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Master Thesis International Business Communication

The Effectiveness of Narratives in Occupational Safety Communication in Belgium and the Netherlands

Name: Gina Theunissen
Student number: S4099303
E-mail address: gina.theunissen@student.ru.nl
Supervisor: M. B.P. Starren
Second reader: B. Hendriks
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Abstract

In order to improve its effectiveness, occupational safety communication will always be subject to change. As long as accidents occur, new and better ways to communicate safety messages should be sought. For this reason, this study took a closer look into the effectiveness of another, relatively under-researched persuasion method for occupational safety communication; storytelling.

A 2x2 between subjects experiment was executed in factories and warehouses in Belgium and the Netherlands. In both countries, one group of employees was shown a traditional safety warning for a fork-lift truck; another group was shown the traditional warning plus an additional narrative about Antoine, a fictional 45 year old fork-lift truck driver who became paralysed after an accident. In total, 183 employees from six companies took part in this study, which showed that the addition of a narrative did unfortunately not result in safer behavioural intentions (RQ1). However, transportation, identification and emotion, three underlying psychological mechanisms of narrative persuasion, did, to some extent, individually influence the behavioural safety intentions (RQ 1a, 1b and 1c).

Next to the factor country, the cultural dimensions uncertainty avoidance and masculinity were expected to be possible moderators of the persuasive effect of the warning. Although no differences were found between the Dutch and Belgian groups, country and uncertainty avoidance did partly have an influence on behavioural safety intentions (RQ 2, 2a, 2b and 2c), meaning that culture and country can to some extent influence the effectiveness of a warning. Lastly, it was shown that the level of perceived understanding, relevance and realism was influenced by both country and type of warning.

Although this study could not prove that narrative persuasion was more effective than a traditional safety warning, it has given an insight into the possibility of applying storytelling in occupational safety communication, which should be further explored in follow-up research.

Preface

This Master's thesis on "The Effectiveness of Narratives in Occupational Safety Communication in Belgium and the Netherlands" was made as a completion of the International Business Communication Master's programme. I was engaged in this research project from March to November 2016. The basis of this research was an experiment that was conducted among 183 employees from six Dutch and Belgian companies.

In order to finish this research project successfully, I was dependent on the aid of several people, to whom I would like to show my gratitude. First and foremost, I would like to thank all my acquaintances who have helped making it possible to execute a study on actual work floors on such a big scale without asking for any kind of compensation, besides a report of my results. I would like to thank all companies and their employees who participated in this study for cooperating and for asking interesting questions. All that was in there for these employees was a biscuit, but the kindness and support I received in exchange was priceless. I would also like to thank my supervisors and other teachers that have supported and motivated me during the process of writing my thesis; I would not have been able to succeed without their help.

Introduction

Occupational Safety and Health

Occupational safety and health (OSH) is an often studied issue. Persuading employees of safety improving behaviour has been shown to be very difficult due to their diversity. Differences in the language proficiency (Schyve, 2007) and the professional, educational and cultural background (e.g. Paul, 2013; Reniers & Gidron, 2013; Starren, Hornikx, & Luijters, 2013) of employees make it very challenging to find one effective way to communicate safety messages. Statistics show that, although the number of occupational accidents in Europe is decreasing substantially, companies still struggle with occupational health and safety issues; in 2012 only, almost 2.5 million accidents happened on the European work floors (Eurostat, 2014).

Companies and governments have tried to address the issue of OSH by legislation and policy changes and also on European level, subjects such as safety of machinery and equipment are receiving increased attention (EU OSH, n.d.-b). However, while regulations become stricter and safety instructions become more elaborate, other methods of OSH communication have not been discussed yet. To date, traditional rhetorical persuasion has been the preferred method to convince people of safer behaviour (Ricketts, Shanteau, McSpadden, & Fernandez-Medina, 2010). This seems strange, as in other fields where persuasive communication is important, currently a shift is taking place towards searching for other, more effective ways of communicating, such as narratives. Storytelling has in fact already become a keyword in marketing (e.g. Fog, Budtz, & Yakaboylu, 2005; Pulizzi, 2012) and it is also undergoing intense study in an educational (e.g. Fisch, 2014; Kalogeras, 2014) and organizational (e.g. Fleming, 2001; Wycherley, 2005) environment while the application of narratives in OSH communication remains relatively under-researched.

Narrative Persuasion

Several studies have shown that reading a narrative can have an effect on someone's beliefs and attitudes (Busselle & Bilandzic, 2009; De Graaf, Hoeken, Sanders, & Beentjes, 2012; De Graaf, Hoeken, Sanders, & Beentjes, 2009; Green & Brock, 2000) and can therefore be persuasive. While traditional non-narrative communication has limited impact due to its impersonality, abstractness and predictability (Ricketts et al., 2010), narrative

communication distinguishes itself from other kinds of communication by instigating an imaginative experience people become immersed in (Green & Donahue, 2009).

Unfortunately, research that addresses the applicability and effectiveness of narrative persuasion in (occupational) safety communication is scarce, as narrative safety and health communication is often only studied in healthcare and patient safety communication, for example in relation to cancer prevention (Murphy, Frank, Chatterjee, & Baezconde-Garbanati, 2013). However, there are some indications that narrative persuasion could also be effective in safety communication. Practice shows that narratives are sometimes already used in safety communication in practice, for example with miners (Cullen, 2002). Also Ricketts et al. (2010) show with their experiment about narrated safety instructions about the safety of a swing set that narratives could possibly result in improved safety behaviour. Unfortunately, their experiment was executed in a non-occupational environment. These results can therefore not simply be applied to occupational safety communication, as it is imaginable that the effects of narrative communication for occupational safety differ considering people might be less accepting of stories when it concerns a professional environment. For this reason, the current study tries to explore the possibility of broadening the applicability of narratives to occupational safety communication.

Different Applications of Narratives

Stories, or narratives, are omnipresent. Long before storytelling became interesting for organisations it played an important role in people's lives. Besides being entertaining, stories are used as a pedagogical tool by parents and teachers (Coulter, Michael, & Poynor, 2007) and also in professional education, narrative training techniques like role-playing and scenarios are widely used (Ricketts, 2007). Schank & Abelson (1996) even claim that all knowledge people have, originates from the stories people tell each other. Although Green and Donahue think this claim is too strong, they do admit that "understanding and learning from [stories] [...] seems to be a fundamental cognitive process", (2009, p. 2) which makes storytelling a very suitable method in education.

Education is not the only way in which narratives can be used. Narratives are believed to have an influence on people's opinions, beliefs and attitudes (Busselle & Bilandzic, 2009; De Graaf et al., 2012; Green & Brock, 2000), which makes narratives also

very suitable for persuasive communication. This is confirmed by Knowles and Linn (2004), who argue that persuasion can only truly be achieved when the resistance an individual has to a persuasive attempt is addressed. According to their study, narrative persuasion is an especially suitable way to do this because stories are able to overcome resistance by “reducing the amount and effectiveness of counter arguing or logical consideration of the message” (Knowles & Linn, 2004, p. 177).

Persuasive Communication and the Elaboration Likelihood Model

The Elaboration Likelihood Model (ELM) (Petty & Cacioppo, 1986) explains how traditional persuasive messages can be processed in two ways; via the central route, or via the peripheral route. Central processing of information is an effortful cognitive activity as it involves evaluating information thoroughly (Petty, Heesacker, & Hughes, 1997; Slater & Rouner, 2002). Peripheral processing of information on the other hand, involves “simple cues [...] [that] either elicit an affective state (such as happiness) [...], or trigger a relatively simple inference or heuristic that a person can use to judge the validity of a message” (Petty et al., 1997, p. 109).

Central processing is triggered when information is highly relevant for the receiver (Slater & Rouner, 2002). When an individual processes information centrally, the attitudes towards the persuasive message are primarily based on the quality of arguments and expertise of the source has little influence. When a message is less relevant for the receiver, attitudes are not based on message quality, but more on the expertise of the source. Receivers are less involved and therefore process information via the peripheral route. (Petty & Cacioppo, 1986; Petty et al., 1997 in Slater & Rouner, 2002) When trying to persuade individuals who process information via the central route, elaborate and well thought-through argumentation is needed, while for individuals who process information via the peripheral route, more superficial cues are needed in order to create a persuasive message.

