Summary and conclusion

8.1 Summary

8.1.1 The persuasion process

In Chapter 1, the theory of persuasion was set out. Based on the Elaboration Likelihood Model (Petty & Cacioppo, 1986a; Petty & Wegener, 1999), the Heuristic-Systematic Model (Chaiken, 1987; Chen & Chaiken, 1999) and comments of Meyers-Levy and Malaviya (1999), three routes to persuasion were discerned: (1) central (or systematic) processing; (2) peripheral (or heuristic) processing; and (3) experiential processing.

Central processing can be characterized by a deep processing of all the information in the ad. Persuasion outcomes are determined by the quality of arguments used in the ad. When strong arguments are used, positive thoughts are evoked and persuasion is likely to be positive. When weak arguments are used, negative thoughts are evoked and persuasion is likely to be negative.

Peripheral processing can be characterized in a qualitative way or in a quantitative way. The quantitative way involves a less effortful way of processing the ad in terms of the amount of information readers process and is also referred to as selective processing. When following this route, readers process only some of the information in the ad intensively, instead of all information as is the case with central processing. Under selective processing conditions, persuasion outcomes are determined by the quality of the selection of the arguments processed. The qualitative way involves a less effortful way of processing the ad in terms of choosing less effortful processing strategies. In this case, readers base their opinion on peripheral cues, such as a nice picture, or on the use of heuristics (easy rules of thumbs). An example of a heuristic is the number of arguments rule of thumb: the more arguments are mentioned; the more likely it is that the product advertised for is of good quality. This process is called peripheral processing.

Experiential processing involves readers to base their judgment on the feelings evoked by the processing of the ad. For instance, when readers think they process the ad very fluently, positive feelings are evoked and persuasion outcomes are likely to be positive.
What route to persuasion readers follow depends on their level of elaboration, or the amount of effort they are willing and able to put in processing the ad. When elaboration is low, readers are likely to process the ad superficially, following the peripheral route. Because readers only process the ad superficially, persuasion outcomes are not very strong: readers are willing to change their opinion easily. When elaboration is high, readers are likely to process the ad extensively, following the central route. Because of the deep processing of the ad, persuasion outcomes are likely to be resistant to counter argumentation and are likely to remain over time. Experiential processing may occur under both high and low levels of elaboration. It is unclear how persistent persuasion outcomes are when readers follow this route.

Elaboration, in turn, is determined by pre- and post-exposure levels of motivation, opportunity and ability (MOA). Pre-exposure motivation is affected by factors such as Need for Cognition, personal relevance, perceived risk and imminence of the decision. Pre-exposure ability and opportunity is affected by factors such as prior knowledge, intelligence, cultural background, language proficiency and distraction. All these factors together determine the level of elaboration before encountering the ad. However, factors present in the ad can affect the level of elaboration after exposure to the ad as well. These factors are known as post-exposure MOA factors. Ad characteristics, such as prominent stimuli, visual complexity, novel stimuli, relevance of the brand and curiosity about the brand can affect motivation after exposure to the ad. Factors such as framing, repeating information, prominent stimuli and analogies can affect the ability/ opportunity to process the ad.

Based on the mechanisms described here, several ways in which text variables affect persuasion outcomes can be distinguished. A text variable may affect persuasion outcomes directly by (1) acting as a central argument; (2) acting as a peripheral cue; (3) by stimulating selective processing; or (4) by acting as an experiential cue. Furthermore, a text variable may exert an indirect effect on persuasion outcomes by affecting the level of elaboration as a post-exposure MOA factor (5).

8.1.2 Typographic layout

Chapter 2 dealt with typographic layout. Typography “deals with the form, spacing and layout of words and sentences of a written or displayed communication message” (McCarthy & Mothersbaugh, 2002, p. 664). Typographic devices are all aspects that affect the appearance of a text. All together they form the typographic layout of a message.
Typographic devices can be categorized into three coding modes: (1) textual devices; (2) spatial devices; and (3) graphic devices. Textual devices include factors such as type style, type size, case, and treatment. Spatial devices include factors such as spacing between words, characters and lines, justification, line length and margins. Graphic devices include factors such as tables and graphs.

