

The thematic organization of consumer safety instructions in English

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This study investigates how the content of consumer safety instructions is organized in Themes and N-Rhemes and connected by thematic progressions. The Themes are chiefly directives or representations of the product and its usage. The goal of safety instructions, on the other hand, i.e. avoiding dangers and their negative outcomes, is mainly represented in the N-Rhemes. Thematic progressions are frequently linear, which reflects the expert/non-expert relationship between the writers and readers, or derived, which reflects the somewhat disjointedness of this text type. There are also many Rheme iterations connecting imperative clauses. In this respect the thematic organization of procedural texts differs significantly from texts where declarative clauses are predominant.

Keywords: N-rheme, rheme, thematic progression, theme

1. Introduction

Manufacturers of consumer goods are obliged by law to provide safety instructions with relevant information about possible risks when using their product and directions as to how these risks are to be avoided in order to prevent negative outcomes such as damage or injury. It goes, therefore, without saying that the successful communication of these instructions is of great importance. They need not only to provide specialized, technical information in a way that is unambiguous and not confusing, but also to persuade their readers to follow their instructions, not least because, from the manufacturers' perspective, preventing damage and injury when using the product is essential in order to avoid liability issues. As Povolná (2018: 84) points out, the intention to persuade is “the guiding force for technical writers”. Their readers, on the other hand, may be more concerned with getting the product to operate than reading the section which deals with safety instructions. They tend to skim through picking out pieces of information that are

relevant for a particular situation, such as installing and operating the machine or troubleshooting. They rarely read the manual from cover to cover and some do not read the manual at all (Mehlenbacher *et al.* 2002; Wright *et al.* 1982). Research carried out by the UK Department of Trade and Industry¹ found that there was scope for improving the content, clarity, conciseness and presentation of many consumer safety instructions and that there was a general feeling that if instructions were made more consumer-friendly, this would encourage more people to read them.

One important aspect of the presentation of any text is the order in which its informational content is presented. The information that is provided first will inevitably influence the readers' expectations and interpretation of what follows (Halliday & Matthiessen 2014: 89; Whittaker 1995: 105). Most sentences tend therefore to start with information that provides a starting point for what follows and at the same time connects backwards to what has preceded it (Fetzer 2008: 1545). The remainder of the sentence, on the other hand, is influenced by its starting point and develops it further, typically providing newsworthy information which is placed in focus at the end. This organization of information in two parts is generally referred to as the Theme and Rheme. It "enables the clause to be packaged in ways which make it effective given its purpose and context" (Eggins 2004: 298), and "It offers us choices about what meanings to prioritize in a text, what to package as familiar and what as new, what to make contrastive, etc." (Eggins 2004: 326). As a text progresses, the Themes and Rhemes of each sentence connect to each other in various ways, tracking referential and semantic connections and developing them further. These connections form patterns of thematic progressions which control the flow of information and influence their readers' understanding of its content.

The thematic organization of the information in a text is thus an essential aspect of successful communication. When it comes to safety instructions, however, although they are used frequently in daily life, they are not so frequently the objects of research, and their thematic structure is therefore a relatively unresearched field. An increased understanding would enable writers to make informed decisions according to the conventions discovered. This would help in the construction of future texts and contribute to the successful communication of their content. The chief aim of this paper is therefore to examine how the informational content of consumer safety instructions is structured in Themes and Rhemes and how these are connected to each other by thematic progressions.

1. *Writing Safety Instructions for Consumer Products*. (November 1998) Government Consumer Safety Research, Department of Trade and Industry, 1 Victoria Street, SW1H0ET London. humanic.es.com (Research commissioned by Consumer Affairs Directorate DTI.)

The paper is organized as follows: Section 2 outlines the theoretical approach to Theme and Rheme and thematic progressions used here, and reviews earlier relevant studies. Section 3 presents the safety instructions which have been investigated in this study, and Section 4 describes the method of analysis. The results of the analysis are presented and discussed in Section 5. The conclusion reiterates the main findings and examines their pedagogical implications.

2. Theoretical background and earlier research

2.1 Themes and Rhemes

This study adopts a Systemic Functional Linguistic approach to analysis. According to this, thematic organization is part of the textual metafunction of language (Halliday & Matthiessen 2014: 31). In contrast to the experiential function,² which is to represent informational content, i.e. our experience of the world as a kind of process, activity, state or happening in which people and things are involved and which take place in certain circumstances, and the interpersonal metafunction, which is to enact social roles and relations (Halliday & Matthiessen 2014: 29–30), the textual metafunction performs an enabling and facilitating role, i.e. “it constructs experiential and interpersonal meanings as information that can be shared by speaker and addressee; and it enables this sharing by providing the resources for guiding the exchange of meaning in text” (Matthiessen 1995: 22). One of these resources is the choice of which information is to be placed in the Theme and Rheme. The Theme is defined here as the first constituent “that has some function in the experiential structure of the clause” (Halliday & Matthiessen 2014: 91), e.g. *The duke* in *The duke gave my aunt a teapot on her birthday*. This provides the “point of departure of the message; it is that which locates and orients the clause within its context” (Halliday & Matthiessen 2014: 89). The remainder is the Rheme. According to this definition, Themes and Rhemes are identified by their position in the utterance, thereby adopting a “separating approach” to analysis, in contrast to a combining approach in which the concepts of Theme/Rheme and Given/New are merged (Fries 1983: 117; Gómez González 2001: 135). Themes which represent experiential meaning³ serve thus as the anchor of the

2. The experiential function is a component of the ideational function of language. (Halliday & Matthiessen 2014: 30, 361–362).

