**Abstract**

According to the South African health organisation loveLife, billboards with cryptic messages that the target group finds difficult or impossible to understand will give rise to dialogue with peers and parents. According to Hoeken et al. (2009), however, perceived comprehension is a necessary condition for such dialogues. These contradictory views were investigated in an experiment. Five loveLife billboards, together with a questionnaire, were presented to 149 first-year university students. Contradictory to loveLife's supposition, and consistent with Hoeken et al.'s assumption, a positive correlation was found between perceived comprehension and the respondents' inclination to dialogue.

**Key words:** Billboards, comprehension, cryptic messages, dialogue, HIV/AIDS, loveLife, rhetorical figures

**INTRODUCTION**

The most recent large-scale study of HIV/AIDS prevalence in South Africa (Shisana et al. 2009) shows that general knowledge about HIV/AIDS in the country is still far from optimal. While the percentage of respondents who passed a fairly easy HIV/AIDS knowledge test in 2005 was 64.6, the percentage of respondents passing the same test in 2008 was 44.4. South African youth were no exception in this respect. In 2005, 66.4 per cent of those interviewed in the 15–24-year age group passed the HIV/AIDS knowledge test. In 2008, the percentage of respondents in this group who passed the test was 42.1. Poor knowledge of HIV/AIDS-related issues constitutes a serious risk factor in South Africa, with its high rate of infection. Effective education is vital, not only to combat the backlog in information, but also to change negative attitudes regarding, for instance, HIV testing and safe sex.

One of the largest organisations in South Africa that tries to deal with this lack of knowledge is loveLife. loveLife aims to positively influence adolescent sexual behaviour by advocating a new lifestyle based on informed choice, shared responsibility and positive sexuality. The organisation focuses on South African youth, more specifically the group aged 12–17 years. Its ultimate goal is to drastically reduce the rate of HIV infections among young South Africans (cf. Stadler & Hlongwa 2002). Its strategy is defined as follows (loveLife n.d.):

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Moving beyond the failed ‘do or die’ messages of the past, loveLife takes the straightforward approach in addressing the underlying factors that fuel the spread of HIV, teenage pregnancy, and sexually transmitted diseases, including society’s reluctance to address youth sexuality, the impact of peer pressure and sexual coercion, and the obstacles that keep young people away from South Africa’s public health clinics. [...] Despite HIV/AIDS and other social problems such as poverty or unemployment, surveys consistently show that young South Africans are highly optimistic about their futures. loveLife’s message reflects this powerful optimism, motivating young people to accept sexual responsibility as an essential part of a healthy lifestyle that will help them to achieve their goals and aspirations.

The ‘do or die’ messages in the first line of this citation refer to intimidating messages containing a fear appeal. loveLife apparently does not believe in fear appeals; it opts for a positive approach, as is indicated by the organisation’s name. loveLife also opts for a multimedia approach, using radio, TV and magazines, as well as billboards, of which about 1 700 are distributed across South Africa (loveLife n.d.).

In this article we investigate the effects of loveLife’s billboards. The billboards are meant to trigger discussion and dialogue, hence the recurring slogan Talk about it. The aim is to encourage people – especially young people – to talk more about sexuality, preferably from a healthy, positive perspective. They should also talk about sexuality-related issues such as teen pregnancies, STDs, HIV/AIDS and the use of contraceptives. loveLife’s aim is not only to stimulate dialogue among young people, but also between young people and their parents, lecturers, teachers and other role players (loveLife n.d.).

One of the ways in which loveLife tries to elicit this kind of dialogue is by using billboards of a cryptic nature. The combinations of text and visuals have been chosen in such a way as to make young people curious, set them thinking and eventually start them talking. In the words of Refilwe Africa, editor of the loveLife magazine Uncut (cited in Hollemans 2005):

We want people to think about our posters. Either they understand it from first-hand or they get angry and say: I do not know what you are trying to say. At some point in our campaign, we will get people to wonder. This creates conversation between parents and children, dialogue between peers. That is exactly what we want to achieve, that people talk about HIV/Aids and sex.