Three cognate strategies were described in which typographic devices can be applied to a text: (1) arrangement and emphasis; (2) clarity and conciseness; and (3) tone and ethos. The first strategy means that typographic layout should help the reader in understanding the text easily and without hesitation. This can be done by (1) making the text structure visible by marking the relevance of text elements and (2) by making relations among text elements visible. The relevance of text elements can be made visible by means of the principle of Figure-ground contrast. This principle means that elements that are visually distinct from others are more likely to stand in the front and thus indicate the relevance of the element. The relations among text parts can be made visible by principles of grouping, such as the principle of similarity and proximity. The more elements look like each other and the closer they are to each other, the more likely readers are to think they belong together. These principles can therefore be used to indicate the relations among text parts. The strategy of clarity and conciseness (strategy 2) involves that a writer should keep in mind not to use too few or too many devices to indicate the relevance and relations among text parts (Kostelnick & Roberts, 1998). The third and last strategy, tone and ethos, means that typographic layout should match with the writer’s attitude towards the reader and the subject, establishing a trusting relationship with the reader.

The three strategies together determine the rhetorical appropriateness of a design. This means that a document is designed in such a way that the reader responds as desired by the writer. For instance, when a typographic layout adds to the emphasis and arrangement of a text, strikes the right tone and ethos, and when rules of clarity and conciseness are kept in mind, it is said to be rhetorically appropriate.

8.1.3 Typographic layout and persuasion

Chapter 3 described the role of typographic layout in the persuasion process. In 2002, McCarthy and Mothersbaugh developed a model in which the role of typographic layout in the persuasion process is described. They hypothesized that typographic layout affects typographic
outcomes, such as legibility, appearance and semantic associations. Furthermore, they argued that typographic layout affects persuasion both directly and indirectly, similar to the mechanisms described in the first chapter.

It was argued that the typographic outcomes as described by McCarthy and Mothersbaugh (2002) should be redefined. Legibility should be replaced by the broader term readability: the ease with which a message is processed. Typography not only affects legibility, but is also likely to help the reader in understanding a message. Typographic layout is suggested to increase the readability of an ad by indicating the relevance of and relations among text parts in the ad. This can be achieved by using the principle of Figure-ground contrast and the principles of proximity and similarity, respectively. Furthermore, appearance should be replaced by text appreciation: the way readers appreciate the overall look and feel of the appearance of the ad. Several factors were identified through which typographic layout may affect text appreciation, such as visual complexity, novelty and surprise. Finally, the definition of semantic association was somewhat refined - i.e. connotations that consumers derive about the text or brand that add meaning to the text’s actual semantic content and which are seen as an artful deviation. It was argued that the effects of typographic layout on semantic associations are comparable to the effects of visual tropes.

Chapter 3 also explained how typographic layout may affect persuasion outcomes. First of all, it was argued that typographic layout is not likely to affect persuasion as a central argument, unless typography acts as a typographic trope. Furthermore, typography may affect the persuasion process by stimulating selective processing under low-elaboration conditions, when the relevance of text parts is indicated appropriately. Typography was also suggested to affect persuasion outcomes as a peripheral cue, by evoking the number of arguments rule of thumb or by indicating the relevance of the brand. In addition, it was hypothesized that typographic layout evokes positive feelings (through the readability and text appreciation of the ad), which affect persuasion outcomes through experiential processing. Lastly, it was suggested that typographic layout affects post-exposure MOA outcomes by increasing/decreasing the motivation/ability to process the message. For instance, when typographic devices really help the reader, he may be more able and willing to process the message.
Because there have been few experimental investigations into the role of typographic layout in the persuasion process, only research questions with regard to the role of layout in the persuasion process were formulated. These questions and the supposed relations among typographic layout, typographic outcomes and persuasion outcomes are depicted in Figure 8.1.