Although the Elaboration Likelihood Model is broadly used to assess persuasive communication, several studies have shown that this model may not be entirely applicable to narrative persuasion (De Graaf et al., 2009; Green & Brock, 2002; Slater & Rouner, 2002). The Extended Elaboration Likelihood Model, an adapted and elaborated version of the above described ELM, was therefore developed specifically for narrative persuasion by Slater and

Rouner (2002). They explain that both absorption (or immersion, transportation) and an individual's response to the characters in the story are factors that enhance persuasiveness and suppress counter arguing in the case of narratives, not central or peripheral processing, as the original ELM describes.

Further, resistance to persuasion plays a role in narrative persuasion. Resistance to persuasion increases when the persuasive intent is salient (Knowles & Linn, 2004; Petty & Cacioppo, 1986). When an individual is confronted with information he/she does not agree with, ignoring the information, counter arguing and belittling the source are common reactions (Knowles & Linn, 2004). In contrast to narratives, traditional rhetorical persuasive messages, often used in OSH communication, contain a clear and salient persuasive message. In other words, traditional safety communication aims at clear, logical, specific arguments, while narratives simply aim to tell a story (Knowles & Linn, 2004), without a salient persuasive attempt. This lack of a salient persuasive message in narratives would eventually lead to less resistance. Slater and Rouner (2002) underline this; a narrative persuasive attempt may even fail completely when the persuasive content and intent is obvious.

Underlying Psychological Mechanisms

In order to assess the persuasiveness of a narrative, it is important to know which underlying psychological mechanisms narrative persuasion entails. Although these mechanisms are not yet fully understood (De Graaf et al., 2009; Knowles & Linn, 2004), it is clear that at least the three factors described below play a role in the process of narrative persuasiveness.

Transportation. Most studies about narrative persuasion describe the specific experience a reader goes through when reading a narrative. A reader can get the feeling of being immersed or lost in a story, an experience that leads to an increased influence on the reader's beliefs (De Graaf et al., 2009; Green & Brock, 2000). This experience is referred to as narrative engagement (De Graaf et al., 2009), but also as transportation (Green & Brock, 2000; Green & Brock, 2002). It was one of the first underlying psychological mechanisms of narrative persuasion that was studied, by Green and Brock (2000) for instance. Green and Brock (Green & Brock, 2000) say that transportation may reduce cognitive responding and make readers less likely to disbelief or counter-argue the claims in the story. Later, it became clear that more factors influence narrative persuasion (Busselle & Bilandzic, 2009) and that

some factors that were previously assumed to be a part of transportation, such as emotion, were in fact separate influencing mechanisms for narrative persuasion (Appel, Gnambs, Richter, & Green, 2015; Murphy, Frank, Moran, & Patnoe-Woodley, 2011).

Identification. While the original explanation of transportation by Green and Brock (2000) did not refer to the characters in the narrative (De Graaf et al., 2012), the story's characters and more specifically the level of identification with the story characters has also been found to be an important underlying mechanism of narrative persuasion (De Graaf et al., 2012; De Graaf et al., 2009; Murphy et al., 2013, 2011; Ricketts et al., 2010). People are more likely to copy behaviour that has been modelled by another individual and are more likely to do this when the models (in the story) are similar to themselves (Bandura, 2004). The extent to which an individual identifies him/herself with the characters in a story (identification or perceived similarity), therefore influences the persuasive effect of a narrative (Cohen, 2001; Murphy et al., 2013; Slater & Rouner, 2002; Tal-Or & Cohen, 2010).

Emotion. Emotion, the third and last underlying psychological mechanism of narrative persuasion that will be discussed for this theoretical framework, also plays a central role in the processing of narratives (Green & Brock, 2000; McQueen, Kreuter, Kalesan, & Alcaraz, 2011; Murphy et al., 2013). As mentioned before, emotion was at first only seen as a necessary component for successful transportation into a narrative (Green & Brock, 2000). However, recent studies suggest that though emotion and transportation are related, they are distinct constructs that influence the persuasiveness of narratives (A. de Graaf et al., 2009; Murphy et al., 2013, 2011). For this reason, De Graaf et al. (2009; 2012) studied how emotion in relation to narratives could be measured, which resulted in two scales that measure transportation and emotion separately.

Behavioural Intention

The current study uses the three above described psychological mechanisms to assess the persuasiveness of a narrative safety message. However, this study aims to compare two types of safety messages; narrative and non-narrative. In order to measure the effectiveness of a narrative safety warning opposed to the effectiveness of a traditional, non-narrative safety warning, it is necessary to look at the desired outcome, which in this case is safer behaviour. As it is beyond the scope of this study to measure the actual safety behaviour that follows the reading of the narrative safety warning, behavioural safety intention will be

measured. People's behavioural intention is very similar to their actual behaviour. This is described in the Theory of Planned Behaviour, which suggests that "Intentions to perform behaviour [...] can be predicted with high accuracy from attitudes toward the behavior" (Ajzen, 1991, p. 179). In other words, a strong relation exists between people's behavioural intentions and their actual behaviour, which makes it possible to predict actual safety behaviour by asking for the behavioural safety intention of participants. The current study therefore uses behavioural safety intention to measure the effectiveness of the safety warnings. As the measurement of behavioural intentions needs to be very case-specific, the scales for purchase intentions (Hornikx, van Meurs, & Hof, 2013) are adapted to the contents of the narrative and the traditional warning.

Country and Culture as Moderators

While three underlying mechanisms exist that together make narrative persuasion possible (transportation, identification and emotion), there are also external factors that could moderate the level of narrative persuasion of a message. Again, the exact factors that moderate the level of narrative persuasion are not yet fully understood.

A factor that has not been studied yet in relation to narrative persuasion is culture. It has already been proven that culture can have an influence on safety attitudes and behaviour (Mearns & Yule, 2009; Schubert & Dijkstra, 2009). Culture has to date not been related to narrative persuasion in research, while it has been found that cultural differences in the effectiveness of different types persuasion (anecdotal, statistical, causal or expert evidence) do actually exist (Hornikx & Hoeken, 2007). It has also been argued that cultural differences can be visible in an individual's narrative style and that "narrativization of experience occurs in culturally specific social contexts" (Gutierrez-Clellen, Peña, & Quinn, 1995, p. 45). It is therefore imaginable that cultural differences could also influence an individual's (unconscious) preference for narratives or non-narratives, as well as the preference for the kind of narratives, the characters, the storyteller and so on.

Two countries that are suitable for such a comparative study are Belgium and the Netherlands. Although (Flemish) Belgium and the Netherlands both have Dutch as an official language, the cultures of the two countries differ (Hofstede & Hofstede, 2005). Studying these two countries therefore allows avoiding the possible linguistic differences that would exist if the story would have to be translated in two different languages, while a cultural

comparison is still possible. The cultural dimensions Hofstede and Hofstede (2005) established and measured on a national level show that especially the levels of uncertainty avoidance and masculinity are different between Belgium and the Netherlands; both the level of uncertainty avoidance and masculinity is higher in Belgium than in the Netherlands according to Hofstede and Hofstede (2005). This would mean that it could be possible to compare the effect of one narrative, in Dutch, within two countries with different cultural values. However, as culture can differ within a country and even within an organisation, culture will be measured specifically for the participants in this study in order to discover whether the cultural differences that were found on a national level, are also reflected in the groups of participants.

Yet, culture might not be the only factor that influences the effectiveness of a narrative. Simply being born in a different country with a different educational system and different habits might cause that a person in one country is not as used to, or does not prefer to read stories as much as a person in another country. Also, a different legislative system and different policies concerning occupational safety could influence the effectiveness of safety communication. For instance, in Belgium, occupational safety is the responsibility of the Minister for Employment, while in the Netherlands the employer and the employees within a company have the primary responsibility for OSH (EU OSH, n.d.-a). This could also change the way in which companies look at OSH regulations; employee initiatives and new methods of OSH communication might be more common in one country than in another country. For the abovementioned reasons, it would be interesting to not only look at the possible moderating effect of masculinity and uncertainty avoidance, but also the moderating effect of country on the process of narrative persuasion.

