Explaining advertising use

The question 'Why do people use advertising in various media as they do', will be answered in this chapter. The data from the second study (the survey) will be used to answer this question for newspaper, magazine, radio and television advertising. The concept ‘advertising use’ refers to the behavioural statements of the previous chapter and is constructed by means of factor scores\(^1\). The explanation of advertising use is based on the conceptual model of Figure 3.1 and will be analysed in two steps. First, advertising use will be related to evaluation of advertising (Section 5.1). Second, use and evaluation will be both related to the other concepts of the model: medium use and demographics (Section 5.2). This explaining of advertising use by means of evaluation, medium use and demographics will be done by means of regression analyses in order to limit the number of relations to be tested at once. LISREL is used to test this complete model with more than one dependent variable, and to give an indication of the fit between this model and the survey data. In the conclusion (Section 5.3), the results of explaining newspaper, magazine, radio and television advertising use will be compared in order to answer the following research question: ‘To what extent is advertising use related to evaluation of advertising and other user characteristics, such as medium use and demographics?’ By comparing these results the research question about intermedia comparison will be answered as well.
5.1 Use explained by evaluation of advertising

Evaluation of advertising was described in the previous chapter. It was shown that the respondents were most positive about newspaper advertising in terms of the information it provides and in terms of general appeal ('liking'). Television advertising on the other hand was seen as most negative and irritating. It was also shown that the ten belief statements could be reduced to the three factors \(^2\) ‘information’, ‘entertainment’ and ‘irritation’.

The hypothesis was formulated that advertising use will be directly influenced by the attitude people have with respect to advertising in a specific medium. Attitude – the degree of like or dislike – is expected to be directly influenced by the beliefs people hold with respect to the object concerned (i.e. advertising in a specific medium). In the conceptual model of Chapter 3, the hypothesis was shown that positive (negative) evaluated beliefs about advertising will result in a more (less) favourable attitude toward advertising, which in turn will be positively related to advertising behaviour ('use'). This means that beliefs about information and entertainment are expected to influence attitude ('liking') positively, while beliefs about irritation will be negatively related to attitude (see Figure 5.1).

![Figure 5.1: The expected mediation of attitude (liking)](image)

In this section, the relation between beliefs, attitude and advertising use will be analysed per medium. As was described in Chapter 3, the sample size differs somewhat per medium.
Newspaper advertising

The correlation matrix in the appendix shows that 'use' and 'liking' are correlated significantly (r=0.31, see Table A7.5). The belief factors are correlated significantly with 'liking' as well (r=−0.27, r=0.15 and r=0.31 for 'irritation', 'information' and 'entertainment', respectively), although the correlation coefficient for information is relatively low. All relations are in the expected direction.

A LISREL analysis was carried out to test the expected relations of Figure 5.1. Results of this analysis showed that the model of Figure 5.1 does not fit (χ²(3)=148.31, p=0.00). Only a saturated model, in which all belief factors relate to attitude as well as to use, appeared to fit the data. In other words: the expectation that the belief factors would only be indirectly related to use could not be accepted. Beliefs about newspaper advertising appeared to be indirectly as well as directly related to advertising use. Especially the belief factor 'entertainment' appeared to be strongly related to use, while 'irritation' is more strongly related to liking (see Table 5.1).

### Table 5.1: Results LISREL analysis (standardised path coefficients)

<table>
<thead>
<tr>
<th></th>
<th>attitude (i.e. liking)</th>
<th>use (i.e. attention)</th>
</tr>
</thead>
<tbody>
<tr>
<td>liking</td>
<td>—</td>
<td>0.10 *</td>
</tr>
<tr>
<td>bf irritation</td>
<td>−0.25 *</td>
<td>−0.14 *</td>
</tr>
<tr>
<td>bf information</td>
<td>0.14 *</td>
<td>0.16 *</td>
</tr>
<tr>
<td>bf entertainment</td>
<td>0.29 *</td>
<td>0.48 *</td>
</tr>
</tbody>
</table>

bf = belief factor, — = not applicable, * significant at the 0.05 level (based on LISREL estimates, Maximum Likelihood); Model statistics: model is saturated (AGFI=0.53); squared multiple correlation: R²_use=0.32, R²_liking=0.16.

In other words: this table shows that paying attention to newspaper advertising ('use') is specifically predicted by the expectations people have with respect to the entertainment function of newspaper advertising. Despite the fact that most respondents agree with the information function of newspaper advertising (see previous chapter), this function is less important for the explanation of their willingness to pay attention to newspaper advertising ('use').

This table also shows that 32% of 'use' is explained by the four evaluation variables 'liking', 'irritation', 'information' and 'entertainment'. The explained variance of 'liking', however, is relatively low: only 16% of the variance in this variable could be explained by the three belief factors.

Magazine advertising

The previous chapter showed that magazine advertising was positively evaluated. Most respondents were especially positive about the information function of magazine advertising. As was the case with newspaper advertising, magazine advertising does not irritate, probably because the
reader can decide when and how long to read the articles as well as the advertisements. This is in line with the finding that magazine advertisements are sometimes read, and sometimes skipped.