3. Experiential Themes are often referred to as Topical Themes (Halliday & Matthiessen 2014: 105–112). I use the term experiential here as many elements, such as adverbials, may be located in initial position without being the topic of the clause (Downing 1991).

clause, “providing the experiential base upon which the rest of the clause is developed” (Ping 2015: 292). These may be preceded by optional textual elements, such as connectors, e.g. *and*, *therefore*, *however*, which indicate logical relations such as addition, cause or contrast, and interpersonal elements, such as attitudinal adjuncts, e.g. *fortunately*, *maybe*, thereby forming multiple Themes (Gómez González 2001: 108), e.g. *But maybe the duke*. In declarative clauses, the unmarked experiential Theme is the Subject, e.g. *The duke*, in *wh*-interrogative clauses, such as *What did the duke give to my aunt on her birthday?*, it is the *wh*-element *What*, and in imperatives clauses, such as *Give the teapot to my aunt on her birthday*, it is the Predicator, *Give*. Marked themes are other items, such as Objects and Adverbials, which have been transferred to initial position from their normal position in the Rheme, e.g. *That teapot* in *That teapot the duke gave to my aunt on her birthday*, and *On her birthday* in *On her birthday the duke gave a teapot to my aunt*. By moving them and making them into the point of departure of the message, they are given a certain prominence in the thematic development of the text (Gómez González 2001: 103). As Eggins (2004: 318) points out, “When a marked choice is made, the speaker/writer is signaling that all things are *not* equal, that something in the context requires an atypical meaning to be made”. Marked themes realized by Adverbials tend to have a framing function, establishing, for instance, the time or place of the rest of the message, and they often signal a shift or change in stages in the development of the discourse (Martin & Rose 2007: 192). They therefore play a crucial role in the interpretation of the text. There are, furthermore, special Thematic constructions (Gómez González 2001: 245), which may also be used to single out and rearrange experiential elements, for instance cleft clauses (e.g. *It was that teapot that the duke gave to my aunt on her birthday*. *What the duke gave to my aunt on her birthday was that teapot*), *it*-extrapositions (e.g. *It is strange that the duke gave that teapot to my aunt on her birthday*) and existential *there*-constructions (e.g. *There is a teapot that the duke gave to my aunt on her birthday*).

Thematic structure exists on several layers of a text (Martin 1992: 437). Themes at sentence level may be predicted by a Hyper-Theme, e.g. a topic sentence or a heading. A set of Hyper-Themes may, in turn, be predicted by a Macro-Theme, e.g. a title or opening paragraph, which represents the overall content of the text. This layering of thematic organization is an important aspect of a coherent text as it establishes expectations about how the text will unfold (Martin & Rose 2007: 194), and “texts which do not make use of predicted patterns of interaction in this way may be read as less than coherent” (Martin 1992: 437).

As Fries (2008: 23) points out, one cannot explore the semantic contribution of Theme completely separate of Rheme. This is “the part of the clause in which the Theme is developed” (Eggins 2004: 300) and “part of the assembly of the new

information that the text offers” (Cummings 2003:133). In contrast to Themes, Rhemes contain at least one constituent, the Predicator, and often a number of other constituents, which are complements and adverbials of various kinds. As they can be very complicated and lengthy, representing a variety of meanings, Rhemes are often treated as unanalysed wholes (e.g. Mauranen 1993:103), though some studies (Elgemark 2017; Fries 2002; Herriman 2011) have investigated the constituent in final position, the N-Rheme, as this is generally regarded as the most newsworthy information and the focus of the message (Fries 2008:26 & 38).

The organization of the content of a text into its Themes and Rhemes is not, as Halliday & Matthiessen (2014: 126) point out, “a haphazard matter” but reflects the way in which the text develops its ideas (Fries 1995a: 9). This has been found to differ somewhat according to the text type depending on its purpose, audience and circumstances. Themes in academic writing, for instance, are often nominalizations of situations and causes etc. (Corbett 2009:87), whereas in face-to-face conversation they are usually personal pronouns referring to the participants themselves and those connected with them (Eggins 2004:322; Ghadessy 1995:139). In narratives the Themes are often animate participants and adverbials indicating sequences of events (Matthiessen 1995:39), whereas in sports commentaries, they are typically animate participants and temporal locations (Ghadessy 1995:143). In guide books, Themes often indicate spatial locations which provide locational orientation (Ghadessy 1995:139), and in procedural texts, such as recipes, they are typically processes in the making of food (Xiao 1991, referred to in Ghadessy 1995:139). N-Rhemes, on the other hand, as they typically express the most newsworthy part of the clause, are generally associated with the primary goals of the text (Fries 2002:126). In a study of a sample of advertisements, Fries (1993) found that evaluations and descriptions of features which gave a favourable impression of the products were typically in the N-Rhemes, whereas the companies advertising the product were usually mentioned in the Themes. Similarly, in a study of a fundraising letter, it was found that the goal of the letter, i.e. the problem for which the money was being raised, was mainly mentioned in the N-Rhemes and the fundraisers were mainly in the Themes (Fries 2002), and in a study of problem and solution texts, it was found that problems, their solutions and evaluations of these were usually in the N-Rhemes (Herriman 2011:34).

2.2 Thematic progressions

Thematic progression is defined by Daneš (1974:114) as “the choice and ordering of utterance themes, their mutual concentration and hierarchy as well as their relationship to the Hyper-theme of the superior text units (such as paragraph, chapter...) to the whole text and to the situation. Thematic progression might be

viewed as the skeleton of the plot". Daneš (1974: 118–121) identified three main types of thematic progression patterns:

Linear progression, where the Rheme becomes the Theme of the next utterance, as in (1).⁴

- (1) *The first of the antibiotics was discovered by Sir Alexander Flemming in 1928. He was busy at the time investigating a certain species of germ which is responsible for boils and other troubles.*

Constant Theme progression, where the same Theme is repeated, as in (2).

- (2) *The Rousseauist especially feels an inner kinship with Prometheus and other Titans. He is fascinated by any form of insurgency ... He must show an elementary energy in his explosion against established order and at the same time a boundless sympathy for the victims of it ... Further the Rousseauist is ever ready to discover the beauty of soul in anyone who is under the reprobation of society.*

Derived Theme progression, where Themes relate to a Macro-Theme or Hyper-Theme, such as New Jersey in (3).

- (3) *New Jersey is flat along the coast and southern portion; the north-western region is mountainous. The coastal climate is mild, but there is considerable cold in the mountain areas during the winter months. Summers are fairly hot.*

Daneš also notes that these three patterns may combine to produce other patterns, such as the split Rheme pattern in (4), where the information in the Rheme is separated into the Themes of several subsequent sentences.

- (4) *All substances can be divided into classes: elementary substances and compounds. An elementary substance is a substance which consists of atoms of only one kind ... A compound is a substance which consist of atoms of two or more different kinds...*

Progressions may also take place in Rhemes (Enkvist 1974: 134; Liu & Tucker 2015: 491). Enkvist notes two types: Rheme iteration, where the Rheme connects to the preceding Rheme, as in (5), and rheme regression where the Rheme connects to the Theme of the preceding clause as in (6).