Control Variables

Next to culture and country, the characteristics of a narrative and the reading conditions of an individual can also influence the persuasiveness of a safety message. More specifically, there are three factors that could influence the desired result of a safety message (increased behavioural safety intentions); (1) perceived relevance of the message, (2) perceived realism of the message and (3) understanding of the message (Busselle & Bilandzic, 2009; Busselle, 2001; Tal-Or & Cohen, 2010). These three factors are therefore taken as control variables for this study. The level of perceived relevance, which indicates how relevant a narrative is in

the eyes of the reader can, as Tal-Or and Cohen (2010) showed, have an effect on the persuasive effect of a narrative, which is reflected in the level of emotion, identification and transportation. This is also the case for perceived realism (Busselle, 2001; Tal-Or & Cohen, 2010), which indicates the probability of the events in the story happening in 'real-life' for the reader. Lastly, Busselle and Bilandzic (2009) show that also narrative understanding can influence the persuasive effect of a narrative. As these three factors can also be applied to non-narrative messages, they will be tested for both the narrative and the non-narrative safety warning in order to increase comparability of the two.

This study tries to change perspective by exploring the possibility of using narratives in occupational safety communication. The study therefore focuses on participants that are involved with strict OSH regulations on a daily basis; employees that work in factories or warehouses. The current study entails an experiment that examines the effectiveness of adding a story to a traditional existing safety warning for a fork-lift truck, a tool that is involved in accidents in warehouses and factories often (NOS, 2016; Smit & Hoeben, 2013). Investigating the effectiveness of narratives in occupational safety communication in these organisations could give insights to other, possibly more effective, ways of communicating safety messages than traditional rhetorical persuasion, which could eventually hopefully help reducing the number of accidents on the work floors.

Research Questions

The above described theories together lead to the following three research questions and six sub questions:

1. To what extent do behavioural safety intentions of factory employees in Belgium and the Netherlands increase after reading a safety warning with a narrative opposed to one without a narrative?
 - a. To what extent does transportation have an effect on behavioural safety intentions?
 - b. To what extent does identification have an effect on behavioural safety intentions?
 - c. To what extent does emotion have an effect on behavioural safety intentions?
2. To what extent does culture moderate the effectiveness of the safety warning?
 - a. To what extent does country moderate the persuasive effect of the safety warning?
 - b. To what extent does masculinity moderate the persuasive effect of the safety warning?
 - c. To what extent does uncertainty avoidance moderate the persuasive effect of safety warning?
3. To what extent does country and type of safety warning influence the control variables understanding, perceived relevance and perceived realism?

Method

Materials

The independent variable for this experimental study was type of safety warning. This variable consisted of two levels; a traditional, non-narrative warning and a warning with a narrative. Both types of warnings contained the same traditional safety warning about the correct use of a fork-lift truck, which was partly based on an existing fork-lift truck safety warning from ITM Interma (n.d.), addressing the width the forks of the truck should be in while transporting a load. The version of the warning with a narrative contained, in addition to the traditional warning, a fictional narrative about the 45 year old Antoine, who had an accident with a fork-lift truck through which he became paralysed. This narrative was designed based on several news articles about recent fork-lift truck accidents and the warning Ricketts et al. (2010) used for their experiment, which was very similar as it also addressed the effectiveness of narratives in safety communication. Both versions of the safety warning had a similar lay-out that was also based on the existing fork-lift truck safety warning and the warning of Ricketts et al. (2010). All three safety warnings (Dutch-narrative, Belgian-narrative and non-narrative) can be found in the appendix.

All materials were Dutch, as all intended participants needed to speak Dutch or Flemish (which is a variety of the Dutch language). The narrative and the questionnaires were revised by a Flemish native speaker, in order to produce one text that was conventional and standardized for both groups. The only difference between the 'Dutch' and 'Belgian' version of the narrative warning, was the city the accident took place. In the 'Dutch' narrative, the accident took place in Weert, while in the 'Belgian' narrative the accident took place in Hasselt. This change was made to encourage the identification of readers with the story. A fork-lift truck was chosen as a subject for the narrative and the traditional safety warning because it is a commonly known and used tool that is often involved with accidents on the work floor (NOS, 2016). Fork-lift trucks and other transport cars are even second in the list of tools that cause the biggest number of accidents on the work floor in 2012 (Smit & Hoeben, 2013). Most factory or warehouse employees are familiar with a fork-lift truck, which increases the usability of the materials in different kinds of companies.

A pilot study was executed in order to pre-test the warnings and all other materials. Nine Dutch people and the Belgian native speaker that executed the language check filled in

the questionnaire and were specifically asked to mention anything remarkable. The pilot study showed that reading the safety warning and filling in the questionnaire took no longer than 10 minutes. Several changes in language and the instructional text were made as a result of the feedback that was given during the pilot study. For example, as one of the pilot participants mentioned that it was unusual that 1 indicates 'totally agree' and 7 indicates 'totally disagree' in the questionnaire, this was changed to 1 = 'totally disagree' and 7 = 'totally agree'. Also the introduction was adapted by adding a sentence about the fact that 'wrong answers are not possible, as the questions concern the opinion of the participants'. The Belgian native speaker only mentioned that a few sentences were vague, like 'the usage of narratives on the work floor' in the introduction, which was changed to 'safety communication on the work floor', but no further changes were needed in language to make the text understandable for participants from both countries. For the three questionnaires (Dutch-narrative, Belgian-narrative and non-narrative) and the safety warnings, see the appendix.

Subjects

For this study, data was collected from factories, warehouses and workplaces in Dutch and Belgian companies. Factories, warehouses and work places were chosen as it was essential that participants were familiar with a fork-lift truck. This meant that the companies that were used to retrieve data should at least work with one fork-lift truck. The sample of participants did not need to meet any other conditions, besides the country the company was in (the Netherlands or Belgium).

Between the 14th of July and the 12th of August, six companies (four Belgian and two Dutch companies) were visited to collect data; one was visited three times. Two companies were active in the automotive sector, two were active in steel processing or machine construction, one company was active in distribution and warehousing and one company installed window- and door frames.

During the four-week period of data collection, 183 questionnaires were filled in. Only 70 participants worked in a Belgian company, while 113 participants worked in a Dutch company. In the Belgian companies, 36 participants filled in the non-narrative survey and 34 Belgian-company participants filled in the narrative survey. In the Dutch companies, 56 participants filled in the non-narrative survey and 57 Dutch-company participants filled in

the narrative survey. The response rate for this study was high; only two questionnaires that were distributed were not filled in. Missing values were reported in some questionnaires.

More male employees than female employees participated in this research; 167 (91%) participants were male and 16 (9%) participants were female. In the Belgian companies, 68 participants (97%) were male and two were female (3%). In the Dutch companies, 99 Participants (88%) were male and 14 were female (12%).

A Chi-square test showed a significant relation between country and gender ($\chi^2 (1) = 4.92, p = .027$). The small and unequal number of women in Dutch and Belgian companies may have caused this significant relation. This sample was, however, a truthful representation of employees in factories and warehouses. A Chi-square test showed no significant relation between version and gender ($\chi^2 (1) = .001, p = .982$).

The mean age of the participants was 43 years ($SD = 11.37$) and the range was 42. The mean age for the participants of the Belgian companies was 43 years ($SD = 8.96$) and the range was 37. The mean age for the participants of Dutch companies was 42 years ($SD = 12.66$) and the range was 42.

An independent-samples T-test showed no significant difference in age between the Belgian and the Dutch group ($t (177.18) = .76, p = .450$). An independent-samples T-test showed no significant difference in age of the narrative version versus the non-narrative version either ($t (180) = 1.18, p = .236$).

Ten participants had primary school as educational level (5%). There were 133 participants that had secondary school as educational level (72%) and 39 had higher education (21%). Five of the participants of the Belgian companies had primary school as educational level (7%), 48 (69%) had secondary school and 17 had higher education (24%). Five of the participants of Dutch companies had primary school as educational level (4%), 85 had secondary school (75%) and 22 had higher education (20%).

A Chi-square test showed no significant relation between country and educational level ($\chi^2 (2) = 1.31, p = .519$). A Chi-square test showed no significant relation between version and educational level either ($\chi^2 (2) = 2.64, p = .267$).