These types of behaviour (i.e. ‘use’)\(^5\) appeared to be moderately related to liking magazine advertising \((r=0.29, p<0.01)\); see Table A7.6 in the appendix\(^6\). The more respondents evaluate magazine advertising as positive, the more they are willing to look at magazine advertising. As expected, the attitude toward magazine advertising is negatively related to ‘irritation’ \((r=-0.20, p<0.01)\), and positively to ‘information’ \((r=0.20, p<0.01)\) and ‘entertainment’ \((r=0.25, p<0.01)\). To test whether these relations can be considered as fitting the data or whether relations are to be added, a LISREL analysis was carried out. As was the case with newspaper advertising use, the model of Figure 5.1 does not fit the survey data \((\chi^2(3)=115.00, p=0.00)\). The addition of relations between the belief factors and use eventually resulted in a saturated model. This means that – contrary to our expectations – it was shown that the mediating role of liking in explaining use is slight. The direct relations between the belief factors ‘information’ and ‘entertainment’, and ‘use’ are stronger than the indirect relations via ‘liking’ (see Table 5.2).

Table 5.2: Results LISREL analysis (standardised path coefficients)

<table>
<thead>
<tr>
<th></th>
<th>magazine advertising: attitude (i.e. liking)</th>
<th>use (i.e. attention)</th>
</tr>
</thead>
<tbody>
<tr>
<td>liking</td>
<td>—</td>
<td>0.13 *</td>
</tr>
<tr>
<td>bf irritation</td>
<td>-0.18 *</td>
<td>-0.13 *</td>
</tr>
<tr>
<td>bf information</td>
<td>0.18 *</td>
<td>0.36 *</td>
</tr>
<tr>
<td>bf entertainment</td>
<td>0.23 *</td>
<td>0.25 *</td>
</tr>
</tbody>
</table>

\(bf = \) belief factor, — = not applicable, * significant at the 0.05 level (based on LISREL estimates, Maximum Likelihood); model statistics: model is saturated (AGFI=0.62); squared multiple correlation: \(R^2_{use}=0.27, R^2_{liking}=0.12\).

Contrary to newspaper advertising, ‘information’ (instead of ‘entertainment’) appeared to be the most strongly related to magazine advertising use. The more respondents agree with the information function of magazine advertising, the more they claim to pay attention to magazine ads. As was the case with newspaper advertising, the dependent variable ‘use’ is moderately explained by the other variables in the model (namely 27\%). Moreover, ‘liking’ is weakly explained by the other variables (12\%).

Radio advertising

As was shown in the previous chapter, radio advertising is almost never avoided, and only sometimes listened to. Respondents generally do not pay a lot of attention to radio commercials. It was also shown that respondents do not have a strong opinion on radio advertising. They generally disagree a little with the positive statements about information and entertainment and are on average ‘neutral’ about the negative...
statements (beliefs) and their attitude towards radio advertising ('liking').

The Pearson correlation coefficients show that the belief factors 'information', 'entertainment' and 'irritation' are significantly related to the degree of like or dislike (attitude) (r=0.32, r=0.29 and r=-0.24, respectively). Attitude is also positively related to 'attention', and negatively - albeit to a lesser extent - to avoidance of radio advertising (r=-0.22 for 'attention' and r=-0.14 for 'avoidance', all significant at the 0.01 level). The third use variable 'physical avoidance' is not significantly related to 'liking' (see Table A7.7 in the appendix). These three use variables were based on a factor analysis showing that the behavioural statements could be reduced to three factors (see Table A7.2 in the appendix). Two of these factors summarised the statements about avoidance behaviour ('avoidance' and 'physical avoidance') and one factor the statements about paying attention to advertising.

Again a LISREL analysis was carried out to test the expected relations of Figure 5.1 between the beliefs, liking and use. Because the items with respect to radio advertising use could be reduced to three factors, the model of Figure 5.1 consists of three dependent use variables for radio advertising. Results show that this model does not fit ($\chi^2(12)=72.80$, p=0.00). As was the case with the print media, relations between the belief factors and use had to be added (see 'a' in Table 5.3). Six relations were added, resulting in a fitting model ($\chi^2(6)=11.70$, p=0.07).

### Table 5.3: Results LISREL analysis (standardised path coefficients)

<table>
<thead>
<tr>
<th></th>
<th>radio advertising:</th>
<th>use1 (i.e. liking)</th>
<th>use2 (i.e. avoidance)</th>
<th>use3 (i.e. physical avoidance)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>liking</strong></td>
<td></td>
<td>—</td>
<td>-0.11 *(a)</td>
<td>0.01</td>
</tr>
<tr>
<td><strong>bf irritation</strong></td>
<td>-0.23 *</td>
<td>0.09 *</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td><strong>bf information</strong></td>
<td>0.31 *</td>
<td></td>
<td>-0.10 (a)</td>
<td>0.12 (a)</td>
</tr>
<tr>
<td><strong>bf entertainment</strong></td>
<td>0.28 *</td>
<td>0.19 * (a)</td>
<td>-0.10 (a)</td>
<td>-0.11 (a)</td>
</tr>
</tbody>
</table>

**bf = belief factor, — =not applicable, a = added (based on Modification Index): * significant at the 0.05 level (based on LISREL estimates, Maximum Likelihood); model statistics: $\chi^2(6)=11.70$, p=0.07, AGFI=0.97; Squared multiple correlation: $R^2_{use1}=0.12$, $R^2_{use2}=0.03$, $R^2_{use3}=0.04$, $R^2_{liking}=0.23$.**