**RQcontract: How does typographic layout affect the processing of product advertisements?**

**RQ1:** Does typographic layout affect typographic outcomes?

**RQ1a:** Does typographic layout affect the readability of product advertisements?

**RQ1b:** Does typographic layout affect the text appreciation of product advertisements?

**RQ2:** Does typographic layout affect persuasion outcomes?

**RQ2a:** Does typographic layout affect persuasion outcomes directly and if so, through what mechanism (as peripheral cue, attention grabber or experiential cue)?

**RQ2b:** Does typographic layout affect persuasion outcomes indirectly (via post-exposure MOA)?

**8.1.4 The experimental studies**

The research questions stated above were investigated by means of six experimental studies. Study 1 investigated the effects of an increase in the number of typographic devices on typographic outcomes. Four versions of an ad for a digital camera were created in which an increasing number of typographic cues were present: (1) virtually no typographic cues, only the header was made to stand out by means of type size and type weight; (2) subheader and pay-off were made to stand out by means of type size and type weight; (3) white space was added to the body text and all elements were separated by means of white space; and (4) bullets were added to the arguments provided in the body text. The results showed that the version in which bullets were added (version 4) was more readable than the version in which the subheader and pay-off were made to stand out by means of type size and type weight (version 2). No effect was found on text appreciation.
Figure 8.1: Schematic overview of the role of typographic layout in the persuasion process (based on the model by McCarthy & Mothersbaugh, 2002, p.665)
Study 2 examined the effects of white space and bullets on the persuasion process. Again, four versions of an ad for a digital camera were created in which the presence of white space (present/absent) and the presence of bullets (present/absent) were systematically varied. Furthermore, for half of the participants motivation to process was manipulated by increasing the relevance of the ad to the reader. The results showed no effects of the use of bullets. Furthermore, the use of white space was found to increase the readability of the ad, but not the text appreciation of the ad. No effects were found on persuasion outcomes.

Study 3 explored the effects of type size and type weight on the persuasion process. This time, an ad for a digital camera and an ad for toothpaste were used. The presence of type size and type weight was systematically varied for both ads. In addition, ability to process was manipulated by distracting half of the participants from processing the ads. The results showed no effects for the digital camera ad. For the toothpaste ad, interactions were found with regard to type size and type weight. For both typographic outcomes and persuasion outcomes, similar patterns were found: if both type size and type weight were present or absent, readability, text appreciation and persuasion outcomes decreased compared to the versions in which only type size or type weight were present.

Study 4 was a replication of Study 3. Again, the toothpaste ad was used and systematically varied in both type size and type weight. Again, ability to process was manipulated. This time, no effects of typographic layout on either typographic outcomes or persuasion outcomes were found.

Study 5 took a somewhat different approach. This time, the effects of the number of typographic cues were investigated. For three products (shampoo, showering gel and moisturizing cream), three ads were created. Of each of these nine ads, three versions were made: one containing only few cues, one containing sufficient cues and one containing many cues. Motivation to process was also manipulated by increasing the relevance of the ad for half of the participants. The results showed that the versions with few cues scored lower on readability, text appreciation and persuasion outcomes than both the versions with sufficient and many cues.

The last study, Study 6, took a closer look at the mechanisms through which typographic layout may affect persuasion outcomes. This time, an ad for fruit juice and an ad for pasta sauce were used. In these ads, the quality of the arguments (strong/weak) and the number of typographic cues (few/sufficient) were systematically varied. Furthermore, motivation to process was manipulated by increasing the relevance of the ad for half of the participants. For both ads the results showed that the
versions containing sufficient cues were found more readable and were appreciated more than versions containing few cues. In addition, the sufficient cues versions were found more persuasive than the few cues versions. Table 8.1 provides an overview of the results of the six experimental studies.