As shown by Van Enschot (2006) in her dissertation on rhetorical figures in advertising, it is general practice in modern commercial advertisements to use text and images inviting readers and viewers to stop and think about the cryptic message presented. As an example, see the Dutch advertisement in Figure 1, in which the words ‘Espresso apparaat’ under a picture of a teaspoon imply that buyers of Nescafé Espresso powder can use a teaspoon as an espresso machine.
The reasoning behind cryptic ads is that the extra effort readers have to invest to understand the message will result in greater appreciation for the advertisement, provided that the readers think they have found the correct interpretation. This greater appreciation is then expected to extend to the product that the advertisement is about and to the company offering this product to the client. From Van Enschot’s experiments, it may be concluded that these types of advertisements are appreciated more than others, provided that they fulfil three conditions: the text and/or picture has to deviate in an artful manner from the readers’ expectations; the readers have to think that they were able to successfully interpret the message; and the advertisement has to be considered as neither very easy nor very difficult to understand. Van Enschot refers to this third phenomenon as an inverted U-curve (see also Van Enschot, Hoeken & Van Mulken 2008; Van Mulken, Van Enschot & Hoeken 2005).

Three examples of loveLife’s billboards are presented below (Figures 2, 3 and 4). Similar to many modern commercial advertisements, these billboards are apparently intended to make the target group think. loveLife also expects cryptic billboards such as these to encourage conversations about sexuality and HIV/AIDS.

Figure 2: Is this your relationship?
Thus far, the only quantitative study on the effects of loveLife’s billboards on the target group’s conversation behaviour was carried out by Zisser and Francis (2006). They asked 187 learners from three secondary schools (black, white, Indian) in Durban to respond to two billboards that these learners were familiar with. One billboard depicted the words ‘Get attitude’ and the other the words ‘Born free’. The majority of the learners (74%) were found to have understood the messages as intended by loveLife. Substantially lower percentages of learners indicated that they had discussed the billboards with other people: only 19 per cent of the respondents had discussed the billboards with their peers, 28 per cent with their parents and 30 per cent with their teachers (Zisser & Francis 2006: 191–192). Zisser and Francis did not investigate whether there was a relationship between degree of understanding and reported conversation behaviour. This is regrettable, because it remains unclear whether the cryptic nature of loveLife’s billboards did indeed lead to the outcome that this organisation tried to attain in the first instance, namely getting people to talk about it.

The theoretical basis for the relationship between understanding and conversation behaviour, as loveLife sees it, seems rather frail. loveLife suggests that the cryptic nature of the billboards will automatically lead to dialogue: ‘We will get people to wonder. This creates conversation [...]’. In Hoeken et al. (2009), however, the possible relationship between understanding and dialogue is taken further. Hoeken et al. assume there are two reasons why cryptic advertising and educational messages may lead to dialogue among peers: the demonstration of knowledge within the group and the strengthening of the mutual group feeling.
Knowledge demonstration in the group is displayed when a person (1) thinks that he/she understands the billboard and (2) assumes that others in the group do not. By presenting other group members with what he/she thinks is the correct interpretation of the billboard, the person in question can demonstrate his/her intelligence and possibly impress others in the group. Strengthening of the group feeling occurs when people agree on 'what’s hot and what’s not', and is possible if a person (a) thinks that the members of his/her own group (including the person in question) understand the billboard and (b) assumes that people outside his/her own group do not understand the billboard (Hoeken et al. 2009: 59).

In Hoeken et al. perceived comprehension is regarded as a vital condition for encouraging conversations through messages such as the intentionally cryptic loveLife billboards. The organisation itself, however, presumes that the more people wonder about the meaning of the messages, the greater the chance that they will engage in conversations. In other words: while Hoeken et al. suggest a positive relationship between perceived comprehension and intention to engage in dialogue, loveLife suggests that this relationship is not positive, but negative.