This table shows that – contrary to print advertising – primarily liking is explained by this model (explained variance is 23%), as well as being most strongly (and significantly) related to 'information', 'entertainment' and 'irritation'. As was the case with the other media, liking is not strongly related to use. Comparing the three use variables, liking appeared to be most strongly (negatively) related to avoidance of radio advertising. In other words: the less the respondents like radio advertising, the more they state that they avoid radio commercials. Of the three use variables, attention to radio advertising (i.e. 'use1') is
explained relatively well by evaluation of radio advertising (explained variance is 12%). The more respondents believe in the entertainment and information qualities of radio advertising and the more they like radio advertising, the more they are willing to pay attention to radio advertising. The other two use variables are hardly explained.

**Television advertising**

Contrary to radio advertising, television advertising is often avoided by zapping or leaving the room (see Chapter 4). And when confronted with television advertising, commercials will only be watched sometimes. It was also shown that television advertising was on average negatively evaluated in terms of liking (attitude), information and entertainment (belief factors). Primarily the belief statements about irritation are generally agreed upon. The correlation coefficients of Table A7.8 in the appendix show that 'liking' correlates positively (and significantly) with 'attention' (i.e. use1) and negatively with 'avoidance' (i.e. use2) (r=0.21 and r=-0.30, respectively). The third use variable ('physical avoidance'), however, is not related to liking at all. As expected, the belief factors 'information' and 'entertainment' have a significant positive correlation with 'liking', while 'irritation' correlates negatively with this variable (r=0.27, r=-0.37 and r=-0.14, respectively).

To see whether the combination of these relations (in other words: the model of Figure 5.1) fits, a LISREL analysis was used. This analysis shows that the model does not fit ($\chi^2(12)=96.02$, p=0.00), nor when direct relations between the belief factors and the use variables were added ($\chi^2(3)=13.23$, p=0.01). The model only fits when saturated, or when adding relations between the uncorrelated use variables. In other words: this poor fit of the television model shows that the hypothesis of Figure 5.1 could not be accepted.

In Table 5.4, the standardised path coefficients and other model statistics with respect to television advertising are presented. It shows that – conform the model with respect to radio advertising – liking is better explained by this model's variables than use is (explained variance of liking is 23%).

**Table 5.4: Results LISREL analysis (standardised path coefficients)**

<table>
<thead>
<tr>
<th></th>
<th>attitude (i.e. liking)</th>
<th>use1 (i.e. attention)</th>
<th>use2 (i.e. avoidance)</th>
<th>use3 (i.e. physical avoidance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>liking</td>
<td>-</td>
<td>0.07 *</td>
<td>-0.18 *</td>
<td>0.04</td>
</tr>
<tr>
<td>bf irritation</td>
<td>-0.14 *</td>
<td>-0.09 * (a)</td>
<td>0.16 * (a)</td>
<td>0.12 * (a)</td>
</tr>
<tr>
<td>bf information</td>
<td>0.27 *</td>
<td>0.10 * (a)</td>
<td>-0.12 * (a)</td>
<td>-0.02 (a)</td>
</tr>
<tr>
<td>bf entertainment</td>
<td>0.37 *</td>
<td>0.28 * (a)</td>
<td>-0.18 * (a)</td>
<td>-0.05 (a)</td>
</tr>
</tbody>
</table>

bf = belief factor, — = not applicable, a = added; * significant at the 0.05 level (based on LISREL estimates, ML); model statistics: $\chi^2(3)=13.23$, p=0.01 (this model only fits when saturated or when a relation between 'use1' and 'use2' is added); AGFI=0.93; squared multiple correlation: $R^2_{use1}=0.12$, $R^2_{use2}=0.15$, $R^2_{use3}=0.02$, $R^2_{lik}=0.23$. 

Mass Media Advertising: Information or Wallpaper?
To sum up
This section showed that the hypothesis of Figure 5.1 – namely that the more people believe that advertising in the medium is informative, entertaining and not irritating, the more they like advertising, and (thus) the more they are willing to use advertising – could not be accepted. For all media, (some of the) belief factors appeared to be directly related to use. It was also shown that use (i.e. attention) and liking could only be moderately explained by evaluation of advertising. Comparing the model statistics of the four media, it shows that for print, advertising use is better explained than liking (about 30% versus about 15%). For broadcast on the other hand, liking is better explained (23% versus about 13% for ‘attention’). Avoidance of broadcast advertising is hardly explained by evaluation of advertising. The only exception being the avoidance of television advertising by zapping, muting or not watching (‘use2’), which is for 15% explained by evaluation of television advertising. Yet, it indicates that 85% is explained by other variables. In the next section, advertising use will be further explained by adding medium use and demographics to the analyses.