As comparisons were made between Belgian and Dutch companies, the position employees had in their company was also asked. Five of the participants of the Belgian companies were production employees (7%). Another 21 participants were mechanics (30%), 12 were warehouse employees (17%), three were operators (4%), nine were test

drivers (13%), five were maintenance employee (7%), two were leading hand (2%), five were engineer (7%), two were administrative/tech support employees (3%), two were safety assistants (3%) and a coordinator of quality, a logistics employee, an assistant and a manager filled in the questionnaire for this study (1% each).

In the Dutch companies, 17 of the participants were production employees (15%), 12 participants were mechanics (11%), 69 were warehouse employees (61%), four were managers (4%), two were welders (2%), two were expedition employees (2%), five were administrative/tech support employees (4%) and an engineer and a shift leader filled in the questionnaire for this study (1% each).

A Chi-square test showed a significant relation between country and position in company ($\chi^2(16) = 78.07, p = .000$). This positive relation may have been caused by the fact that position names differ a lot from company to company and from country to country.

A Chi-square test showed no significant relation between version and position in company ($\chi^2(16) = 11.34, p = .788$).

Not all participants had Dutch as their mother tongue. In the Belgian companies, 67 participants had Dutch as their mother tongue (96%) and three participants had other mother tongues; Arabic, Greek and Turkish (1% each).

In the Dutch companies, 101 participants had Dutch as their mother tongue (89%). Three participants had German as their mother tongue (3%) and two had Polish as their mother tongue (2%). Six participants had other mother tongues; Greek, Moroccan, Susu, French, Papiamento, Surinamese (1% each).

A Chi-square test showed no significant relation between country and mother tongue ($\chi^2(10) = 9.71, p = .467$). A Chi-square test showed no significant relation between version and mother tongue ($\chi^2(10) = 14.08, p = .170$).

Not all participants were born in Belgium or in the Netherlands. In the Belgian companies, 63 participants were born in Belgium (90%), three were born in the Netherlands (4%), two were born in Morocco (3%), one was born in Congo and one was born in Greece (1% each).

In the Dutch companies, 99 participants were born in the Netherlands (88%). Two were born in Morocco (2%), three were born in Germany (3%), and two were born in Poland (2%). One participant was born in Greece, one in Brazil, one in Indonesia, one in Guinea, one in Chad, one in Curacao and one in Belgium (1% each).

A Chi-square test showed no significant relation between country and country of birth ($\chi^2(12) = 13.65, p = .324$). A Chi-square test showed no significant relation between version and country of birth ($\chi^2(12) = 15.35, p = .223$).

Design

A 2x2 between subjects experiment was executed with type of version of warning (narrative/non-narrative warning) and country of company (the Netherlands/Belgium) as variables. Group 1 (Dutch, non-narrative warning) was shown a traditional warning, group 2 (Belgian, non-narrative warning) was also shown a traditional warning. Group 3 (Dutch, warning with narrative) and group 4 (Belgian, warning with narrative) were shown a narrative safety warning.

Instruments

A questionnaire was developed that operationalised nine variables with items that were measured with 7-point Likert scales (1 = totally disagree, 7 = totally agree). The nine variables were:

Behavioural intentions. Behavioural intentions was measured with three items, adapted from the purchase intention scale from Hornikx, Van Meurs and Hof (2013): “I would certainly not drive the fork-lift truck with the arms in the narrowest position”, “I would recommend driving the fork-lift truck with the arms in the widest position to my co-workers”, “I identify myself as someone who always follows safety regulations”. These three items described safe use of the forks on a fork-lift truck. The forks should be put in the widest position possible while transporting a load, in order to prevent lateral instability of the truck. The adjustment of the width of the forks is a part of most safety instructions for fork-lift trucks, for instance those of labour-union FNV (BGZ Wegvervoer, n.d.) and those of ITM Interma (n.d.) which are used to design the traditional warning and the narrative.

The reliability of ‘behavioural safety intentions’ comprising three items was unacceptable: $\alpha = .42$. Deletion of items of the scale could not improve the Cronbach’s Alfa of ‘behavioural intentions’. The three items of ‘behavioural safety intentions’ were therefore analysed separately.

Transportation. Transportation was measured with five items from the Transportation Scale Short Form (TS-SF) (Appel et al., 2015), which is an adapted and

shortened version of Transportation Scale (TS) (Green & Brock, 2000), which contained 11 items. The items that measured transportation were: “I could picture myself in the scene of the events described in the narrative”, “I was mentally involved in the narrative while reading it”, “I wanted to learn how the narrative ended”, “The narrative affected me emotionally” and “While reading the narrative I had a vivid image of Antoine”. Dutch translations were made by De Graaf (2015). The reliability of ‘transportation’ comprising five items was good: $\alpha = .83$. Therefore, a composite mean of all five items was calculated for transportation.

Identification. Identification was measured with five items from Tal-Or and Cohen (2010), which were taken from Cohen (2001) and were adapted to the story: “I think I understand Antoine well”, “I understood the events in the story the way Antoine understood them”, “While reading, I felt like Antoine felt”, “While reading, I could really ‘get inside’ Antoine’s head” and “I tend to understand why Antoine did what he did”. Dutch translations were made by De Graaf (2015). The reliability of ‘identification’ comprising five items was good: $\alpha = .80$. Therefore, a composite mean of all five items was calculated for identification.

Emotion. Emotion was measured with three items from De Graaf et al. (2009; 2012): “I found the story moving”, “The story stirred emotions in me” and “Because of the story, feelings arose in me”. The fourth item (“the story affected me”) overlapped with the transportation scale and was therefore not used here. Dutch translations were made by De Graaf (2015). The reliability of ‘emotion’ comprising five items was excellent: $\alpha = .90$. Therefore, a composite mean of three items was calculated for emotion.

Uncertainty Avoidance. Uncertainty avoidance, one of five cultural dimensions (Hofstede & Hofstede, 2005), was measured with five items from Culpepper and Watts (1999): “It is important to have job requirements and instructions spelled out in detail so that employees always know what they are expected to do”, “Managers expect employees to closely follow instructions”, “Rules and regulations are important because they inform employees what the organization expects of them”, “Standard operating procedures are helpful to employees on the job” and “Instructions for operations are important for employees on the job”. Dutch translations for the uncertainty avoidance items were made and tested for a bachelor-thesis group that studied safety in multicultural companies (Starren & Hobelman, 2014). The reliability of ‘uncertainty avoidance’ comprising five items

was acceptable: $\alpha = .79$. Therefore, a composite mean of all five items was calculated for uncertainty avoidance.

Masculinity. Masculinity, also one of the five cultural dimensions (Hofstede & Hofstede, 2005), was measured with five items from Culpepper and Watts (1999): “Meetings are usually run more effectively when they are chaired by a man”, “It is more important for men to have a professional career than it is for women to have a professional career”, “Men usually solve problems with logical analysis; women usually solve problems with intuition”, “Solving organizational problems usually requires an active forcible approach which is typical for men” and “It is preferable to have a man in a high level position rather than a woman”. Dutch translations for the masculinity items were also made and tested for the bachelor-thesis group that studied safety in multicultural companies (Starren & Hobelman, 2014). The reliability of ‘masculinity’ comprising five items was good: $\alpha = .81$. Therefore, a composite mean of all five items was calculated for masculinity.

Perceived relevance. The control variable perceived relevance was measured with one item from the three items from Tal-Or and Cohen (2010): “The warning reminded me of situations in my own life”. Dutch translations were self-made.

Perceived realism. The control variable perceived realism was measured with one item based on the three items from Tal-Or and Cohen (2010), originally from Busselle (2001): “The events in the warning resemble safety issues in the real world”. Dutch translations were self-made.

Narrative understanding. The control variable (narrative) understanding was measured with one item based on the three items from Busselle and Bilandzic (2009): “I understood the warning well”. Dutch translations were self-made.