- (5) *John loved Margaret. I also admired her immensely.*
 (6) *Margaret published a book but no one believed her.*

4. Examples (1)–(4) are from Daneš 1974. The Themes and Rhemes which are connected to each other are marked here in bold print.

Crompton (2004: 240) established a derived Rheme pattern, though this is not illustrated by an example. Ping (2005: 718) notes that both the Theme and Rheme may connect to the Theme and Rheme of the preceding utterance forming a boxed progression, as in (7).

(7) *and I had not done this well. In fact, I'd done it badly.*

Theme progressions may be interrupted by short passages (Dubois 1987: 94), various insertions (supplements, explanatory notes) or asides (Daneš 1974: 120), or breaks e.g. *wh*-clauses, polar interrogatives, *it* and *there* predicates (Hawes 2015: 96). Following Dubois, these will be referred to here as gapped progressions.

Thematic progressions are a rhetorical phenomenon and, like the selection of Theme and Rheme, they are therefore “constrained by such factors as purpose, audience and context” (Nwogu & Bloor 1991: 370). Thus, although most texts usually have a “certain proportion of static iteration and dynamic progression” (Enkvist 1974: 135), it has been found that some theme progressions are more characteristic of one genre rather than another. Linear progressions, in which newly introduced information in the Rheme becomes the following Theme, thereby creating a somewhat cumulative development, are frequent in narratives (Egins 2004: 325), as well as journalistic reports, where they often organize and develop information in paragraphs involving explanation or argumentation (Nwogu & Bloor 1991: 375). Similarly, a high frequency of linear progressions has been found in the introductions of research articles where they gradually narrow down description from general to specific issues (Ping 2015: 309). Constant Theme progressions develop from the perspective of one piece of information which is repeated as the starting point and therefore maintain a strong topical focus on one idea in the text (Egins 2004: 324). They are therefore typically used in descriptive paragraphs (Nwogu & Bloor 1991: 377), and are, for instance, more usual than linear progressions in the introductions of news reports (Gómez González & García Varela 2014: 110). According to Hawes (2015: 96) the frequent usage of constant progressions in editorials in *The Sun* contributes to their “tub-thumping style”. Kizil & Kushch (2019: 186), finally, found that legislative texts frequently used constant progressions to provide detailed specification of given information. Derived theme progressions, which assume relatively more background knowledge on the part of the reader (Hawes 2015: 97), are often found in explanations and descriptions of places and characters (Kizil & Kushch 2019: 183). They also occur mainly in the discussion sections of research articles and in paragraphs which involve the itemization and serialization of events (Nwogu & Bloor 1991: 378).

3. Material

For the purpose of this study, eight randomly chosen instruction manuals for washing machines were downloaded from the websites of the following manufacturers Amica (A.), Beko (B.), Bosch (Bo.), Electrolux (E.), (Grundig (G.), Hotpoint (H.), Miele (M.) and Whirlpool (W.) in April 2020, and their safety instructions sections were extracted. The total number of words is 6067. The corpus is thus, for practical reasons, small, as this study requires a close, in-depth analysis of the informational content, which cannot be carried out by a computer programme. The results, though not conclusive, should, nevertheless, point to significant tendencies in the thematic organization of this type of text.

The instruction manual, i.e. “the set of instructions and explanations that accompany a particular machine” (Sager *et al.* 1980: 168), belongs to the genre of instructive texts, which are defined by Trimble (1985: 20) as “the rhetoric of telling someone what to do and how to do it to achieve a certain goal”. This is typically realized by sequences of imperatives indicating various ways of using the product. Instruction manuals also have a variety of other functions ranging from that of “identifying the machine, to that of representing its parts, to that of actually instructing the user, to specifying the technical characteristics of the machine, to publicizing the product it accompanies and pleasing the reader” (Ciliberti 1990: 300). They tend therefore to adopt four different stances: the provision of information, eulogy, directives and explanations (Paris & Scott 1994: 47). A variety of rhetorical modes, such as description and explanation, are therefore used (Sharpe 2014), and these may vary in different parts of the manuals.

According to Paris and Scott (1994: 48–50), instruction manuals are organized around the following main parts:

- general information about the product
- general safety advice, warnings concerning specific actions
- installation of the device or preparatory steps
- use
- maintenance, directions for care
- trouble shooting and potential problems

This study focuses on the part of the manual concerned with “general safety advice and warnings concerning specific actions”. In Christobalena Frutos’ rhetorical analysis of instruction manuals (2018: 159–160), this forms part of the Advice stage. Its chief purpose is to persuade their prospective readers to perform or not to perform certain actions that keep them safe and therefore comprises two steps: “Do’s”, which provide compulsory advice, such as “*Keep children away from the machine at all times*”, and “Don’ts, which advise users not to perform an action

because it is dangerous, such as *Do not install or use a damaged washing machine*. The safety instructions section differs thus from the other sections of the manuals in that it is a list of warnings concerning safe usage of the machine rather than a sequence of physical actions to achieve a certain practical goal. According to Ciliberti (1990:303), commands such as these alert the user as to ways of avoiding undesired effects caused by dangers and are therefore not part of instructions proper but are normative, i.e. they are “a caveat, a warning, a social norm, the violation of which is potentially dangerous”. Many of these commands are accompanied by descriptive statements, which explain and motivate why instructions should be followed, such as the danger of coming into contact with a hot door in (8b), or the risk of damage to the machine, in (9b).

- (8) a. *Always keep children well away from the appliance while it is operating.*
 b. *The door can become quite hot during the wash cycle.* (H.)
- (9) a. *All packing and transit bolts must be removed before use.*
 b. *Serious damage can occur to the product and to property if this is not adhered to.* (E)

The instructions tend thus to have a “tutorial aspect”, i.e. they attempt to get the user to understand the rationale behind the prescribed action (Paris & Scott 1994: 48). According to the 1998 Government Consumer Safety research report (p.16, see footnote 1 above), brief explanatory statements such as those in (8b) and (9b) are important as users may decide to ignore instructions where they cannot themselves supply a rationale. Persuasion is thus not only carried out by the instructions themselves but also by noting dangers and their negative outcomes if these are not followed.