5.2 Further explaining advertising use

In order to test the remaining relations of the conceptual model, several demographics and medium use variables were related to use and attitude. Based on the meta-analysis of Chapter 2, it is expected that younger respondents would be more positive about advertising and would pay more attention to advertising. Men are expected to be more negative about advertising in terms of their attitude toward advertising and behaviour. Besides the demographics age and sex, the number of persons in a household (‘size of household’) is expected to be (negatively) related to avoidance, while the role of education is not clear. Also the effect of medium use – in terms of amount and frequency of use – is not clear. Some studies in Chapter 2 showed that on the one hand heavy medium users will avoid (television) advertising more often. On the other hand, other studies showed that the more a medium is used, the more advertising is liked and the more attention is paid to advertising (various media).

In this study, medium use was measured by asking the respondents how many days of the week they generally read their newspaper/magazine – i.e. how often they listen to the radio or watch television (‘frequency’). After this first medium use question, the respondents were asked “And when you read your newspaper/magazine (listen to the radio or watch television), how many minutes do you spend on it, on average?” (‘duration’). Besides the variables ‘sex’, ‘age’, ‘education’ and ‘size of household’, the variable ‘working hours’ was added to this study. The in-depth interviews of the first study indicated that time left for medium use could be an important variable in...
explaining evaluation and use of advertising. This relation between time left and medium use was shown in the Dutch Time Budget Survey as well (SCP, 1996): an increased amount of leisure time is spent on watching television and to a lesser extent on reading.

The explanation of advertising use by evaluation of advertising (i.e. beliefs and liking), medium use and demographics will be analysed in two steps. First, a regression analysis for each dependent variable will be carried out in order to limit the number of relations to be tested at once. Second, based on the regression results the complete model with more than one dependent variable will be tested by means of a LISREL procedure. The results of the different regression results are listed in the appendix, while the LISREL results are (per medium) presented in this section.

Newspaper advertising
In order to see to what extent the survey data fits the conceptual model of Figure 3.1 when more than one dependent variable is taken into account, an analysis of covariance structures (LISREL) was used. This analysis is based on all variables which were included in the regression models (see appendix, Table A7.9). In sum, 13 relations were included in the causal model. Results of the LISREL procedure show that this model fits well ($\chi^2(12)=6.49$, $p=0.89$, AGFI=0.99; $R^2_{use}=0.33$, $R^2_{liking}=0.17$, $R^2_{irritation}=0.02$, $R^2_{information}=0.04$, $R^2_{entertainment}=0.02$), although not very parsimoniously (PGFI=0.33). Based on the LISREL estimates (Maximum Likelihood), it appeared that two relationships are not significant, namely the relationship between ‘education’ and ‘use’, and ‘education’ and ‘information’. These relations are not included in the next picture (Figure 5.2). The relations shown are significant at the 0.05 level. The values are standardised path coefficients.
This model shows that especially the belief factor ‘entertainment’ directly relates to advertising use. Information, the absence of irritation and liking relate to this variable as well, albeit to a lesser extent. The three belief factors are also indirectly related to use, via liking. This model shows that respondents claim to pay more attention to newspaper advertising (‘advertising use’), and like newspaper advertising more, if they believe in the entertaining and information function of newspaper advertising and the absence of irritating elements.

This model also shows that advertising use is not directly related to medium use (‘frequency’) and demographics (‘age’). Advertising use appeared only (to a small extent) to be indirectly related to these variables via the three belief factors. Moreover, Figure 5.2 shows that younger respondents are more positive about newspaper advertising (in terms of entertainment and absence of irritation). This finding is in line with the expectation based on the meta-analysis which showed that age is negatively related to evaluation of advertising. Finally, Figure 5.2 shows that the more often respondents read a newspaper, the more positive they are about the information function of newspaper advertising and the less they believe newspaper advertising irritates. In other words, frequent medium users are more positive about advertising (in terms of information and absence of irritation). By frequently using the medium, these people possibly have learned to evaluate the advertising content as informative and not irritating (compare the feedback function in Figure 1.1, based on the Expectancy Value theory).
Based on the regression results (Table A7.10), several relations were added to the saturated model of Table 5.2. This extended model is presented in Figure 5.3. The LISREL results show that this model fits well ($\chi^2(10)=5.70$, $p=0.84$; AGFI=0.99, PGFI=0.28; $R^2_{\text{use}}=0.29$, $R^2_{\text{liking}}=0.13$, $R^2_{\text{irritation}}=0.02$, $R^2_{\text{information}}=0.01$). The relations between 'education' and 'information', and 'education' and 'attention' are not significant.

The most important difference between this figure for explaining magazine advertising use and the previous one for explaining newspaper advertising use is the stronger role of the belief factor 'information'. While newspaper advertising use was most strongly related to 'entertainment', magazine advertising use is most strongly related to 'information'. This means that respondents who differ in their opinion on the information qualities of magazine advertising, differ in their willingness to pay attention to this type of advertising. As was the case with newspaper advertising, demographics add little to the explanation of magazine advertising use (compare $R^2_{\text{use}}$ of 27% in Table 5.2 with $R^2_{\text{use}}$ of 29% in this figure). Only 'working hours' is directly related to use, indicating that the more hours respondents work per week (on average), the more they claim to pay attention to magazine advertising.

In short, Figure 5.2 shows that respondents pay more attention to magazine advertisements ('use') when they perceive magazine advertising as relevant to them in terms of expected information and expected entertainment. Moreover, they intend to use magazine
advertising more often when they are more positive about this medium’s advertising in terms of liking and (absence of) irritation.