Procedure

The experiment was conducted on an individual basis. Participants were gathered by their supervisor, who had already informed them about the study, with the information that was available on a leaflet for the company on beforehand (see the appendix). In all companies, participants were able to fill in the questionnaires during work hours, which was advantageous because no lunch-break time was lost for the employees who took part in the study. Questionnaires were filled out in a group, sometimes on the work floor and sometimes in a separate, quieter room. Before filling in the questionnaire, a short

introduction to the subject of the study was given and all other instructions were printed on the questionnaire itself. All questionnaires were distributed on paper, a pen and cookies were given to each participant to thank them for participating. The researcher was present during all experiments, in order to give participants the opportunity to ask questions. Reading the warning and filling in the questionnaire took no more than 10 minutes, which was less than expected. Due to a printing error, thirteen Belgian participants were handed out a questionnaire with a scale that measured 1 = 'totally agree' and 7 = 'totally disagree', instead of the other way around. These questionnaires were recoded for the analyses afterwards. A few questions about the meaning of items in the questionnaire were answered, which led to some interesting conversations among participants and the researcher. Afterwards, the participants were thanked and told that the results would reach the company around the end of October. On October 31st, an infographic with results and other information about the research was provided to the companies and the participants in the study. For the infographic, see the appendix.

Statistical Treatment

In order to answer the research questions, first two independent samples t-tests were executed to look at possible differences in masculinity and uncertainty avoidance in the two countries. Three two-way ANOVA's (two independent variables with two levels) were executed for the three control variables perceived relevance, perceived realism and understanding with company and version of warning as independent variables. Nine two-way ANOVA's were used for the three separate items that measured behavioural intentions, with uncertainty avoidance/masculinity/country and version of safety warning as independent variables. One-way ANOVA's were executed for the three behavioural intentions items with transportation, identification and emotion as independent variables. In order to use uncertainty avoidance, masculinity, transportation, identification and emotion in an ANOVA, two groups (high/low) were created for each variable.

Results

For five ANOVA's that were executed for this study, the assumption of homogeneity of variances was not met. This was probably a result of the difference in the number of participants from Belgian ($n = 70$) and Dutch ($n = 113$) companies. It was beyond the scope of the thesis to further investigate this and therefore, inequality of variances was not taken into account for this study.

This section contains analyses that were used in order to answer research question 1: "To what extent do behavioural safety intentions of factory employees of Belgium and the Netherlands increase after reading a safety warning with a narrative opposed to one without a narrative?" and the sub questions 1a: "*To what extent does transportation have an effect on behavioural safety intentions?*", 1b: "*To what extent does identification have an effect on behavioural safety intentions?*" and 1c: "*To what extent does emotion have an effect on behavioural safety intentions?*". Transportation, identification and emotion were only tested for the narrative safety warning as they might occur as a result of reading the narrative safety warning.

For the item transportation, two groups were created (high and low transportation), based on a median of 5.8. 47 (52%) participants score under or equal to 5.8. Therefore, low transportation was decided to be lower than or equal to 5.8 and high transportation was decided to be higher than 5.8.

A one-way analysis of variance for item 1 of behavioural safety intentions showed a trend effect of transportation ($F(1, 90) = 3.92, p = .051$). Participants with low transportation ($M = 4.49, SD = 2.03$) reported that they would certainly not drive the fork-lift truck with the arms in the narrowest position less than participants with high transportation ($M = 5.30, SD = 1.84$).

A one-way analysis of variance for item 2 of behavioural safety intentions showed a significant effect of transportation ($F(1, 89) = 4.19, p = .044$). Participants with low transportation ($M = 4.60, SD = 2.09$) reported that they would recommend to co-workers to drive the fork-lift truck with the arms in widest position less than participants with high transportation ($M = 5.44, SD = 1.80$).

A one-way analysis of variance for item 3 of behavioural safety intentions showed a significant effect of transportation ($F(1, 90) = 6.25, p = .014$). Participants with low transportation ($M = 5.49, SD = 1.20$) reported that they identified as someone who always followed safety regulations less than participants with high transportation ($M = 6.11, SD = 1.19$). For means and standard deviations, see table 1.

Table 1. The effect of transportation (high or low) on three items of behavioural safety intentions (item 1 = I would certainly not drive the fork-lift truck with the arms in the narrowest position, item 2 = I would recommend driving the fork-lift truck with the arms in the widest position to my co-workers, item 3 = I identify myself as someone who always follows safety regulations). (1 = low safety intentions, 7 = high safety intentions).

	Item 1			Item 2			Item 3		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Low transportation	4.49	2.03	47	4.60*	2.09	47	5.49*	1.20	47
High transportation	5.30	1.84	44	5.44*	1.80	43	6.11*	1.19	44
Total	4.88	1.97	91	5.00	1.99	90	5.79	1.23	91

* $p < .05$, ** $p < .001$

For the item identification, two groups were created (high and low identification), based on a mean of 5.02. 45 (50%) participants score under or equal to 5.0. Therefore, low identification was decided to be lower than or equal to 5.0 and high identification was decided to be higher than 5.0.

A one-way analysis of variance for item 1 of behavioural safety intentions showed a significant effect of identification ($F(1, 90) = 11.84, p < .001$). Participants with low identification ($M = 4.20, SD = 2.09$) reported that they would certainly not drive the fork-lift truck with the arms in the narrowest position less than participants with high identification ($M = 5.54, SD = 1.62$).

A one-way analysis of variance for item 2 of behavioural safety intentions showed no significant effect of identification ($F(1, 89) = 2.56, p = .113$).

A one-way analysis of variance for item 3 of behavioural safety intentions showed a significant effect of identification ($F(1, 90) = 6.64, p = .012$). Participants with low

identification ($M = 5.47$, $SD = 1.25$) reported that they identified as someone who always followed safety regulations less than participants with high identification ($M = 6.11$, $SD = 1.12$). For means and standard deviations, see table 2.

Table 2. The effect of identification (high or low) on three items of behavioural safety intentions (item 1 = I would certainly not drive the fork-lift truck with the arms in the narrowest position, item 2 = I would recommend driving the fork-lift truck with the arms in the widest position to my co-workers, item 3 = I identify myself as someone who always follows safety regulations). (1 = low safety intentions, 7 = high safety intentions).

	Item 1			Item 2			Item 3		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Low identification	4.20**	2.09	45	4.67	2.08	45	5.47*	1.25	45
High identification	5.54**	1.62	46	5.33	1.87	45	6.11*	1.12	46
Total	4.88	1.97	91	5.00	1.99	90	5.79	1.23	91

* $p < .05$, ** $p < .001$

For the item emotion, two groups were created (high and low emotion), based on a mean of 4.35. 45 (50%) participants score under or equal to 4.33. Therefore, low emotion was decided to be lower than or equal to 4.33 and high emotion was decided to be higher than 4.33.

A one-way analysis of variance for item 1 of behavioural safety intentions showed a significant effect of emotion ($F(1, 90) = 6.68$, $p = .011$). Participants with low emotion ($M = 4.36$, $SD = 1.97$) reported that they would certainly not drive the fork-lift truck with the arms in the narrowest position less than participants with high emotion ($M = 5.39$, $SD = 1.86$).

A one-way analysis of variance for item 2 of behavioural safety intentions showed no significant effect of emotion ($F(1, 89) < 1$).

A one-way analysis of variance for item 3 of behavioural safety intentions showed a significant effect of emotion ($F(1, 90) = 19.72$, $p < .001$). Participants with low emotion ($M = 5.27$, $SD = 1.21$) reported that they identified as someone who always followed safety regulations less than participants with high emotion ($M = 6.30$, $SD = 1.01$). For means and standard deviations, see table 3.

Table 3. The effect of emotion (high or low) on three items of behavioural safety intentions (item 1 = I would certainly not drive the fork-lift truck with the arms in the narrowest position, item 2 = I would recommend driving the fork-lift truck with the arms in the widest position to my co-workers, item 3 = I identify myself as someone who always follows safety regulations). (1 = low safety intentions, 7 = high safety intentions).