In this study we investigate these contrasting points of view. The first research question concerns the relationship between perceived comprehension of the billboards by young people in South Africa and their intention to engage in dialogue with their peers. Furthermore, the relationship between perceived comprehension and actual comprehension is investigated, and also the relationships between perceived comprehension of the billboards, appreciation of the billboards, the intention to engage in dialogue, and a possible change in respondents’ behavioural intentions with regard to safe sex.

**METHOD**

**Respondents**

This study was carried out in the autumn of 2007. Respondents were 149 first-year students on the Turffloop Campus of the University of Limpopo, South Africa. Of the respondents, 98 per cent had one of the nine official indigenous South African languages as their first language. Almost equal numbers of men (72) and women (73) participated; four respondents did not indicate their gender. The average age was 20.7 years (SD = 2.3). Thus, loveLife’s specific target group of teenagers between twelve and seventeen was not represented. However, the respondents all belonged to loveLife’s intended audience in a broader sense: South African youth.
Materials

In a within-subjects experimental design, five billboards from the 2006 loveLife HIV-Face it campaign (see Figure 5) were shown to each of the respondents. According to loveLife's CEO, David Harrison, the billboards in this 2006 campaign were intentionally provocative. The aim was '[...]' to make them stand out from all the clutter about HIV and Aids, to keep young South Africans engaged with the loveLife campaign, but most importantly to ensure that South Africans continue to debate about the behaviours and attitudes driving the epidemic' (loveLife, n.d.). loveLife's general intention to make people think about their posters, and loveLife's expectation that the billboards from the 2006 campaign would give rise to dialogue, were important reasons for selecting these billboards for our study.

![Figure 5: The loveLife billboards from the 2006 HIV-Face it campaign used in this study](image)

Questionnaire

Included in the questionnaire that was completed by the respondents were copies of each of the five billboards, in the order in which they are presented in Figure 5 (from above left to below right). Each image was followed by eight statements meant to measure the dependent variables perceived comprehension, appreciation, inclination to dialogue and change in behavioural intention with regard to safe sex. Each statement was followed by a seven-point Likert scale.

The reliability of the combined scores for the various dependent variables proved to be satisfactory to good. For perceived comprehension (two statements: 'I understand this billboard'; 'I know what this billboard is about'), Cronbach's $\alpha = .95$ ($r = .90$). For appreciation (three statements: 'I like
this billboard'; 'This billboard appeals to me'; 'I think this billboard is attractive'), Cronbach's
\( \alpha = .86 \), and for intention to engage in dialogue (two statements: 'This billboard will make me
talk about HIV/AIDS'; 'This billboard will make me talk about practising safer sex'), Cronbach's
\( \alpha = .87 \) \( (r = .79) \). One statement was used for change in behavioural intention with regard to safe
sex: 'Because of this billboard I'll perform safe sex more often.'

Each billboard was furthermore accompanied by an open-ended question to measure actual
comprehension: 'What is, according to you, the meaning of this billboard (think about the meaning
of the picture and the message)？」 In analysing the answers to this question, the second author of
this article evaluated whether the respondent had mentioned one or more of the associations that,
according to loveLife, the various billboards should evoke. Possible associations that the billboards
should evoke, according to loveLife, were distilled from an internal loveLife publication about
the HIV - Face it campaign (Stewart-Buchanan 2006). Next, the associations mentioned in this
publication were presented to loveLife's communications officer, B. Swarts, who confirmed that
these were indeed the associations loveLife wished to evoke with the various billboards (B. Swarts,
pers. comm.).

For example, the billboard NO 'til we know should, according to loveLife, evoke one or more of
the following associations:

- We will have no sex unless we know that we truly love each other;
- We will have no sex until we both have been tested for HIV;
- We will have no sex until we know our HIV status;
- Knowing our status empowers us to take the necessary steps to prolong our quality of life if the
test result is positive;
- We will use protection (condoms) consistently, no matter what our status is;
- Using protection (condoms) consistently is crucial for someone who is HIV positive and needs
to prevent re-infection.