The writers of safety instructions are usually technical writers or technicians who have been involved in designing and building the product and therefore have expert knowledge. However, as the instruction manual is a non-synchronous medium where the social features of use are stereotypical and fixed at the outset, the writers are idealized figures who are neither completely identified with the producer of the appliance nor with the writer producing the instructions (Carroll & Delin 1998: 369). The readers, on the other hand, are novice users of the product and they may have very little or no prior knowledge of the product at all. At the same time they are also customers to whom manufacturers wish to promote their product. One concern, then, may be that in the process of informing and warning consumers of dangers, there is also a risk of unnecessarily frightening them. Another concern is that readers may not be prepared to spend a lot of time reading. Therefore, in order to provide rapid and easy access, instructions are presented as economically as possible, mainly in short sentences in a spaced layout, often on separate lines in lists with bullets, and sometimes interspersed with

Warning!, *Important!* or warning symbols to alert readers. These lists are usually grouped in subsections headed by titles such as *Electrical safety*, *Children's Safety*, *Installation*, *Correct Use*, *Flood Hazard*, etc.

Most of the Safety Instructions sections downloaded for this study (in seven of the eight manuals) start off with an exhortation to read and follow the instructions carefully. This is followed by the instructions, whose informational content could be classified according to the following informational categories.⁵

1. DANGERS involved in using the product, e.g. faulty handling of electricity and water (such as faulty hose pipes), instability, heavy weight of machine, lack of air circulation under the machine, frost, children or people with disabilities using or coming into contact with the machine, overloading, unwanted objects in the washing, insecure drum loading bolts, etc. DANGERS such as these are causes of NEGATIVE OUTCOMES.
2. NEGATIVE OUTCOMES refer to what is expected to occur if dangers are not avoided, i.e. damage to the machine, or injury to humans. These are the results of DANGERS.
3. SAFETY, i.e. the goal of the instructions: safe usage of the machine
4. DIRECTIVES, i.e. the actions users are obliged to perform or not perform in order to deal with dangers, and thereby avoid negative outcomes and maintain safe usage of the machine: e.g. *do not install*, *must be replaced*, *check*, *activate*, *do not use*, *ensure*, *unplug*, *do not allow*, *do not touch*, *should be kept away from*, etc.
5. THE PRODUCT & ITS USAGE, i.e. the washing machine, its parts, the various stages of handling or using the machine, such as transportation, installation, loading, operation, maintenance, and repairs, as well as products used for this, e.g. detergents.
6. ANIMATE PROTAGONISTS, i.e. the manufacturers, technicians, service centre, users, and groups of people who may be in danger when using the product, e.g. children, persons with disabilities.
7. MISCELLANEOUS, i.e. references to the manual itself, warranties and liability, etc. and other items, such as general verbs, e.g. *become*, *cause*, *occur*, *result*, time and manner expressions, etc. e.g. *a few hours*, *carefully*, and *it* and *there* in extrapositions, etc.

This study will examine how these categories of information are organized in Themes and Rhemes and connected by thematic progressions. The method of investigation will be presented in the following section.

5. These categories of information will be referred to in block capitals

4. Method

The following steps were undertaken: First, the safety instructions were divided into T-units, i.e. units which are “slightly larger than the clause, but smaller than the sentence” consisting of “an independent clause together with all hypotactically related clauses and words that are dependent on that independent clause” (Fries 1995b: 49).⁶ The advantage of using the T-unit is, as Fries and Francis (1992: 47) note, that the structure of dependent clauses, including their thematic structure, tends to be constrained by the independent clauses. Using this unit of analysis, will, of course, affect the results and must be taken into account when making comparisons with other studies that have used a different unit of analysis, such as the sentence or clause.

Second, the Themes of each T-unit were identified. The boundary between where the Theme of a T-unit ends and where the Rheme begins is inherently indeterminate (Berry *et al.* 2014: 113; Fries 2008: 13) and will affect the results of the investigation. In some studies (e.g. Berry 1995; Dominguez *et al.* 2020; Dubois 1987; Mauranen 1993), where the Theme is defined as what the clause is about, the boundary between the Theme and Rheme is drawn after the constituent which is the subject of the clause. This means, however, as Thompson & Thompson (2009: 58) point out, that two strands of meaning are blurred, i.e. the Theme as the starting point of the message and the subject as “the one on which the validity of the information is made to rest” (Halliday & Matthiessen 2014: 146). In this study, following Halliday & Matthiessen (2014: 105), the boundary between the Theme and the Rheme has been drawn after the first constituent in the T-unit which has experiential meaning, i.e. the first constituent that is either a participant, process or circumstance. The chief features of the Themes were then noted, such as their formal realization, whether they were marked or unmarked and whether they were accompanied by interpersonal and textual elements. Then, the informational content of the Themes was classified according to the categories listed above in Section 3.

Third, the N-Rhemes of each T-unit, i.e. the last constituents with experiential meaning on the independent clause level, were identified. Constituent status can be established by, for instance, tests such as fronting and clefting, as exemplified in (10) and (11), respectively.

- (10) a. *This machine is provided with child safety option to prevent children from playing with the control panel.* (E.)
 b. *To prevent children from playing with the control panel, this machine is provided with child safety option.*

6. Coordinated clauses were counted as two T-units.

- (11) a. *Miele cannot be held liable for the consequences of an inadequate earthing system (e.g. electric shock).* (M.)
 b. *What Miele cannot be held liable for are the consequences of an inadequate earthing system (e.g. electric shock).*

The informational content of the N-Rhemes was then classified according to the informational categories listed above in Section 3 and then compared to the informational content of the Themes.