8.2 Implications for theory

In general, it was found that typographic layout is indeed capable of increasing the readability, text appreciation and persuasion outcomes of an ad, but only under certain circumstances:

1. The results of the studies are inconsistent. Sometimes effects were found, sometimes no effects at all were found.
2. The effects of typographic layout on typographic outcomes and persuasion outcomes are mostly only small.
3. No strong evidence was found for the hypothesized inverted U-shaped relationship between typographic signals and typographic outcomes.
4. The studies do not provide insight into the question through what mechanisms typographic layout does affect persuasion outcomes.

All in all, the model that was suggested in Chapter 3 (see also in this chapter) can neither be confirmed nor be discarded. More research is needed to identify the circumstances under which typographic layout affects typographic outcomes and persuasion outcomes. In the following, these points are discussed for readability (RQ1a), text appreciation (RQ1b) and persuasion outcomes (RQ2a/b), respectively.

8.2.1 The effects of typographic layout on readability (RQ1a)

In Study 1, 5 and 6 the number of typographic signals was varied. The results of these studies consistently showed that the more typographic cues were used, the better readable the ad became.

In Study 2, 3 and 4 typographic cues were investigated on their own and in interaction with each other. These studies did not provide consistent results. Study 2 showed that application of white space increased readability, but the use of bullets did not. Study 3 showed that type size and type weight interacted with each other. If only type size or type weight was varied, readability was found to increase. If both type size and type were varied and if both type size and type weight were not varied, readability was found to decrease. This effect was only found for the toothpaste ad and not for the digital camera ad, however.
Table 8.1: Overview of the results of study 1-6: effects on readability, text appreciation and persuasion outcomes