	Item 1			Item 2			Item 3		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Low emotion	4.36*	1.97	45	4.82	2.06	45	5.27**	1.21	45
High emotion	5.39*	1.86	46	5.18	1.93	45	6.30**	1.01	46
Total	4.88	1.97	91	5.00	1.99	90	5.79	1.23	91

* $p < .05$, ** $p < .001$

The next section contains analyses that were used in order to answer research question 2: *“To what extent does culture influence the effectiveness of the narrative safety warning?”* and the sub questions 2a: *“To what extent does country moderate the persuasive effect of the safety warning?”*, 2b: *“To what extent does masculinity moderate the persuasive effect of the safety warning?”* and 2c: *“To what extent does uncertainty avoidance moderate the persuasive effect of the safety warning?”*.

For the following analyses that involved looking at cultural differences between two countries (analyses with uncertainty avoidance, masculinity or country), participants who were not originally from the Netherlands/Belgium or who were working, but not living in the country where the company was in, were left out.

As it was assumed that, based on prior research from Hofstede and Hofstede (2005), Belgium and the Netherlands would score differently on the dimensions uncertainty avoidance and masculinity, first t-tests were used to look at these possible differences.

An independent-samples t-test showed no significant difference between the uncertainty avoidance of employees in Dutch and Belgian companies ($t(160) = .39, p = .698$). Employees in Dutch companies ($M = 6.14, SD = .83$) were not shown to have a different uncertainty avoidance than employees in Belgian companies ($M = 6.09, SD = .85$).

Furthermore, an independent-samples t-test also showed no significant difference between the masculinity of employees in Dutch and Belgian companies ($t(159) = .23, p = .821$).

Employees in Dutch companies ($M = 2.58$, $SD = 1.25$) were not shown to have a different masculinity than employees in Belgian companies ($M = 2.53$, $SD = 1.31$). For means and standard deviations, see table 4.

Table 4. Differences in uncertainty avoidance and masculinity between Dutch and Belgian participants (1 = low uncertainty avoidance or masculinity, 7 = high uncertainty avoidance or masculinity).

Country	Uncertainty avoidance			Masculinity		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Belgian	6.09	0.85	63	2.53	1.31	63
Dutch	6.14	0.83	99	2.58	1.25	98

* $p < .05$, ** $p < .001$

Three items that measured behavioural safety intentions were analysed separately:

Item 1: I would certainly not drive the fork-lift truck with the arms in the narrowest position.

Item 2: I would recommend driving the fork-lift truck with the arms in the widest position to my co-workers.

Item 3: I identify myself as someone who always follows safety regulations.

A two-way analysis of variance for item 1 of behavioural safety intentions with country (BE/NL) and version of warning as factors showed no significant main effect of country ($F(1,157) = 2.50$, $p = .116$). Version of warning was not found to have a significant main effect on item 1 of behavioural safety intentions either ($F(1, 157) = 2.42$, $p = .122$). The interaction effect between country and version of warning was also not statistically significant ($F(1,157) < 1$).

A two-way analysis of variance for item 2 of behavioural safety intentions with country (BE/NL) and version of warning as factors showed a significant main effect of country ($F(1,157) = 13.73$, $p < .001$). Dutch participants ($M = 4.22$, $SD = 2.22$) would recommend safe fork-lift truck usage to their co-workers less than Belgian participants ($M = 5.48$, $SD = 2.01$), irrespective of the type of safety warning they read.

Version of warning was not found to have a significant main effect on item 2 of behavioural safety intentions ($F(1, 157) = 2.81$, $p = .096$). The interaction effect between country and version of warning was not statistically significant either ($F(1,157) < 1$).

A two-way analysis of variance for item 3 of behavioural safety intentions with country (BE/NL) and version of warning as factors showed no significant main effect of country ($F(1,158) < 1$). Version of warning was not found to have a significant main effect on item 3 of behavioural safety intentions either ($F(1, 158) < 1$). The interaction effect between country and version of warning was also statistically not significant ($F(1,158) = 1.36, p = .246$). For means and standard deviations, see table 5.

Table 5. The effect of country (Belgian or Dutch) and version of safety warning (narrative or non-narrative) on three items of behavioural safety intentions (item 1 = I would certainly not drive the fork-lift truck with the arms in the narrowest position, item 2 = I would recommend driving the fork-lift truck with the arms in the widest position to my co-workers, item 3 = I identify myself as someone who always follows safety regulations). (1 = low safety intentions, 7 = high safety intentions).

Version of safety warning	Item 1			Item 2			Item 3		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Belgian									
Narrative	5.16	2.18	31	5.61	1.71	31	5.68	1.45	31
Non-narrative	4.66	2.34	32	5.34	2.28	32	5.84	1.19	32
Total	4.90	2.26	63	5.48**	2.01	63	5.76	1.32	63
Dutch									
Narrative	4.65	1.85	51	4.65	2.05	51	5.84	1.12	51
Non-narrative	4.09	2.22	47	3.77	2.33	47	5.56	1.07	48
Total	4.38	2.04	98	4.22**	2.22	98	5.71	1.10	99
Total									
Narrative	4.84	1.98	83	5.01	1.97	82	5.78	1.25	82
Non-narrative	4.32	2.27	79	4.41	2.43	79	5.68	1.12	80
Total	4.58	2.14	161	4.71	2.22	161	5.73	1.19	162

* $p < .05$, ** $p < .001$

For the cultural dimension masculinity, two groups were created (high and low masculinity), based on a median of 2.20. 82 (51%) participants scored under or equal to 2.2. Therefore, low masculinity was decided to be lower than or equal to 2.20 and high masculinity was decided to be higher than 2.20.

A two-way analysis of variance for item 1 of behavioural safety intentions with masculinity (high/low) and version of warning as factors showed no significant main effect of masculinity ($F(1,156) = 3.21, p = .075$). Version of warning was not found to have a significant main effect on item 1 of behavioural safety intentions either ($F(1, 156) = 2.61, p = .108$). The interaction effect between masculinity and version of warning was also statistically not significant ($F(1,156) < 1$).

A two-way analysis of variance for item 2 of behavioural safety intentions with masculinity (high/low) and version of warning as factors showed no significant main effect of masculinity ($F(1,156) = 2.24, p = .136$). Version of warning was not found to have a significant main effect on item 2 of behavioural safety intentions either ($F(1, 156) = 3.17, p = .077$). The interaction effect between masculinity and version of warning was also statistically not significant ($F(1,156) < 1$).

A two-way analysis of variance for item 3 of behavioural safety intentions with masculinity (high/low) and version of warning as factors showed no significant main effect of masculinity ($F(1,157) < 1$). Version of warning was not found to have a significant main effect on item 3 of behavioural safety intentions either ($F(1, 157) < 1$). The interaction effect between masculinity and version of warning was also statistically not significant ($F(1,157) = 3.79, p = .053$). For means and standard deviations, see table 6.

Table 6. The effect of masculinity (high or low) and version of safety warning (narrative or non-narrative) on three items of behavioural safety intentions (item 1 = I would certainly not drive the fork-lift truck with the arms in the narrowest position, item 2 = I would recommend driving the fork-lift truck with the arms in the widest position to my co-workers, item 3 = I identify myself as someone who always follows safety regulations). (1 = low safety intentions, 7 = high safety intentions).

Version of safety warning	Item 1			Item 2			Item 3		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Low masculinity									
Narrative	5.26	2.15	39	5.23	2.30	39	5.59	1.33	39
Non-narrative	4.52	2.32	42	4.71	2.42	42	5.84	1.00	43
Total	4.88	2.26	81	4.96	2.36	81	5.72	1.17	82
High masculinity									
Narrative	4.47	1.76	43	4.81	1.62	43	5.95	1.15	43
Non-narrative	4.11	2.24	36	4.08	2.44	36	5.47	1.25	36
Total	4.30	1.99	79	4.48	2.06	79	5.73	1.22	79
Total									
Narrative	4.84	1.98	82	5.01	1.97	82	5.78	1.25	82
Non-narrative	4.33	2.28	78	4.42	2.44	78	5.67	1.13	79
Total	4.59	2.14	160	4.73	2.22	160	5.73	1.19	161

* $p < .05$, ** $p < .001$

For the cultural dimension uncertainty avoidance, also two groups were created (high and low uncertainty avoidance), based on a mean of 6.12 and a median of 6.30. 81 (50%) participants scored under or equal to 6.2. Therefore, low uncertainty avoidance was decided to be lower than or equal to 6.2 and high uncertainty avoidance was decided to be higher than 6.2.