Finally, the thematic progressions formed between the Themes and Rhemes in each section were examined. Following Enkvist (1974) and Mauranen (1993), this was done by counting the first item in each T-unit that contained a cohesive tie which connected it to an item in a preceding T-unit within the same subsection. (If there is a connection but it is not in the preceding T-unit, it has been counted as a gapped progression). If no cohesive tie was found in the Theme, the Rheme was examined. If neither the Theme nor Rheme contained a cohesive tie to a preceding T-unit in the same section, and their Theme or a constituent in the Rheme was contextually derived from the Hyper-theme (usually section headings) or the Macro-theme (i.e. the title, *Safety Instructions*), these were counted as Derived progressions. The following connections (Halliday & Hasan 1978) were regarded as cohesive ties in a progression: repetition (including partial identity, e.g. *electrical* – *electricity*); substitution by a proform, e.g. *children* – *them*; synonymy, e.g. *machine* – *device* – *appliance*; antonymy (both contrast and negation), e.g. *in a group* – *alone*; *authorized* – *unauthorised*; hyponymy, e.g. *colour run and dye removers* – *products*; collocations or associative relations (i.e. belonging to the same semantic environment), e.g. *washing* – *detergents*; *clothing* – *buttons and zips*, and ellipsis, e.g. in *The following information is provided for safety reasons and Ø must therefore be read carefully*, where *The following information* is ellipsed in the second coordinated clause. As Tanskanen (2006: 55) has pointed out, the interpretation of items as cohesive ties depends on the context in which they occur as well as each individual's world knowledge and the inferences they make. The classification of theme progressions in this study is therefore dependent on my own subjective interpretation of this particular context.

5. Results and discussion

There are altogether 441 T-units in the material. Section 5.1 examines their Themes, Section 5.2 examines the informational content of their N-Rhemes, and Section 5.3. examines the thematic progressions formed between the Themes and Rhemes.

5.1 Themes

As shown in Table 1, the Themes are predominantly imperative VPs (41%) and NPs (34%). Most of the NP Themes (134 instances) are full lexical phrases, e.g. *Packaging materials*, and only 17 are pronouns (chiefly *It*, *They* and *This*). About a fifth of the Themes (19%) are marked, i.e. fronted clauses, AdvPs or PPs, e.g. *Before plugging the washing machine into the mains*.

Table 1. Form of Themes

VP		NP		Clause		AdvP / PP		Other*	
182	41%	151	34%	63	14%	22	5%	23	5%

* These are ellipited Themes in coordinated clauses, and *it* and *there* in extrapositions.

As shown in Table 2, the majority of the Themes (83%) are simple. Only 9% contain an interpersonal element and only 8% contain a textual element. None of the Themes include both.

Table 2. Simple and multiple Themes

Simple		Multiple			
		Interpersonal		Textual	
365	83%	40	9%	36	8%

All of the interpersonal Themes, with the exception of three instances of *please*, are focusing adjuncts, e.g. *only*, *always*, *completely* and *never*, placed in front of imperatives.⁷ These invoke a categorical interpretation as they exclude all alternatives, as exemplified by (12), where *Never*, as it puts strong emphasis on the directive, functions here as an interpersonal Theme.

(12) *Never wash the product by spreading or pouring water on it.* (G.)

There are no attitudinal Interpersonal Themes, such as *fortunately*, or hedges, such as *perhaps*, *maybe*, *certainly*. The textual Themes are mainly *and* (22 instances) and the adversative connector *otherwise* (7 instances), which is used with explanatory force to indicate a negative outcome if directions are not followed, as in (13). There are no instances of the adversative connector *but*.⁸

7. In four cases *Important!* was placed before a T-unit. These were not counted as Themes.

8. The remaining textual Themes are *however* (2), *or* (2), *furthermore* (1), *so* (1), *therefore* (1).

- (13) *The water supply and draining hoses must be securely fastened and remain undamaged. **Otherwise** water leak may occur.* (Be.)

The infrequency of textual Themes can be partly explained by the fact that, for reasons of economy and in order to provide rapid and easy access to relevant information, the safety instructions are mainly presented in short, concise sentences, and logical relations between them are instead often indicated by visual means, such as bullet lists, which signal the addition of unordered items in a list, or merely implied by juxtaposition, in which case the relations between them must be inferred by the reader. This is illustrated by (8) and (9) above and by (14) and (17) below, where there are implicit causal connections between the sentences.

- (14) a. *Do not use solvent based cleaning agents e.g. those containing benzine to clean the surfaces of the machine.*
 b. *They can cause damage to plastic surfaces.* (M.)

Table 3 gives the informational content of the Themes (unmarked and marked). With the exception of the Miscellaneous category, each category is exemplified below in rank order of its proportional distribution. (The Themes are in bold print.)

Table 3. The informational content of the Themes

	Unmarked	Marked	Total	%
DIRECTIVES	182	0	182	41
PRODUCT & USAGE	79	44	123	28
DANGERS	31	25	56	13
PROTAGONISTS	33	1	34	8
MISCELLANEOUS	20	9	29	7
SAFETY	4	6	10	2
NEGATIVE OUTCOME	7	0	7	1
Total	356	85	441	100

DIRECTIVES make up the largest proportion of Themes (41%), which reflects the main purpose of the safety instructions to persuade readers to perform or not perform certain actions. These DIRECTIVES are assertive imperatives which readers are not expected to challenge, such as *Never place* and *Always observe* in (15) and (16). Although imperatives such as these are typically bald-on-record face threatening acts (Brown & Levinson 1987: 94–101), as Povolná (2018: 75) points out, when issued by experts to non-expert readers, they “mostly concern actions

that are clearly to be performed in the reader's interest, so that no redress is required to minimize the degree of imposition imposed on the reader by the writer".

(15) *Never place the product on a carpet-covered floor.* (G.)

(16) *Always observe the manufacturer's instructions carefully.* (M.)

PRODUCT & USAGE make up the second largest proportion of Themes (28%). This is to be expected as this information orients the instructions within their context, i.e. the various aspects of using the washing machine. These Themes provide, for instance, the starting point of explanatory information, as in (17), and DIRECTIVES which are realized by passive verbs with deontic modal verbs, such as *should* or *must*, as in (18).

(17) *Do not install the washing machine in a room where there is a risk of frost. The reliability of the electronic control unit may be impaired at temperatures below freezing point.* (M.)

(18) *Cleaning and user maintenance must not be carried out by children without supervision.* (W.)

About a third of the PRODUCT & USAGE Themes are marked. These are fronted adverbials, as exemplified by (19), where they frame instructions by indicating various stages in the installation of the machine.

(19) *The washing machine is fitted with transport bolts to prevent any possible damage to the interior during transport. Before using the machine it is imperative that the transport bolts are removed. After their removal cover the openings with the 4 enclosed plastic caps. After the installation of the device wait a few hours before starting it so that it acclimates to the environmental conditions of the room.* (W.)