**Radio advertising**

Based on the regression analyses presented in the appendix (Table A7.11), some hypothesised direct relations could be accepted and some were rejected. The remaining 22 relations were tested by means of a LISREL analysis, which shows that this model for explaining radio advertising use just fits ($\chi^2(48)=65.11, p=0.05$; $R^2_{use1('attention')}=0.15$; $R^2_{use2('avoidance')}=0.06$; $R^2_{use3('physical avoidance')}=0.06$; $R^2_{liking}=0.25$; $R^2_{information}=0.02$). Although the fit is good enough (AGFI=0.96), this model is not very parsimoniously (PGFI=0.45). Three relationships appeared to be not significant. Three and three relations with standardised path coefficients lower than 0.10 are not included in Figure 5.4.

Because the three types of radio advertising use are included in one model, its graphical presentation is rather complex. In short, this figure shows that paying attention to radio commercials (‘use1’) is directly influenced by the respondents’ beliefs about the amusing and funny qualities of radio commercials (‘entertainment’) and their beliefs about providing information. Besides these two relatively strong relations, ‘attention’ is negatively related to ‘age’ and ‘irritation’, and positively related to ‘frequency’. In other words: the more often people listen to the radio, the less they think radio commercials irritate and the younger they are, the more they pay attention to these commercials. Besides ‘age’, ‘working hours’ and ‘size of household’ are indirectly related to attention.

**Figure 5.4: Explaining radio advertising use (n=500)**
(via 'information'), indicating that people believe more in the information qualities (and thus are willing to pay more attention to radio commercials) when they work more hours per week. This is also the case for respondents of larger households.

Liking radio advertising is directly influenced by the presence of information and entertainment in radio commercials, and the absence of irritating elements. In other words: the more people believe that radio commercials can offer them information ('information') and/or something to be amused about ('entertainment'), the more they are positive about radio advertising ('liking'). They are also more positive about radio commercials when they believe less strongly that radio advertising is irritating ('irritation'). Besides these belief factors, 'liking' is directly influenced by the age of the respondents: the younger they are, the more they like radio advertising. Finally, 'working hours' can explain some of the variance in 'liking', albeit to a lesser extent and only indirectly via 'information'. The other dependent variables in this model ('use2' and 'use3') can hardly be explained ($R^2$ is 6% each). Relations found are between avoidance and less liking, less entertainment, less working hours and less duration of use.

**Television advertising**

First several regression analyses were carried out. The results of these analyses are presented in the appendix (Table A7.12). In order to estimate the indirect effects on television advertising use as well, the remaining complete model was then tested by means of LISREL. These results show that this model of 21 relations fits ($\chi^2$(30)=44.97, $p=0.24$, AGFI=0.97, PGFI=0.38; $R^2_{\text{use1('attention')}}=0.16$, $R^2_{\text{use2('avoidance')}}=0.17$, $R^2_{\text{use3('physical avoidance')}}=0.04$, $R^2_{\text{liking}}=0.26$, $R^2_{\text{entertainment}}=0.06$, $R^2_{\text{information}}=0.02$). The next figure shows all significant relations, which a standardised path coefficient of at least 0.10.
Paying attention to television advertising ('use1') is primarily explained by the respondents' beliefs about the entertaining qualities of television advertising as well as their age. Figure 5.5 shows that younger respondents are more positive about television advertising (in terms of 'entertaining' and 'liking'), and are more willing to pay attention to television advertising. ‘Attention’ is also – albeit to a lesser extent – directly related to household size (the more persons, the more attention) and the other two belief factors (information and the absence of irritation).

Contrary to radio advertising, avoidance of television advertising (i.e. 'use2') could be explained as well. Figure 5.5 shows that avoidance is negatively related to 'entertainment', 'liking', 'information' and positively related to 'irritation'. In other words: the more respondents evaluate television advertising negatively (in terms of the belief factors and liking), the more they avoid television advertising by zapping, muting, or not watching. Besides a negative evaluation, avoidance is negatively related to the size of the household. It appeared that the more members in a household, the less television advertising will be avoided. This effect is confirmed by studies on zapping behaviour, which show that zapping occurred less when television is watched in larger households (see Figure 2.1, Chapter 2).
Intermedia comparison

Four models to explain advertising use in four media were described. To facilitate the comparison, the standardised total effects of all variables on liking and advertising use are listed in the appendix. Table A7.15 shows that newspaper advertising use was mainly influenced by the beliefs about the entertaining qualities of newspaper advertising (total effect of 0.51), while magazine advertising use was most strongly related to beliefs about information (0.39). The attitude towards advertising (‘liking’) is for both print media most strongly related to the entertainment function of print advertising (0.29 and 0.23, respectively) and the absence of irritation (especially for newspaper advertising: -0.25). The explained variance of use in both models was acceptable (33% and 29%, respectively), although it indicates that more than half of the variance in use is explained by other variables.

Advertising use in the broadcast media (Table A7.16) was divided into paying attention to advertising and avoidance of advertising. For radio advertising, attention (‘use1’) was especially related to beliefs about entertainment (0.24) and information (0.22), while both types of avoidance (‘use2’ and ‘use3’) could barely be explained by the variables of the model. It was shown that avoidance of radio advertising was most strongly related to demographics: respondents who work fewer than average claim to avoid radio advertising more often than others. Avoidance only relates to beliefs about radio advertising via ‘liking’, which relates relatively strong to beliefs about information (0.29), entertainment (0.25) and absence of irritation (−0.22), and age (−0.21).