Only if the answer to the open-ended question included none of the intended associations, or if
no answer was given at all, was it concluded that the billboard had not been understood. Each
time that at least one of the intended associations was mentioned, either fully or partly, it was
interpreted as an indication of the respondents' actual comprehension of the message. Actual
comprehension was thus not defined as the respondent having noticed all or most of loveLife's
intended associations, some of which might be open for discussion. Only mentioning (part of) one
of the associations that loveLife wanted a billboard to evoke, was already regarded as an indication
of actual comprehension of at least part of the meaning of that billboard.

**RESULTS**

Table 1 shows the scores for the variables perceived comprehension, appreciation, intention to
engage in dialogue and change in behavioural intention with regard to safe sex.
Table 1: Average scores and standard deviations (all respondents, all billboards) for perceived comprehension, appreciation, intention to engage in dialogue and change in behavioural intention (minimum 1, maximum 7)

<table>
<thead>
<tr>
<th>Perception</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived comprehension</td>
<td>5.91</td>
<td>1.22</td>
</tr>
<tr>
<td>Appreciation</td>
<td>5.67</td>
<td>1.24</td>
</tr>
<tr>
<td>Intention to engage in dialogue</td>
<td>5.56</td>
<td>1.42</td>
</tr>
<tr>
<td>Change in behavioural intention</td>
<td>5.40</td>
<td>1.13</td>
</tr>
</tbody>
</table>

The scores for the four variables in Table 1 are relatively high. The respondents apparently felt that they understood the billboards, they appreciated the billboards, they intended to engage in dialogue about the billboards, and they expected that the billboards would encourage them to have safe sex more often. These results may be regarded as supporting loveLife’s expectations about the effects of these billboards. The respondents’ answers not only indicate relatively high levels of perceived comprehension, appreciation and behavioural change intention, but also suggest that the billboards will contribute to the intention to engage in dialogue. However, the results in Table 1 give no information as to the possible relationships between, for instance, perceived comprehension and intention to engage in dialogue. This information will be presented in Table 4.

Table 2 shows the scores for actual comprehension, as defined above.

Table 2: Actual comprehension (percentages of respondents who did or did not mention at least one of the associations intended by loveLife)

<table>
<thead>
<tr>
<th>Billboard</th>
<th>Mentioned at least one of the intended associations</th>
<th>Mentioned none of the intended associations</th>
</tr>
</thead>
<tbody>
<tr>
<td>No ‘til we know</td>
<td>83.2%</td>
<td>16.8%</td>
</tr>
<tr>
<td>If it’s not just me, you’re not for me</td>
<td>39.6%</td>
<td>60.4%</td>
</tr>
<tr>
<td>You can’t pressure me into sex</td>
<td>81.2%</td>
<td>18.8%</td>
</tr>
<tr>
<td>Prove your love, protect me</td>
<td>79.2%</td>
<td>20.8%</td>
</tr>
<tr>
<td>If you aren’t talking to your child about sex, who is?</td>
<td>89.9%</td>
<td>10.1%</td>
</tr>
</tbody>
</table>

Table 2 shows that, for actual comprehension as measured by the open-ended question about the meaning of the billboards, the scores were less favourable than those for perceived comprehension. The responses to each billboard show that there always was a considerable group of respondents who could not mention any of the intended associations partly or fully.

How actual comprehension was related to perceived comprehension is shown in Table 3.
Table 3: Actual comprehension (yes/no) and perceived comprehension (minimum 1; maximum 7) of respondents who did and did not prove to have understood the messages on the billboards

