wept	wept
wind	wound	wound
win	won	won
withhold	withheld	withheld
withstand	withstood	withstood
wring	wrung	wrung
write	wrote	written

Retrieved August 15, 2008, from <http://www2.gsu.edu/~wwwesl/egw/verbs.htm>