Attention to television advertising (‘use1’) was most strongly related to the age of the respondent (−0.28) and entertainment (0.27). It was shown that younger respondents and respondents who evaluate television advertising as entertaining generally pay more attention to television advertising. Avoidance of television advertising (‘use2’) especially relates to disliking (−0.23 for ‘liking’) and irritation (0.19). Liking on was most strongly explained by beliefs about entertainment (0.34), and – to a lesser extent – beliefs about information (0.27) and the age of the respondent (−0.23). Contrary to print media, attention to broadcast advertising could not be explained very well by variables in the model (15% and 16%, respectively). Of all media, newspaper advertising use could be explained best of all (33%; magazine advertising use is 29%). Remarkably, demographics and medium use were not strongly related to print advertising use. Demographics – especially age – were more important in explaining broadcast advertising use. Medium use appeared to be only (somewhat) important for radio advertising.

The previous comparisons of total effects are summarised in the next table. This table shows the relative importance of each effect (‘1’ is most important, ‘5’ is least important’ and ‘0’ is no effect or very weak effect).

Mass Media Advertising: Information or Wallpaper?
All in all, the belief factors ‘entertainment’ and (to a lesser extent) ‘information’ are most important in explaining attention to advertising in all four media. As was predicted by the Expectancy Value theory of the first chapter, expectations regarding the gratifications offered by the medium content (i.e., advertising) as well as its evaluation influence the use of this content. Remarkably, ‘age’ appeared to have the most (total) effect on paying attention to television advertising. As expected, younger respondents were more positive about television advertising than older respondents, and were more willing to pay attention to television advertising. This effect is possibly caused by the television environment they have grown up with (see also next section).

Avoidance of (broadcast) advertising is mainly influenced by the beliefs as well, although not as strongly as paying attention to. To put it simply: respondents claim to avoid advertising more often when they do not believe in the ‘entertainment’ function of radio advertising and believe in the irritation effect of television advertising. Remarkably, working hours appeared to have the most strong total effect on avoidance of (radio) advertising: the less hours respondents work per week, the more they claim to avoid radio advertising. This rather unexpected effect can be explained by radio listening at work or whilst driving to work (see also next section).
5.3 Conclusion and discussion

A brief answer to the leading question of this chapter ‘Why do people use advertising?’ is ‘Because they like it’. Results of the survey generally show that the more people like advertising in a medium and the more they evaluate it as informative, entertaining and not irritating, the more people are willing to pay attention to advertising. Medium use and demographics added only little to this explanation. Per medium this explanation varies a little, although differences mainly exist between the print and broadcast media.

This chapter aimed to answer two research questions. First: to what extent is advertising use related to people’s evaluation of advertising (1a) and to other user characteristics, such as medium use and demographics (1b)? Second: this chapter aimed to compare media differences (2). The question is to what extent the explanation of advertising use differs in the four different media. In this section, the most important results will be repeated in order to answer these questions.

Question 1a: The role of people’s evaluation of advertising
To test the relation between advertising use and evaluation, it was hypothesised that use would be indirectly related to the beliefs about advertising via attitude (i.e. liking). Results showed that this hypothesis could not be accepted. The beliefs appeared to be more strongly related to use than to liking. Results also showed that advertising use could only be explained to some extent by evaluation of advertising. The explained variance of use varied between 32% for newspaper advertising and 19% for radio advertising. Newspaper advertising use appeared to be most strongly related to beliefs about the entertaining qualities of newspaper advertising. Despite the fact that the beliefs about the information function of newspaper advertising is most agreed upon (see previous chapter), it was shown that the variation in entertainment is a better predictor of the variation in use. This relation indicates that most people perceive newspaper advertising as informative, but will pay (more) attention to newspaper ads when they evaluate these ads as entertaining.

Magazine advertising use on the other hand was most strongly related to beliefs about the information function. In other words: people will pay more attention to magazine advertising when they expect to be informed by the ads. In the broadcast models, the variance in liking could be better explained by the beliefs about information, entertainment and (absence of) irritation than attention and avoidance.

Based on these findings, the previous hypothesis is reformulated in the expectation that liking as well as beliefs about entertainment and information are positively related to use, while beliefs about irritation are negatively related to use (hypothesis 1a). Since ‘advertising use’ refers...
to ‘attention’ (all media) as well as to ‘avoidance’ (broadcast advertising), it is also hypothesised that evaluation is be positively related to ‘attention’ and negatively to ‘avoidance’ (hypothesis 1b).

Question 1b: The role of medium use and demographics
In order to further explain advertising use, some hypotheses were added to the previous relation between evaluation and use (hypothesis 1). It was further hypothesised in Section 5.2 that age would be negatively related to these concepts (hypothesis 2), that men would be more negative about advertising in terms of evaluation and use (hypothesis 3), that the relation between household size and these concepts would be positive (hypothesis 4), and that time left for medium use would be positively related to evaluation and use (hypothesis 5; measured as a negative relation between working hours and evaluation and use). Besides these five hypotheses, it was expected that education (hypothesis 6) and medium use (hypothesis 7) would be related to evaluation and use. The directions of these two effects were not predicted, because a negative as well as a positive relation were found in the literature. These expected relations as well as the results are summarised in Table 5.6.