<table>
<thead>
<tr>
<th>Billboard</th>
<th>Actual comprehension: no</th>
<th>Actual comprehension: yes</th>
<th>Difference significant?</th>
</tr>
</thead>
<tbody>
<tr>
<td>No 'til we know</td>
<td>perceived comprehension:</td>
<td>perceived comprehension:</td>
<td>yes; p &lt; .001</td>
</tr>
<tr>
<td></td>
<td>M = 3.72</td>
<td>M = 6.37</td>
<td></td>
</tr>
<tr>
<td>If it's not just me,</td>
<td>perceived comprehension:</td>
<td>perceived comprehension:</td>
<td>yes; p &lt; .001</td>
</tr>
<tr>
<td>you're not for me</td>
<td>M = 4.56</td>
<td>M = 6.12</td>
<td></td>
</tr>
<tr>
<td>You can't pressure you to sex</td>
<td>perceived comprehension:</td>
<td>perceived comprehension:</td>
<td>yes; p &lt; .01</td>
</tr>
<tr>
<td></td>
<td>M = 4.75</td>
<td>M = 6.07</td>
<td></td>
</tr>
<tr>
<td>Prove your love, protect me</td>
<td>perceived comprehension:</td>
<td>perceived comprehension:</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>M = 6.26</td>
<td>M = 6.41</td>
<td></td>
</tr>
<tr>
<td>If you aren't talking to your child</td>
<td>perceived comprehension:</td>
<td>perceived comprehension:</td>
<td>no</td>
</tr>
<tr>
<td>about sex, who is?</td>
<td>M = 5.53</td>
<td>M = 6.53</td>
<td></td>
</tr>
</tbody>
</table>

The results in Table 3 suggest that the respondents – especially those who did not in fact understand the messages that loveLife tried to convey – may have been too optimistic about their own comprehension of these messages. It is remarkable that in the group of respondents who could not mention any of the intended associations, the mean scores for perceived understanding were closer to 7 (the maximum of the scale) than to 1 (the minimum of the scale) for four out of five billboards. It is also remarkable that for two out of five billboards no significant difference in the scores for perceived comprehension was found between those respondents who had actually understood the message to some extent, and those who had not.

Considering the focus of this research, the results that were the most relevant refer to the relationships between the variables perceived comprehension, appreciation, intention to engage in dialogue and change in behavioural intention with regard to safe sex. Table 4 shows the correlation matrix.

Table 4: Correlations between perceived comprehension, appreciation, intention to engage in dialogue and change in behavioural intention

<table>
<thead>
<tr>
<th></th>
<th>Perceived comprehension</th>
<th>Appreciation</th>
<th>Intention to engage in dialogue</th>
<th>Change in behavioural intention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived comprehension</td>
<td>.65 (p &lt; .001)</td>
<td>.59 (p &lt; .001)</td>
<td>.34 (p &lt; .001)</td>
<td></td>
</tr>
<tr>
<td>Appreciation</td>
<td>.77 (p &lt; .001)</td>
<td>.53 (p &lt; .001)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intention to engage in</td>
<td></td>
<td></td>
<td>.64 (p &lt; .001)</td>
<td></td>
</tr>
<tr>
<td>dialogue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Of special interest in Table 4 is the positive correlation (r = .59) between perceived comprehension and intention to engage in dialogue. loveLife’s assumption about the relationship between these variables (the more people wonder about the meaning of the messages, the greater the chance that they will engage in conversations) is contradicted by this outcome. Consistent with the assumption of Hoeken et al. (2009), perceived comprehension (to be distinguished from actual comprehension) is positively related to inclination to dialogue. Table 4 also shows that perceived comprehension of a billboard is positively related to appreciation (r = .65), and to change in behavioural intention (r = .34). Furthermore, a high positive correlation is found between appreciation and intention to engage in dialogue (r = .77). Finally, both appreciation and intention to engage in dialogue are positively related to change in behavioural intention (r = .53 and r = .64 respectively).

DISCUSSION

The results of this study suggest that there is a gap between perceived comprehension and actual comprehension of the loveLife billboards among first-year students of the University of Limpopo. It seems that a considerable group of students overestimate what they understand about the billboards.