A two-way analysis of variance for item 1 of behavioural safety intentions with uncertainty avoidance (high/low) and version of warning as factors showed no significant main effect of uncertainty avoidance ($F(1,157) < 1$). Version of warning was not found to have a significant main effect on item 1 of behavioural safety intentions either ($F(1, 157) = 2.28, p = .133$). The interaction effect between uncertainty avoidance and version of warning was not statistically significant ($F(1,157) < 1$).

A two-way analysis of variance for item 2 of behavioural safety intentions with uncertainty avoidance (high/low) and version of warning as factors showed no significant main effect of uncertainty avoidance ($F(1,157) < 1$). Version of warning was not found to have a significant main effect on item 2 of behavioural safety intentions either ($F(1, 157) = 2.75, p = .099$). The interaction effect between uncertainty avoidance and version of warning was also not statistically significant ($F(1,157) < 1$).

A two-way analysis of variance for item 3 of behavioural safety intentions with uncertainty avoidance (high/low) and version of warning as factors showed a significant main effect of uncertainty avoidance ($F(1,158) = 25.76, p < .001$). Participants with low uncertainty avoidance ($M = 5.28, SD = 1.11$) reported that they identified as someone who always followed safety regulations less than participants with high uncertainty avoidance ($M = 6.17, SD = 1.09$), irrespective of the type of safety warning they read. Version of warning was not found to have a significant main effect on item 3 of behavioural safety intentions ($F(1, 158) < 1$). The interaction effect between uncertainty avoidance and version of warning was also statistically not significant ($F(1,158) = 1.41, p = .237$). For means and standard deviations, see table 7.

Table 7. The effect of uncertainty avoidance (high or low) and version of safety warning (narrative or non-narrative) on three items of behavioural safety intentions (item 1 = I would certainly not drive the fork-lift truck with the arms in the narrowest position, item 2 = I would recommend driving the fork-lift truck with the arms in the widest position to my co-workers, item 3 = I identify myself as someone who always follows safety regulations). (1 = low safety intentions, 7 = high safety intentions).

Version of safety warning	Item 1			Item 2			Item 3		
	M	SD	n	M	SD	n	M	SD	n
Low uncertainty avoidance									
Narrative	4.83	1.86	36	5.00	1.94	36	5.17	1.18	36
Non-narrative	4.23	2.24	44	4.23	2.34	44	5.38	1.05	45
Total	4.50	2.09	80	4.57	2.19	80	5.28**	1.11	81
High uncertainty avoidance									
Narrative	4.85	2.10	46	5.02	2.02	46	6.26	1.08	46
Non-narrative	4.43	2.33	35	4.63	2.55	35	6.06	1.11	35
Total	4.67	2.20	81	4.85	2.25	81	6.17**	1.09	81
Total									
Narrative	4.84	1.98	82	5.01	1.97	82	5.78	1.25	82
Non-narrative	4.32	2.27	79	4.41	2.43	79	5.68	1.12	80
Total	4.58	2.14	161	4.71	2.22	161	5.73	1.19	162

* $p < .05$, ** $p < .001$

The last section contains analyses that were used in order to answer research question 3: “To what extent does country and type of safety warning influence the control variables understanding, perceived relevance and perceived realism?” to investigate these three control variables, three two-way analyses of variance were executed.

A two-way analysis of variance for understanding with country of company and version of warning as factors showed no significant main effect of country of company ($F(1,179) < 1$). Version of warning was not found to have a significant main effect on understanding either ($F(1, 179) = 1.45, p = .231$). The interaction effect between country of company and version of warning was also statistically not significant ($F(1, 179) = 1.47, p = .227$).

A two-way analysis of variance for perceived relevance with country of company and version of warning as factors showed a significant main effect of country of company ($F(1,178) = 4.80, p = .030$). Employees in Dutch companies ($M = 3.77, SD = 2.04$) reported a lower perceived relevance than employees in Belgian companies ($M = 4.47, SD = 2.14$), irrespective of the type of safety warning they read.

Version of warning was not found to have a significant main effect on perceived relevance ($F(1, 178) < 1$). The interaction effect between country of company and version of warning was not statistically significant either ($F(1,178) = 2.48, p = .117$).

A two-way analysis of variance for perceived realism with country of company and version of warning as factors showed a significant main effect of country of company ($F(1,177) = 5.72, p = .018$). Employees in Dutch companies ($M = 5.49, SD = 1.48$) reported a lower perceived realism than employees in Belgian companies ($M = 5.99, SD = 1.34$), irrespective of the type of safety warning they read.

Version of warning was also found to have a significant main effect on perceived realism ($F(1, 177) = 5.31, p = .022$). Participants who read the narrative safety warning ($M = 5.95, SD = 1.37$) reported a higher perceived realism than participants who read the non-narrative safety warning ($M = 5.41, SD = 1.48$), irrespective of the type of safety warning they read. The interaction effect between country of company and version of warning was not statistically significant ($F(1, 177) = 1.23, p = .270$). For means and standard deviations, see table 8.

Table 8. The effect of country the company was in (Belgium or the Netherlands) and version of safety warning (narrative or non-narrative) on control variables understanding, relevance and realism (1 = poor understanding, relevance and realism, 7 = good understanding, relevance or realism).

Version of safety warning	Understanding			Relevance			Realism		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Company in Belgium									
Narrative	6.47	1.26	34	4.09	2.42	34	6.12	1.39	34
Non-narrative	6.47	1.08	36	4.83	1.80	36	5.86	1.29	36
Total	6.47	1.16	70	4.47*	2.14	70	5.99*	1.34	70
Company in the Netherlands									
Narrative	6.53	0.78	57	3.89	2.18	56	5.84	1.36	57
Non-narrative	6.12	1.25	56	3.64	1.90	56	5.11	1.53	54
Total	6.33	1.06	113	3.77*	2.04	112	5.49*	1.48	111
Total									
Narrative	6.51	0.98	91	3.97	2.26	90	5.95*	1.37	91
Non-narrative	6.26	1.19	92	4.11	1.94	92	5.41*	1.48	90
Total	6.38	1.10	183	4.04	2.10	182	5.68	1.44	181

* $p < .05$, ** $p < .001$

Conclusion & Discussion

This study aimed to explore whether narrative persuasion could improve the effectiveness of occupational safety communication. The first research question therefore was: *“To what extent do behavioural safety intentions of factory employees in Belgium and the Netherlands increase after reading a safety warning with a narrative opposed to one without a narrative?”*. In order to answer this question, two-way analyses of variance for the three separate items that measured behavioural safety intentions (1: *“I would certainly not drive the fork-lift truck with the arms in the narrowest position”*, 2: *“I would recommend driving the fork-lift truck with the arms in the widest position to my co-workers”*, 3: *“I identify myself as someone who always follows safety regulations”*) with identification, transportation and emotion as fixed factors were executed. These analyses showed that adding a narrative safety message to the traditional safety warning did not result in safer behavioural intentions, which was different from the results that Ricketts et al. (2010) found with a narrative safety message for a swing set, that actually was shown to be more effective than the traditional safety warning.

While adding a story to a traditional warning did not have the desired positive effect on the behavioural safety intentions of participants, the three underlying psychological mechanisms of narrative persuasion did to some extent have a positive effect on behavioural safety intentions. Transportation had an effect on all three behavioural safety intentions items described above. This answers research question 1a: *“To what extent does transportation have an effect on behavioural safety intentions?”*. Participants who read the narrative safety message and scored low on transportation, also reported to have less behavioural safety intentions than participants with a high transportation; they would *“certainly not drive the fork-lift truck with the arms in the narrowest position”* (Item 1) less than participants who scored high on transportation. Participants who scored low on transportation also reported to *“recommend safer behaviour to their co-workers”* (Item 2) less and reported to *“identify as someone who follows safety regulations”* (Item 3) less than participants who scored high on transportation. A higher level of transportation, one of the three underlying psychological mechanisms of narrative persuasion, thus had a positive influence on the behavioural safety intentions of participants, which means that when someone gets transported more, they actually do behave more safely. This is in line with the findings of prior research on narrative persuasion (e.g. De Graaf et al., 2009; Green & Brock,

2002), which showed that being transported into a story can actually have an effect on someone's beliefs.