Table 5.6: Conclusions on explaining use and evaluation of advertising in four media

<table>
<thead>
<tr>
<th>hypotheses:</th>
<th>newspaper</th>
<th>magazine</th>
<th>radio</th>
<th>television</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) evaluation</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>(2) age</td>
<td>0</td>
<td>0</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>(3) sex (‘men’)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>(4) size household</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>(5) time left</td>
<td>0</td>
<td>1</td>
<td>1 a</td>
<td>1 a</td>
</tr>
<tr>
<td>(6) education</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>(7) medium use</td>
<td>0</td>
<td>0</td>
<td>1 a</td>
<td>1 a (e)</td>
</tr>
</tbody>
</table>

0=rejected, 1=accepted, 1a=accepted, but in reversed direction (hypothesis 5) or specification of direction, namely positive (hypothesis 7); (e) = only evaluation.

Regression and LISREL analyses showed that evaluation of advertising was significantly related to advertising use and in the expected direction (see ‘1’ in Table 5.6). As was mentioned before, a positive evaluation results in ‘positive’ use of advertising in terms of paying more attention to it and less avoidance. The second hypothesis was accepted as well; younger people are more positive about advertising and are more willing to pay attention to advertising (especially broadcast). Although results indicated that men are more willing to avoid advertising, this relation was not significant. Therefore, the third hypothesis could not be accepted (‘0’). Household size (hypothesis 4) was not significantly related to print advertising use, but did relate significantly (and in the expected direction) to television advertising use (‘1’). It was shown that larger households were more
positive about the information function of radio advertising. It was also shown that household size was positively related to television use (namely positively to attention and negatively to avoidance). The fifth hypothesis was accepted, because it was shown that time left (i.e. the number of working hours per week) significantly relates to evaluation and advertising use (for three of the four media). It appeared however that this relation was negative instead of positive. It was shown that the fewer hours a person spends on working – and thus the more time left per week – the less this person uses magazine advertising or broadcast advertising (in terms of more avoidance). On the one hand, this relation could mean that time left for medium use (and thus advertising use) is not determined by the hours worked. On the other hand, this positive relation between working hours and use could indicate that advertising is used at work and to save time and is therefore more 'useful' for people with less time available for medium use.

Finally, education and medium use were expected to relate to evaluation and use without specifying the direction of these relations. Results show that education was not significantly related to one of the dependent variables. This hypothesis could therefore not be accepted. Medium use on the other hand appeared to be somewhat related to radio advertising use. It was shown that frequency of radio use was positively related to paying attention to radio commercials, while duration of radio use was negatively related to avoidance of radio commercials. The seventh hypothesis was therefore accepted (for radio advertising), with the addition that medium use positively influences advertising use. The relations between medium use (frequency or duration of use) and use or liking of the other types of advertising were not significant or extremely weak.

Finally, it was shown that medium use and demographics did not add much to the explanation of advertising use, especially not for print advertising. The explained variance increased by 1 percent point for print advertising. However, the explained variance of broadcast advertising use increased by 8 and 6 percent points by expanding the model (for radio and television advertising, respectively).

**Question 2: Intermedia comparison**

By answering the previous question, it was shown that the explanation of advertising use differs per medium. It was expected that print and broadcast would differ – inter alia – as a result of the difference in the control people perceive in using the medium and its advertising content ('internal pacing' vs. 'external pacing'). As expected, results show that the main differences were found between print and broadcast media. Prudence however is called for, because the dependent variable 'advertising use' is not measured in exactly the same way for print and broadcast (see previous chapter for exact statements used). Moreover, factor analyses showed that print advertising use consisted of one factor while for broadcast advertising more factors emerged (attention as well
as two types of avoidance). Despite these differences in operationalisation, it was generally shown that evaluation – in terms of entertainment – and age were important in explaining attention to broadcast advertising, while evaluation in terms of the entertainment and information functions of advertising related more strongly to attention for print advertising. The implication of this finding in terms of the pacing differences is that the information function of advertising is only relevant when the medium allows the user some degree of control (print media are ‘search media’ or media with internal pacing). When advertising is only displayed to the medium user (broadcast media are ‘display media’ or media with external pacing), a general evaluation in terms of (dis)liking and (absence of) irritation is more appropriate. Expectations (‘beliefs’) concerning information or entertainment are of no use since medium users are not allowed to determine for themselves when and for how long they are exposed to the commercials.

Another difference between print and broadcast advertising is the extent to which the other user characteristics add to the explanation of use. It was shown that these other characteristics hardly influence the variation in print advertising use (‘attention’) at all but did influence broadcast advertising use (‘attention’). Especially the demographic ‘age’ appeared to be related to broadcast advertising use. As was shown in the meta-analysis of Chapter 2, youngsters are more positive about advertising and will therefore pay more attention to advertising. This age difference can be explained by the fact that young adults were raised in a multimedia environment and therefore used to the different visual and auditory stimuli of the display media (see for instance: Neijssel & Smit, 1998). This difference in acceptance of stimuli does not play an important part in using print media.