<table>
<thead>
<tr>
<th>Study Variables</th>
<th>Effects on readability</th>
<th>Effects on text appreciation</th>
<th>Effects on persuasion outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong> Number of typographic signals:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) virtually none/ (2) type size &amp; type weight/ (3) type size, type weight and white space/ (4) type size, type weight, white space and bullets</td>
<td>Digital camera:</td>
<td>Digital camera:</td>
<td>Digital camera:</td>
</tr>
<tr>
<td></td>
<td>- Version 4 (type size, type weight, white space &amp; bullets) more readable than version 2 (type size &amp; type weight)</td>
<td>- No effects</td>
<td>- No effects</td>
</tr>
<tr>
<td><strong>2.</strong> White space: present/ absent</td>
<td>Digital camera:</td>
<td>Digital camera:</td>
<td>Digital camera:</td>
</tr>
<tr>
<td>Bullets: present/ absent</td>
<td>- Versions with white space more readable than versions without white space</td>
<td>- No effects of white space</td>
<td>- No effects of white space</td>
</tr>
<tr>
<td>Motivation: high/ low</td>
<td>- No effects of bullets</td>
<td>- No effects of bullets</td>
<td>- No effects of bullets</td>
</tr>
<tr>
<td></td>
<td>- High-motivation participants found the ads easier to read than low-motivation participants</td>
<td>- No effects of motivation</td>
<td>- No effects of motivation</td>
</tr>
<tr>
<td><strong>3.</strong> Type size: present/ absent</td>
<td>Toothpaste:</td>
<td>Toothpaste:</td>
<td>Toothpaste:</td>
</tr>
<tr>
<td>Bullets: present/ absent</td>
<td>- Versions in which both type size and type weight were either present or absent were less readable than versions in which only type size or only type weight was present</td>
<td>- Versions in which both type size and type weight were either present or absent were appreciated less than versions in which only type size or only type weight was present</td>
<td>- Versions in which both type size and type weight were either present or absent were appreciated less than versions in which only type size or only type weight was present</td>
</tr>
<tr>
<td>Ability: high/ low</td>
<td>- No effects of ability</td>
<td>- No effects of ability</td>
<td>- No effects of ability</td>
</tr>
<tr>
<td></td>
<td>Digital camera:</td>
<td>Digital camera:</td>
<td>Digital camera:</td>
</tr>
<tr>
<td></td>
<td>- No effects of type size</td>
<td>- No effects of type size</td>
<td>- No effects of type size</td>
</tr>
<tr>
<td></td>
<td>- No effects of type weight</td>
<td>- No effects of type weight</td>
<td>- No effects of type weight</td>
</tr>
<tr>
<td></td>
<td>- No effects of ability</td>
<td>- No effects of ability</td>
<td>- No effects of ability</td>
</tr>
<tr>
<td>Study Variables</td>
<td>Effects on readability</td>
<td>Effects on text appreciation</td>
<td>Effects on persuasion outcomes</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------------</td>
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<td>-------------------------------</td>
</tr>
</tbody>
</table>
| **4.** Type size: present/ absent  
Bullets: present/ absent  
Ability: high/ low | Toothpaste:  
- No effects of type size  
- No effects of type weight  
- No effects of ability | Toothpaste:  
- No effects of type size  
- No effects of type weight  
- No effects of ability | Toothpaste:  
- No effects of type size  
- No effects of type weight  
- No effects of ability |
| Digital camera:  
- No effects of type size  
- No effects of type weight  
- No effects of ability | Digital camera:  
- No effects of type size  
- No effects of type weight  
- No effects of ability | Digital camera:  
- No effects of type size  
- No effects of type weight  
- No effects of ability |
| **5.** Number of cues: few/ sufficient/ many  
Motivation: high/ low  
Product: showering gel/ moisturizing cream/ shampoo | Showering gel, moisturizing cream and shampoo  
- Versions in which only few cues were present were found less readable than versions in which sufficient or many cues were present  
- No effects of motivation  
- Shampoo more readable than showering gel and moisturizing cream | Showering gel, moisturizing cream and shampoo  
- Versions in which only few cues were present were appreciated less than versions in which sufficient or many cues were present  
- No effects of motivation  
- Shampoo appreciated most followed by showering gel and moisturizing cream | Showering gel, moisturizing cream and shampoo  
- Versions in which only few cues were present were less persuasive than versions in which sufficient or many cues were present (for Aad, Ab and PI)  
- No effects of motivation  
- Shampoo highest, followed by showering gel and moisturizing cream (no difference for Ab) |
<table>
<thead>
<tr>
<th>Study Variables</th>
<th>Effects on readability</th>
<th>Effects on text appreciation</th>
<th>Effects on persuasion outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Number of cues: few/ sufficient</td>
<td>Fruit juice: - Versions in which only few cues were present were found less readable than versions in which sufficient cues were present - No effects of argument quality - No effects of ability</td>
<td>Fruit juice: - Versions in which only few cues were present were appreciated less than versions in which sufficient cues were present - Versions containing strong arguments were appreciated more than versions containing weak arguments - No effects of ability</td>
<td>Fruit juice: - Versions in which only few cues were present were less persuasive than versions in which sufficient cues were present (only for Aad and Ab, not for PI) - Versions containing strong arguments were more persuasive than versions containing weak arguments (for Aad, Ab and PI) - No effects of ability</td>
</tr>
<tr>
<td>Argument quality: strong/ weak</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ability: high/ low</td>
<td>Pasta sauce: - Versions in which only few cues were present were found less readable than versions in which sufficient cues were present - No effects of argument quality - No effects of ability</td>
<td>Pasta sauce: - Versions in which only few cues were present were appreciated less than versions in which sufficient cues were present - No effects of argument quality - No effects of ability</td>
<td>Pasta sauce: - Versions in which only few cues were present were less persuasive than versions in which sufficient cues were present (only for Aad, not for Ab and PI) - Versions containing strong arguments were more persuasive than versions containing weak arguments (for Aad, Ab and PI) - No effects of ability</td>
</tr>
</tbody>
</table>
In addition, these findings were not replicated in Study 4, in which type size and type weight were varied as well. For all studies, the effect sizes ($\eta^2$) varied between .02 and .13.