The results of this study also show clear positive relationships between perceived comprehension, appreciation, intention to engage in dialogue and changes in behavioural intention with regard to safe sex. The positive correlation between perceived comprehension and intention to engage in dialogue contradicts loveLife’s expectations about the effects of cryptic billboards. No support was found for loveLife’s assumption that the more the billboards make people wonder about the messages, the greater the chance will be of discussions and debate among young South Africans. Support was found, however, for the assumption put forward by Hoeken et al., that youngsters’ intention to participate in peer group discussions about cryptic messages is positively related to their perception that they have grasped the meaning of these messages.

Remarkably high correlations were found between appreciation for the billboards on the one hand, and perceived comprehension, intention to engage in dialogue and change in behavioural intention with regard to safe sex on the other hand. The high correlation between the scores for appreciation and for intention to engage in dialogue may help to explain the relatively strong intention that the respondents expressed to discuss the billboards. Perhaps it is not a low level of understanding that evokes peer group discussions, but rather a high level of appreciation.

Although strong correlations evidently do not necessarily imply causal relationships, these outcomes do justify further investigation of the possible influence of perceived understanding and appreciation on the effectiveness of prevention messages in terms of readers’ attitudes and behavioural intentions.

Evidently, the last word about the possible effects of cryptic messages in health education has not yet been spoken. There is a definite need for follow-up studies in which, for example,
respondents are also confronted with less cryptic HIV/AIDS billboards advertising organisations other than loveLife. Another suggestion for a follow-up study would be to present the billboards in varied sequences, so that the possibility of sequence effects can be eliminated. Perhaps it may also be advantageous to implement a between-subjects or a mixed between- and within-subjects experimental design. Another improvement might be to add both prior knowledge of a certain billboard and prior experience in discussing that same billboard to the variables, in order to better explain possible differences in intention to engage in new dialogue. Furthermore, in defining actual comprehension, the emphasis could be shifted from the degree of correspondence with loveLife’s intended associations towards the level of conformity with paraphrases of the messages agreed on by independent raters. And, finally, the selection of respondents in follow-up studies could be done to correspond more closely to loveLife’s primary target group: 12–17-year-olds.4

ACKNOWLEDGEMENT

We sincerely thank the anonymous reviewers for their insightful comments on an earlier version of this article.

ENDNOTES

1 A report on this study in Dutch is presented in Janssen and Jansen (2009).
2 The knowledge test consisted of two parts. In the first part the respondents were asked two yes/no questions about HIV prevention: ‘To prevent HIV infection, a condom must be used for every round of sex’ and ‘One can reduce the risk of HIV by having fewer sexual partners’. In the second part the respondents were presented with four yes/no questions about myths and misconceptions related to AIDS: ‘There is a cure for AIDS’, ‘AIDS is caused by witchcraft’, ‘HIV causes AIDS’ and ‘AIDS is cured by sex with a virgin’. Respondents were considered to have passed the test if they had either answered the two questions in the first part correctly, or the four questions in part B, or both (Shisana et al. 2009: 51).
3 On its website (loveLife n.d.), loveLife defines its main goal and target group as follows: ‘loveLife is South Africa’s national HIV prevention programme for youth. loveLife has brought together a broad-based coalition of international foundations […] to turn back the epidemic of HIV/AIDS, and related epidemics of teenage pregnancy and sexually transmitted infections, among South Africa’s young people. […] loveLife reaches a particularly vulnerable group: pre- and newly sexually active adolescents ages 12–17.’
4 A start for such a follow-up study has already been made in the HACALARA project. HACALARA (HIV/AIDS Communication Aimed at Local And Rural Areas) is a cooperation project between the University of Limpopo, the University of Tilburg, The Netherlands, and Radboud University Nijmegen, The Netherlands. Information is available at www.hacalara.org. The HACALARA project is supported financially by SANPAD (South Africa-Netherlands Research Programme on Alternatives in Development), a Netherlands-South African research organisation financed by the Netherlands Ministry of Foreign Affairs (see www.sanpad.org.za).
REFERENCES


Stewart-Buchanan, A. 2006. loveLife billboards 2006 HIV – Face it. loveLife billboards Phase 2, 2006 – rationale. loveLife, internal publication.