Size of household was only related to television advertising use, while medium use only relates to radio advertising use. Both effects can be explained by the nature of medium use. While television is often watched in company (in larger households), the other media are more often used alone. Studies on zapping showed that this kind of avoidance behaviour occurred less often when more people are watching the program (see Chapter 2). As was mentioned in the previous chapter, radio is mostly used as background medium in which advertising is accepted as part of this auditory ‘wallpaper’. The ‘heavy’ radio listeners probably accepted radio advertising as part of radio broadcasting (otherwise they would have listened less to the radio in general). Moreover, those who are irritated by radio advertising, will possibly listen less to the radio (and thus pay less attention to radio advertising).

In conclusion, the results of the second study showed that about 30% of the variance in advertising use could be explained by the evaluation of advertising in that medium and some of the other user characteristics. Advertising use was conceptualised in this chapter as a general indication of what people claim they will do when confronted with...
advertising in that particular medium. In terms of attitude theories, this could be interpreted as the behavioural component of the attitude construct or the attitude towards behaviour. In this sense, some might say that it is not surprisingly that beliefs, general evaluation and general advertising behaviour are related to each other. The next question would then be to what extent these attitudinal components are related to 'actual' noticing of advertising. If this general advertising behaviour were unrelated to actually noting specific advertisements, it would 'only' be an attitude construct. However, if these variables are related, general advertising behaviour can be seen as an indicator of (actual) behaviour. This relationship will be dealt with in the next chapter.
1 'Advertising use' is constructed by means of the general behavioural statements as described in the previous chapter (see Section 4.2.2). The estimation of last time use (Section 4.2.1) is not used, because of the difficulty of the respondents in giving this estimation, resulting in a lot of missing values. The behavioural statements were reduced to one or more factors per medium by means of a factor analysis (Principal Component Analysis with Varimax rotation). The results of the factor analyses per medium are presented in the appendix (see Table A7.1 and Table A7.2). The advantage of PCA with Varimax rotation is that different components are not correlated and therefore do not explain part of the variance of the other components (Knippenberg & Siero, 1994). Moreover, a correlation was calculated between the factor based on factor scores and the computed summary score of the individual items to test whether these factors are unjustly 'forced' in a situation of independence. This is not the case since most correlation coefficients are higher than 0.90 (see appendix, Table A7.3 in the appendix).

2 The factors are based on factor scores (see Table A6.4 in the appendix). These belief factors correlate highly with the variables based on summary scores of individual items (see Table A7.4 in the appendix).

3 See results factor analysis in appendix (Table A5.1). This 'use' factor refers to attention given to newspaper advertising.

4 All LISREL analyses in this dissertation are based on the covariance matrices. LISREL analysis can be used to test structural models. The causality of the relations in non-experimental research is based on theory. In the analysis it is tested to what extent the theory (the model) fits the data. In a LISREL model, the Adjusted Goodness of Fit (AGFI) varies between 0 (no fit) and 1 (perfect fit). A fitted model is further characterised by a probability (p) value (belonging to the $\chi^2$) of more than 0.05. See for information about LISREL: Boomsma, 1989; Saris & Stronkhorst, 1984.

5 See results factor analysis in appendix (Table A7.1). This 'use' factor refers to attention given to magazine advertising.

6 See results factor analysis in appendix (Table A7.2). As was the case with radio advertising use, this factor analysis yielded three factors ('attention', 'avoidance' and 'physical avoidance').

7 'Sex' is a dichotomous variable (1 means 'men' and 0 means 'women'). 'Job' is a dichotomous variable as well, indicating that 1 means having a job (part time or full time, housework was not considered as having a job) and 0 means having no job. Those who have a job were asked how many hours they work on average per week, overtime not included ('working hours', 0–80 hours). 'Education' existed originally of eight categories and is for this analysis coded as 'low' (1), 'medium' (2) and 'high' (3). The other demographics were measured as continuous variables.

8 The advantage of using regression analysis (method: Backward) is to see to what extent the explanation of the different dependent variables (Section 5.1) is increased by adding demographics and medium use to the list of predictors. The
other (pragmatic) reason is that the results of these regression analyses can be used to reduce the number of relations to be tested in the LISREL procedure.

9 Exclusion of these two relations (and thus exclusion of the variable ‘education’) still results in a fitting model ($\chi^2(9)=6.27$, $p=0.71$; AGFI=0.99, PGFI=0.32).

10 Exclusion of these two relations (and thus exclusion of the variable ‘education’) still results in a fitting model ($\chi^2(5)=3.25$, $p=0.66$; AGFI=0.99, PGFI=0.18).

11 Exclusion of these three relations (and thus excluding the variables ‘sex’ and ‘education’) still results in a fitting model ($\chi^2(35)=32.48$, $p=0.59$; AGFI=0.98, PGFI=0.44). For information about all relations, see: Table A7.13 in the appendix.

12 Exclusion of the not significant relation (and thus excluding the variable ‘sex’) still results in a fitting model ($\chi^2(25)=36.89$, $p=0.06$; AGFI=0.97, PGFI=0.37). The complete model is presented in the appendix, Table A7.14.