On the basis of these findings, it can be concluded that (1) the effects of typographic layout on readability are inconsistent; (2) effects of typographic layout on readability are only small; (3) no strong evidence exists for the hypothesized inverted U-shaped relationship between typographic layout and readability.

**Effects of typographic layout on readability are inconsistent**

The studies showed inconsistent effects of typographic layout on readability. First of all, it seems that different cues exert different effects on readability. For instance, signaling the relations among text parts (e.g. by means white space) or signaling the relevance of text parts (e.g. by means of type size) may exert different effects on readability. No categorization of typographic devices on these dimensions exists. Such a categorization would be fruitful for designers: it can provide a practical tool for choosing devices to signal relations or relevance. Moreover, it can provide more insight into the effects of typographic devices on readability and the way readers use typographic cues when processing a text. It might be, for instance, that readers make stronger use of signals that provide information about the relevance of text parts than devices that indicate the relations among text parts and that these devices therefore exert greater impact on readability scores (or vice versa). However, more research is needed to make such a categorization.

Second, the results of the studies suggest that typographic devices interact with each other. For instance, type size and type weight were found to interact with each other, and effects of typographic layout on readability were strongest when the number of typographic cues was varied (instead of the presence or absence of specific cues). Again, a categorization of typographic cues based on whether they signal relations among or relevance of text parts (or both) may provide more insight into the way typographic devices interact with each other. Furthermore, the finding that sometimes typographic devices affected readability scores and sometimes did not affect readability scores can also be explained by possible interactions with other variables. Throughout the studies, several of such variables were suggested. Examples are: verbal complexity of the ad, visual complexity of the ad, product shown in the ad, appearance of surrounding ads and reader characteristics. In future research, therefore, these variables may be systematically varied as well.
Effects of typographic layout on readability are only small

If typographic layout was found to affect readability, the effects were mostly only small. This may have several reasons. First of all, typographic layout may only have just a small impact on readability. Second, the texts used in the experiments may also had enough verbal cues to signal relevance and relations and that readers therefore relied less heavily on the visual cues. Third, most readers know how advertisements are structured and therefore do not need visual cues to process them. Besides, advertisements mostly contain little text, which also explains why typographic layout only exerts a small effect. Fourth, the typographic manipulations were mostly modest, which may also provide an explanation for the small effects. Last, typographic cues such as color (not investigated in the study) or placement on the page may exert greater impact.

In future research, therefore, both verbal and visual cues should be manipulated systematically. Furthermore, the effects of typographic layout in settings other than advertising must be investigated. Finally, typographic devices other than the ones investigated in the studies here are in need of further investigation.

No strong evidence exists for the hypothesized inverted U-shaped relationship between typographic layout and readability

No conclusive answer can be given to the question whether typographic layout and readability have a U-shaped relationship with each other. Support was found for the first half of the inverted U: the studies consistently showed that the more typographic cues were used, the better readable the ads were found. No consistent results were found for the second half of the inverted U: only in Study 3 a decrease in readability was found when too many signals were present. This finding was not replicated in the other studies, however. It may be that in an advertising setting the optimum of typographic cues has a wider range than expected. Advertising is known for its abundant use of typographic cues. In other genres, this optimum may be different. More research is needed into this matter, therefore.