DANGERS make up 13% of the Themes. Some of these Themes are nominalizations functioning as the Agentive subjects of verbs causing negative outcomes, such as *Incorrect levelling, especially instability* in (20). As well as being a concise means of representing the dangerous activity, nominalizations do not need to explicitly state who is responsible for the dangerous activity, and therefore avoid placing blame on the user.

(20) *Incorrect levelling, especially instability, may cause the washing machine to move around during operation.* (A.)

Other DANGER Themes are marked Themes representing hypothetical, dangerous situations when directives must be followed, as in (21), where a faulty connection cable is a potential danger.

- (21) *If the electrical connection cable is faulty, it must only be replaced by a Miele authorized service technician to protect the user from danger.* (M.)

ANIMATE PROTAGONIST Themes make up 8% of the Themes, and are, with only one exception, third person lexical NPS, such as *the manufacturer*, and *children*, etc., as in (22).⁹

- (22) *Children may lock themselves in appliances, putting themselves at risk.* (Bo.)

NEGATIVE OUTCOMES, as in (23), make up 2% of the Themes in the safety instructions.

- (23) *Damage to the fabric or appliance can occur if you exceed the recommended amount.* (E.)

SAFETY Themes, as in (24), make up the smallest proportion of Themes in the safety instructions, only 1%.

- (24) *Safe, long-term and reliable operation of the washing machine depends on it being correctly positioned and levelled.* (A.)

In sum, the Themes are predominantly DIRECTIVES, some of which are reinforced by focusing adjuncts, and PRODUCT & USAGE. The former reflect the direct strategy of persuasion used in safety instructions. In contrast to the strategy of persuasion used in, for instance, argumentative texts, there are no interpersonal Themes which hedge the writer's commitment to the propositional content, and there are few textual Themes with adversative meanings typical of argumentation. The predominance of PRODUCT & USAGE Themes, combined with the avoidance of first and second person animate PROTAGONIST Themes and attitudinal interpersonal Themes, presents the safety instructions from an objective perspective with very little overt authorial presence, thereby following the conventions of impersonality, which is typical of scientific writing. Finally, the realization of a number of DANGER Themes by agent-free nominalizations which do not assign direct responsibility to the user for the dangerous activity reflects the manufacturer/customer relationship and the manufacturers' concern for protecting the face of customers.

5.2 N-Rhemes

Table 4 gives the informational content of the N-Rhemes. With the exception of MISCELLANEOUS, each category is exemplified below in rank order of its proportional distribution in the N-Rhemes. (The N-Rhemes are in bold print.)

9. There is only one first person pronoun animate PROTAGONIST. This is *we* in *We ask you to read the manual carefully ...* (A.)

Table 4. The informational content of the N-Rhemes

	No.	%
DANGERS	146	33
PRODUCT & USAGE	121	27
NEGATIVE OUTCOMES	47	11
DIRECTIVES	45	10
MISCELLANEOUS	35	8
SAFETY	25	6
PROTAGONISTS	22	5
Total	441	100

DANGERS, as in (25) and (26), make up the largest proportion of the N-Rhemes, about a third of the total number (33%).

(25) *There is a risk of electric shock if you touch live components.* (Bo.)

(26) *Never use in washing machine detergents that contain solvents (e.g. petrol trichlorethylene).* (D.)

In (26), the DANGER N-Rheme, *detergents that contain solvents*, is an Object which has been postponed from its prototypical position immediately following the verb and placed in focus at the end of the T-unit.

PRODUCT & USAGE make up the second largest proportion of N-Rhemes, more than a quarter of the total number (27%). These are typically Objects of imperatives, such as *cut off* in (27), or circumstances concerning its usage, such as the temporal AdvP in (28)

(27) And then cut off *the power lead.* (A.)

(28) The loading door will be ready to open *just a few minutes after the washing cycle comes to an end.* (G.)

NEGATIVE OUTCOMES, as in (29) and (30), make up 11% of the N-Rhemes. Most of these represent *damage* or *injuries* and occur with causal verbs, e.g. *cause*, *result*, which are modalised by epistemic modal verbs, such as *may* or *can*.

(29) *During spinning a transit bar which is still in place may result in damage to both the machine and adjacent furniture or appliances.* (M.)

(30) *Reaching into the drum when it is turning can cause injuries to hands.* (B.)

DIRECTIVES, as in (31), make up 10% of the N-Rhemes. These are mainly agent-free passives with deontic modals, such as *should* or *must*. As passives tend to

place the action in focus (Sager *et al.* 1980: 209) and do not need to make agency explicit, they create a greater distance to the reader and are less confrontational than imperatives which address the reader directly.

- (31) *The old hose-sets **should not be reused**.* (W.)

Some other expressions, which, as Hyland (2002: 217) points out, may have a directive force when they occur in a context where they place an obligation on the reader, are also included here. In (32), for instance, the clause introduced by *only if* has the pragmatic effect of a DIRECTIVE by representing a condition which must be fulfilled for the machine to be guaranteed.

- (32) *The electric safety of the machine is guaranteed **only if the machine is connected to a legal standard protective (earthing system) power unit**.* (D.)

SAFETY, as in (33), makes up 6% of the N-Rhemes.

- (33) *The following information is provided **for safety reasons**.* (H.)

PROTAGONISTS, as in (34), make up the smallest proportion of the N-Rhemes, only 5%.

- (34) *Any electrical work required to install this appliance **should be carried out by a qualified plumber**.* (E.)

In sum, the N-Rhemes chiefly represent DANGERS and PRODUCT & USAGE. A comparison with the content of the Themes (Table 3 above) shows that, whereas there are more or less similar proportions of PRODUCT & USAGE Themes (27%) and N-Rhemes (28%), there are larger proportions of, in particular, DANGERS in the N-Rhemes (cf. 33% vs 13%) as well as NEGATIVE OUTCOMES (cf. 11% vs. 2%), and SAFETY (cf. 6% vs. 2%). Together these three categories make up 50% of the N-Rhemes. As these categories of information represent the chief goals of the safety instructions, i.e. keeping users of the product safe by avoiding dangers and negative outcomes, this tallies with earlier studies that have shown that N-Rhemes are mainly associated with the goals of the text (Fries 2002; Herriman 2011). A further reason why NEGATIVE OUTCOMES are more usual in N-Rhemes than Themes is that if they were presented as Themes they would be typically backgrounded information, whereas presentation in the N-Rheme not only places them in focus but also allows them to be modalized by epistemic modal verbs thereby downtoning the likelihood of the NEGATIVE OUTCOME actually taking place and avoiding the risk of frightening customers. There are, finally, two categories which occur in larger proportions in the Themes than N-Rhemes (DIRECTIVES, cf. 41% vs. 10%) and ANIMATE PROTAGONISTS (cf. 8% vs. 5%).

I will now go on to examine how the Themes and Rhemes are connected by thematic progressions.

5.3 Progressions

Table 5 gives the thematic progressions in the safety instructions. These are discussed below in rank order of their number of their occurrences. (The connections in the progressions are in bold print.)

Table 5. Thematic progressions

PROGRESSION	No.	%
Linear	123	28
Rheme iteration	117	26
Derived Theme	70	16
Derived Rheme	14	3
Constant	60	14
Rheme Regression	45	10
Theme iteration	4	1
Boxed	3	1
Break*	5	1
Total	441	100

* The Breaks are five existential *there*-clauses.

Linear progressions and rheme iterations are the most usual progressions, each making up somewhat more than a quarter of the total number (28% and 26% respectively). Linear progressions are often used to connect two instructions, as in (35), or to connect instructions with their explanations, as in (36) and (37).

(35) *Unplug the machine before preparing the machine **for transport**. Do not transport the machine if the drum locking bolts are not in place.* (A.)

(36) *There is a risk of electric shock if you **touch** live components. Never touch or hold the mains plug with wet hands.* (Bo.)

(37) *Do not force open **the locked loading door**. The loading door will be ready to open just a few minutes after the washing cycle comes to an end.* (G.)

The large number of linear progressions can be related to the fact that safety instructions are directed to a non-expert readership. According to Nwogu & Bloor (1991:376), mutual knowledge is a factor in determining the predominance of

different types of progressions. When the level of shared specialist knowledge is expected to be high and readers are assumed to know as much as the writers about the content, the writer may exploit this mutual knowledge by frequently using constant progressions, which centre round one item of given information. In contrast, when the level of shared knowledge is low, writers may adopt a strategy where new information is presented in the Rheme and then taken up and developed in the following Theme. In Nwogu and Bloor's study (1991), it was found that there was a higher number of linear thematic progressions in journalistic science reports than in research articles as their readers are not expected to have a high level of scientific expertise. Similarly, the fact that linear progressions are frequent in the safety instructions is also probably due to the fact that users are not expected to have a great deal of previous knowledge of the product and its usage.

Rheme iterations are illustrated in (38)–(40).

- (38) *When you wash at high temperatures, the glass in the washing machine door gets hot. Do not let children touch the hot washing machine door.* (Bo.)
- (39) *Do not reach into the drum when it is turning. Wait until the drum has stopped turning.* (Bo.)
- (40) *Keep these instructions in a safe place and ensure that new users are familiar with their content. Pass them on to any future user.* (M.)

One reason for the large number of Rheme iterations in the safety instructions is the predominance of imperative clauses where DIRECTIVES are the point of departure in the Theme. These are often actions which have not been mentioned earlier and therefore represent new or unused information.¹⁰ The Rheme usually represents whatever is undergoing the action and is often shared information. In these imperatives, continuity between the T-units is maintained by connections in their Rhemes. This is exemplified in (40) above where *the instructions, with their content* and *them* connect the T-units.

Derived progressions account for almost a fifth (19%) of the progressions in the safety instructions. They tend to occur at the beginnings of sections or when moving from one instruction and its explanation to another. Most of the derived progressions (70 instances) are Themes which are Derived from a Hyper-Theme, such as *If the product has a failure*, which is connected by collocation to the section heading *ELECTRICAL SAFETY* in (41). Some (14 instances) are Rhemes which are derived from a Hyper-Theme, such as *maximum load of washing* which is connected to the section heading *LOADING THE MACHINE* in (42).

10. New information can be identified by asking a hypothetical *wh*-question, e.g. (40) above provides the answer to *What should I do with these instructions?*

(41) ELECTRICAL SAFETY

If the product has a failure, it should not be operated unless it is repaired by the authorized service agent. (Be.)

(42) LOADING THE MACHINE

Do not exceed the recommended maximum load of washing (A.)

Constant progressions make up only 14% of the progressions. In (43), for instance, the constant progressions connect a series of instructions listing where and where not to place the washing machine, and in (44) a constant progression connects coordinated clauses by ellipsis of the second Theme.

- (43) – *Place the product on a rigid, flat and level surface.*
 – *Do not place it on a long-pile rug or similar surfaces.*
 – *Do not place the product on a high platform or near the edge on a cascaded surface.*
 – *Do not place the product on a power cable.* (G.)

- (44) *Any objects such as coins, safety pins, nails screws, stones or any other hard sharp material* can cause extensive damage and Ø must not be placed into *the machine.* (E)

Theme regressions make up the smallest proportion of the progressions (10%). In (45) and (46), elements in the Rhemes of instructions (*these products* and *in the vicinity of the appliance*, respectively) connect to the Themes of the preceding explanations (*Colour run and dye removers* and *your washing machine*, respectively).

- (45) *Colour run and dye removers* contain sulphur compounds which can cause damage such as corrosion. Do not use *these products* in this machine (M.)
- (46) *The door glass of your washing machine* is hot during operation. Do not allow children in the vicinity of the appliance. (A.)

There are four progressions (all of which occur in one manual), which are somewhat similar to constant progressions, although here the Themes connect to both the Themes and Rhemes of the following T-units, as exemplified in (47). I will refer to these as Theme iterations.

- (47) *If you climb on the washing machine, the worktop may break and cause injuries. Do not climb onto the washing machine.* (Bo.)

In the first T-unit of this progression, the Theme is a DANGER and the Rheme is its NEGATIVE OUTCOME. The following T-unit does not provide new information but repeats the DANGER Theme as the Theme and Rheme of a negated imperative clause, thereby making an explicit DIRECTIVE not to carry out the dangerous

action. These progressions are used to “drive home” the need to avoid a certain danger. In many cases, however, the manuals only mention the DANGER and its NEGATIVE OUTCOME, as in (48), and the readers are required to infer the corresponding directive (i.e. ‘Do not force the loading door open’). As Paris & Scott (1994: 46) note, implicit indirect directives such as these grant readers the right to demur, in contrast to direct imperatives which grant the readers little or no choice.