8.2.2 The effects of typographic layout on text appreciation (RQ1b)

In Study 1, 5 and 6, the number of typographic signals was varied. In two of these studies, an increase in the number of typographic evoked a higher level of text appreciation. In Study 2, 3 and 4 typographic cues were investigated on their own and in interaction with each other. These studies also did not provide consistent results. Only Study 3 showed that type size and type weight interacted with each other. If only type size or
type weight was varied, text appreciation was found to increase; if both type size and type were varied and if both type size and type weight were not varied, text appreciation was found to decrease. This effect was only found for the toothpaste ad and not for the digital camera ad, however. In addition, these findings were not replicated in Study 4, in which type size and type weight were varied as well. In the other two studies no effects of typographic layout on text appreciation were found. For all studies, the effect sizes ($\eta^2$) varied between .02 and .23.

On the basis of these findings, it can therefore be concluded that (1) the effects of typographic layout on text appreciation are inconsistent; (2) effects of typographic layout on text appreciation are fairly small; (3) no strong evidence exists for the hypothesized inverted U-shaped relationship between typographic layout and text appreciation.

**Effects of typographic layout on text appreciation are inconsistent**

The studies showed inconsistent effects of typographic layout on text appreciation. The studies in which the number of typographic was investigated (Study 1, 5 and 6) showed an increase in text appreciation with the exception of Study 1. The studies in which they were varied systematically (Study 2, 3 and 4) only showed an interaction between type weight and type size in the toothpaste ad in Study 3. This was not replicated in the digital camera ad used in the same study, nor in Study 4. The results thus suggest that visual complexity indeed plays a role in affecting the appreciation of the ad, but that the increase in visual complexity should be sufficiently high to affect text appreciation. It seems that when only one or two devices are varied, the increase in visual complexity is not high enough to affect text appreciation. However, visual complexity was not assessed directly. Other mechanisms may account for the effect of typographic layout on text appreciation as well, such as novelty and surprise, or mechanisms that have not been identified yet. This may explain the inconsistent findings. Furthermore, some typographic cues may affect text appreciation directly, such as color or the use of a distinct type font. More research is therefore needed to determine the effects of typographic layout on text appreciation.

Similar to the findings for readability, the results of the studies suggest that typographic devices interact with each other. For instance, type size and type weight were found to interact with each other, and effects of typographic layout on text appreciation were strongest when the number of typographic cues was varied (instead of the presence or absence of specific cues). Again, the finding that sometimes typographic devices affected text appreciation and sometimes did not can be
explained by interactions with other variables. The same variables as identified for readability may also affect text appreciation, such as verbal complexity of the ad, product shown in the ad, appearance of surrounding ads and reader characteristics. In future research, therefore, these variables should be systematically varied as well.

**Effects of typographic layout on text appreciation are fairly small**
If typographic layout was found to affect text appreciation, the effects were fairly small. Approximately the same reasons as mentioned for readability may account for this finding: (1) typographic layout may have only just a small impact on text appreciation; (2) readers may be used to an abundant use of typographic devices in advertising; (3) the typographic manipulations were mostly modest; and (4) typographic devices such as color or type font (not investigated in the study) may exert greater impact on text appreciation. In future research, the effects of typographic layout in settings other than advertising must therefore be investigated. In addition, other typographic devices should be taken into account as well.

**No strong evidence exists for the hypothesized inverted U-shaped relationship between typographic layout and text appreciation**
No conclusive answer can be given to the question whether typographic layout and readability have a U-shaped relationship with each other. Support was found for the first half of the inverted U: the studies fairly consistently showed that the more typographic cues were used, the more the text was appreciated. No consistent results were found for the second half of the inverted U: only in Study 3 a decrease in text appreciation was found when too many signals were present. This finding was not replicated in the other studies, however. Again, it may be that in an advertising setting the optimum of typographic cues has a wider range than expected. Advertising is known for its abundant use of typographic cues. In other genres, this optimum may be different. This needs further investigation. Furthermore, as visual complexity was not assessed directly, other mechanisms (such as novelty or surprise) may account for the findings as well, which may explain why no strong support was found for the inverted U-shaped relationship.