(48) *In case of forcing the loading door to open, the lock mechanism may get damaged.* (M.)

There are, finally, three Boxed progressions, as in (49), where both the Theme and Rheme connect to the Theme and Rheme of the preceding T-unit, the former by repetition (*this washing machine*) and the latter by negation and contrast (i.e. *domestic households vs. outdoor use*), thereby explicating its content further.

(49) *This washing machine is intended for use in domestic households and similar working and residential environments. This washing machine is not intended for outdoor use.* (M.)

Altogether 68 of the progressions (24 linear, 24 rheme iterations, 11 constant progressions, and 9 rheme regressions) are gapped. This is exemplified by the gapped constant progression in (50).

(50) *Any repair of the appliance must be made only by an authorized Technical Services Department of the manufacturer. Otherwise the manufacturer is not liable for damages that may result. Repairs not performed in perfection can also expose users to serious dangers, for which the manager is not answerable.* (D.)

Table 6 gives the cohesive ties which form these progressions.

Table 6. Cohesive Ties in Thematic progressions (Rep. = repetition; Coll. = collocation; Syn. = synonymy; Pro. = proform substitution; Hyp. = hyponymy; Ant. = antonymy; Ell. = ellipsis)

Rep.		Coll.		Syn.		Pro.		Hyp.		Ant.		Ell.		Total
No	%	No	%	No	%	No	%	No	%	No	%	No	%	
219	50	64	15	48	11	37	8	37	9	17	4	14	3	436*

* Five existential *there*-clauses are excluded

The most usual cohesive tie is repetition (50%), as in (35)–(37) above. Substitution by a proform, as in (40), on the other hand, is unusual (only 8%). This is most likely due to the fact that writing for non-experts requires a high degree

of explicitness in order to ease comprehension.¹¹ Repetitions “help to avoid misunderstandings and support the precision and stability of the text” (Schubert 2016:104). They are therefore preferred to substitution by a semantically empty pronoun for which readers need to infer the referent. Other lexical cohesive ties, i.e. collocation, as in (41), synonymy, as in (46), hyponymy, as in (45) and antonymy, as in (49), make up together 39%. Ellipsis, as in (44), is the least usual cohesive tie, only 3%.

In sum, the safety instructions are not static texts with many constant progressions centred round one topic, but rather more dynamic with many linear and derived progressions as well as many progressions that take place in the Rhemes, i.e. Theme regressions, Derived Rheme progressions, and in particular, Rheme iterations (altogether 39%). The large number of linear progressions is related to the fact that the safety instructions are directed towards non-expert readers, and the large number of derived and gapped progressions reflects the somewhat disjointedness of this text type, i.e. rather than continuous dense text with one central line of development of ideas, it presents clusters of loosely connected items of information about a shared topic in a spaced layout of sections containing lists of short sentences. The large number of Rheme iterations is related to the high frequency of imperative clauses in this text type. In contrast to declarative clauses, the Themes of imperatives often represent actions which are new to the reader, in which case the given, shared information tends to be in the Rhemes and continuity in the text is instead maintained in the Rhemes. This supports Crompton’s observation (2004: 241–242) that not only Themes but also Rhemes have an important text structuring function. Furthermore, although Themes are generally described in the literature as typically representing given information, this appears to be less true of Themes in imperative clauses.

6. Conclusion

This study has found that the thematic organization of the informational content of the safety instructions reflects its main purpose, i.e. direct persuasion by experts talking to non-experts while maintaining a certain degree of scientific objectivity and protecting the face of customers. The Themes are thus mainly categorical DIRECTIVES, or representations of the PRODUCT & USAGE whereas the goals of the persuasion, i.e. avoiding DANGERS and NEGATIVE OUTCOMES, are

11. In a comparison of English and German user manuals, Schubert (2016) found there was less lexical repetition and more substitution by proforms in the English manuals than in the German manuals and therefore a higher degree of explicitness in German than in English.

mostly in focus in the N-Rhemes. The expert/non-expert relationship between the writers and readers is reflected in the frequent usage of linear progressions, and the organization of the content in sections with Hyper-Theme headings is reflected in the large number of derived progressions. Finally, due to the many imperative clauses with DIRECTIVES as their Themes, continuity is often maintained by progressions in their Rhemes. In this respect, the thematic organization of procedural text types with many imperatives differs significantly from texts where declarative clauses are predominant.

The results of this study give rise to some issues concerning thematic organization which could be further investigated with a view to making safety instructions more consumer-friendly and effective. As Schubert (2016: 113) observes: “a user manual is more relevant if the reader gains the desired information about the appliance by expending as little processing effort as possible”. Firstly, a balance has therefore to be achieved between the need for economy, as readers may not be prepared to spend a long time reading manuals, and the need for clarity, as readers may have little or no knowledge of how to use the product. The former is reflected, for instance, in the usage of simple Themes in short sentences. However, when sentences have no explicit textual connectors, readers are expected to infer the logical relations between them. It is therefore possible that clarity would be improved by including more textual connectors in the Themes, while, at the same time, care should be taken not to increase the complexity of the text more than necessary. Informant testing could be used to investigate to what extent this would be effective. Secondly, according to Cornelissen *et al.* (2014: 24), who studied the attitudes of warehouse employees towards safety instructions, motivation is a key feature in raising levels of safety performance, and increased awareness of e.g. NEGATIVE OUTCOMES is one way of achieving this. It was found, however that in the N-Rhemes, where information is placed in focus, NEGATIVE OUTCOMES and in particular SAFETY, made up relatively small proportions of their total informational content. Manuals also varied in the extent to which they explicitly spelt out various aspects of their informational content. It was found, for example, that one manual used Theme iterations to explicitly connect DIRECTIVES with the DANGERS and NEGATIVE OUTCOMES they are intended to avoid whereas other manuals sometimes only mention DANGERS and their NEGATIVE OUTCOMES leaving the related DIRECTIVES to be inferred by the readers. Raising the level of explicitness in general may therefore be one way of improving safety instructions.

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