**8.2.3 The effects of typographic layout on persuasion outcomes (RQ2)**
Again, the studies in which the number of typographic signals was varied (Study 5 and 6) consistently showed that the more typographic signals were present, the more persuaded readers were. In the studies in which typographic devices were systematically manipulated (Study 2, 3 and 4),
no effects on persuasion outcomes were found, except for the interaction in Study 3 - but this was not replicated in other studies. In all studies, it was unclear whether the manipulation of motivation/ability worked (for an elaborate discussion of this issue, see Section 8.3.3). For all studies, the effect sizes ($\eta^2$) varied between .02 and .15.

On the basis of these findings, it can therefore be concluded that (1) the effects of typographic layout on persuasion outcomes are inconsistent; (2) the effects of typographic layout on persuasion outcomes are fairly small; (3) it is impossible to identify the mechanism through which typographic layout affect persuasion outcomes on the basis of these studies.

**Effects of typographic layout on persuasion outcomes are inconsistent**

The studies show that effects of typographic layout on persuasion outcomes are inconsistent. The studies in which the number of typographic cues was investigated showed an increase in persuasion. The studies in which they were manipulated systematically only showed an interaction between type weight and type size in the toothpaste ad in Study 3, which was not replicated in the digital camera ad, nor in Study 4. Again, an explanation may be found in the possible interaction between typographic layout and other variables. Just as was the case for readability and text appreciation, variables such as verbal complexity of the ad, product shown in the ad, appearance of surrounding ads and reader characteristics may have interacted with typographic layout. In future research, therefore, these variables should be systematically varied as well.

**Effects of typographic layout on persuasion outcomes are fairly small**

Again, effects of typographic layout on persuasion outcomes were found to be fairly small. Approximately the same reasons as mentioned for text appreciation and readability may account for this finding: (1) typographic layout may have only just a small impact on persuasion outcomes; (2) readers may be used to an abundant use of typographic devices in advertising; (3) the typographic manipulations were mostly modest; (4) other typographic devices such as color (not investigated in the study) may exert greater impact on text appreciation. In future research, other typographic devices should be taken into account as well and manipulations of typographic layout should be made stronger.
Through what mechanism did layout affect persuasion outcomes?
The most important question with regard to persuasion outcomes is through what mechanism typographic layout is most likely to affect persuasion outcomes. As has been stated throughout the studies, all hypotheses (peripheral cue/ experiential cue/ selective processing/ post-exposure MOA) may account for the findings. This thesis can therefore not give a conclusive answer to this question.

An important reason why it is impossible to determine the mechanism through which typographic layout affects persuasion outcomes can be found in the manipulation of the level of elaboration through pre-exposure motivation or ability. In all studies, it was unclear whether the manipulation of motivation and ability worked sufficiently. It seems that in most studies, participants paid a considerable amount of attention to the ads. If this is indeed the case, the experiential processing hypothesis, feelings evoked by processing of the ad affect persuasion outcomes, seems to account for most of the findings, as this is the only mechanism that is likely to play a role under high-elaboration conditions. This does not mean, however, that the other mechanisms should be rejected. It may still be, that under conditions of low elaboration typographic layout acts as a peripheral cue, guides low-motivation readers in what information to attend to and thus stimulate them to selectively pay attention to some parts of the ad or stimulates them to pay more attention to the ad overall.

In future research, therefore, it is very important to pay close attention to the motivation/ ability manipulation (see Section 8.3.3). Furthermore, other methods such as eye-tracking may be used as a check on the manipulation (e.g. attention duration should be shorter for low-elaboration readers than for high-elaboration readers). Online measures such as these may also provide more insight into the question whether typographic layout can stimulate selective processing or stimulate overall attention paid to the ad.

8.3 Limitations of this study and suggestions for future research

8.3.1 Assumptions
In this thesis, the effects of typographic layout on the processing of product advertisements were studied. Several assumptions were made. First of all, it was assumed that typographic layout helps to signal the relations among and relevance of text parts. In this way layout helps the