The level of identification and emotion, the other two underlying psychological mechanisms of narrative persuasion, only had an effect on item 1 and 3 of behavioural safety intentions. Participants who read the narrative and scored low on identification reported that they *"would certainly not drive the fork-lift truck with the arms in the narrowest position"* (item 1) less than participants who scored high on identification. Participants who scored low on identification also stated that they *"identified as someone who follows safety regulations"* (item 3) less than participants who scored high on identification. This was also the case for emotion; participants who scored low on identification reported that they would *"certainly not drive the fork-lift truck with the arms in the narrowest position"* (item 1) less and *"identified as someone who follows safety regulations"* (item 3) less than participants who scored high on emotion. The abovementioned results answer research questions 1b: *"To what extent does identification have an effect on behavioural safety intentions?"* and 1c: *"To what extent does emotion have an effect on behavioural safety intentions?"*. Identification and emotion hence only partly had a positive influence on the behavioural safety intentions of the participants, which is only partly in line with prior research that had proven that being able to identify with the characters of a story and experiencing emotion while reading the story, would influence the beliefs of the reader (e.g. De Graaf et al., 2009; De Graaf et al., 2012; Murphy et al., 2013).

The difference between the influence of identification, emotion and transportation on behavioural safety intentions could be caused by the fact that the three items that should together have measured behavioural safety intentions were self-adapted. It was important that filling in the questionnaires would not take too long, as the companies would not allow their employees to leave their work for a long time. Therefore, the purchase intentions scale (Hornikx et al., 2013), containing only three items, was chosen and adapted specifically for this subject. Consequently, the length of the questionnaire was short enough, which probably resulted in a high return-rate of the questionnaires. However, three items might not have been sufficient to determine the actual behavioural safety intentions of the employees. This was a shortcoming of the research that could have possibly had a negative influence on the reliability of the results and the unacceptable Cronbach's Alfa values for behavioural intentions. The found results could also originate from the content of the story;

possibly it was easy for the participants to feel transported in the story, but more difficult to identify with the main character or to feel emotion while reading the story. This could be due to the diversity in the group of participants; the main character was a 45 year old fork-lift truck driver, which might have made it difficult to identify with the main character. While the mean age of all participants (42) was close to the main character's age, the participants were not all fork-lift truck drivers and their age ranged from 20 to 62 years old. Furthermore, the fact that emotion was not triggered by the story could be related to the professional environment; feeling emotion might be considered as inappropriate by some participants or in some companies, which could also be culturally dependent. Moreover, the perception of the quality of the story could also have influenced its effectiveness; just like with books, one story can be perceived as better and as more immersing than another story. The above described could subsequently have caused that not all items of behavioural safety intentions were positively influenced by identification and emotion.

To answer the second research question *"To what extent does culture moderate the effectiveness of the safety warning?"*, the assumption of a cultural difference between Belgium and Dutch employees was tested with independent samples t-tests first. These analyses showed that the levels of uncertainty avoidance and masculinity, as measured by the scales of Culpepper and Watts (1999), were not significantly different between groups of employees from the Netherlands and Belgium. This means that the assumption of a cultural difference that was based on research from Hofstede and Hofstede (2005), needed to be rejected for this group of participants. An explanation for these findings could be the existence of an organisational and/or group culture. In both countries, participants were low-skilled labour employees who worked in similar sectors and companies, often factories and warehouses. This common denominator could make it possible that cultural differences within the group of participants were minimal, while cultural differences between the two countries do exist.

Next, two-way analyses of variance for the three separate items that measured behavioural safety intentions with country, masculinity and uncertainty avoidance as fixed factors were executed in order to answer questions 2a: *"To what extent does country moderate the persuasive effect of the safety warning?"*, 2b: *"To what extent does masculinity moderate the persuasive effect of the safety warning?"* and 2c: *"To what extent does uncertainty avoidance moderate the persuasive effect of safety warning?"*. Country only had an influence

on item 2 of behavioural safety intentions; Dutch participants would “*recommend safe forklift truck usage to their co-workers*” (Item 2) significantly less than Belgian participants. There was no significant effect of country on item 1 and 3 of behavioural safety intentions. The level of masculinity of participants did not have a significant effect on the three items of behavioural intentions. The level of uncertainty avoidance only had an effect on item 3 of behavioural safety intentions; participants who scored low on uncertainty avoidance reported that they “*identified as someone who always follows safety regulations*” (Item 3) significantly less than participants who scored high on uncertainty avoidance. Uncertainty avoidance had no effect on the other two items of behavioural safety intentions. No interactions were found for masculinity, uncertainty avoidance and country with version of warning, which means that these three factors did not moderate the relation between reading a narrative safety warning and reporting behavioural safety intentions. It was expected that *if* culture and country would have had an effect on behavioural safety intentions, it would have an effect on all three items of behavioural safety intentions. As mentioned before, the reliability of these three items together was possibly negatively influenced by a few factors. This makes it rather complicated to interpret the fact that Belgian participants would recommend safe behaviour more than Dutch participants; it could be related to company habits, other cultural differences could have played a role, but the samples could also have been too different from each other. This is also the case for the effect uncertainty avoidance had on identifying as a safety-conscious employee (Item 3). It seems logical that someone who wants to avoid uncertain situations would identify as safety-conscious, but it is unclear why the other two items that measured behavioural safety intentions were not affected by the level of uncertainty avoidance of the participants.

In order to answer question three “*To what extent does country and type of safety warning influence the control variables understanding, perceived relevance and perceived realism?*”, three two-way ANOVA’s for understanding, perceived relevance and perceived realism with country and version of warning as fixed factors were executed. These analyses showed that country and version of the warning did not have a significant effect on the understanding of the warning, meaning that there was no difference in understanding of the narrative or the non-narrative warning in both countries. However, country did have an effect on the perceived relevance; employees in Dutch companies reported a lower perceived relevance than participants in Belgian companies, irrespective of the type of safety

warning they read. Dutch employees also reported a lower perceived realism than employees in Belgian companies, irrespective of the type of safety warning they read. Although the narrative version of the warning was not significantly more effective than the non-narrative version, there was an effect of version on perceived realism; participants who read the narrative safety warning reported a higher perceived realism than participants who read the non-narrative safety warning. The narrative safety warning was also perceived as more realistic than the non-narrative safety warning in both countries. This is interesting because higher perceived realism and higher perceived relevance were reported for the narrative, although it was not found to be more effective. This could be caused by various factors. First, the narrative safety warning that was designed could have resembled safety warnings used in these companies more than the traditional safety warning, which could make it more realistic for participants. It is also possible that the narrative version of the warning was found to be more realistic because the traditional warning contained a few ambiguities, which will be described later in this section. These ambiguities could have caused that participants found the traditional warning less realistic, while the narrative together with the traditional warning as a whole were found to be more realistic. However, this does not explain the difference in perceived relevance and perceived realism between the participants of the Dutch and the Belgium companies. These findings could also be a result of a difference of habits, other cultural differences, a too diverse sample or maybe even differences in Dutch and Belgian safety legislation, which could make one of these warnings more or less relevant or realistic in a country. The level of familiarity with a fork-lift truck could have also played a role here, as participants were not asked to report the amount of experience they had working with a fork-lift truck.

This study also had its shortcomings. Besides the self-designed scales for behavioural safety intentions that were discussed earlier in this section, the Dutch and the Belgian group sizes differed significantly (70 Belgian participants vs. 113 Dutch participants), which caused difficulties in the comparability of the two groups. Significant results should therefore be interpreted carefully. Also, thirteen questionnaires needed to be recoded as they were printed wrongly, which could have possibly had a negative influence on the reliability of the results. During the data collection, a few participants also mentioned that the formulation of these questions was unclear, as it did not state if there was a load and if so, how big the load on the forks of the fork-lift truck was. Therefore it was difficult for participants to determine

whether they would never use the fork-lift truck with the arms in the narrowest position; it depends on the load, because if there is a small load, it would not be possible to use the arms in the widest position as the load would fall through the arms of the fork-lift truck.

This study explored the field of narrative occupational safety communication, and therefore additional research could give a better and more elaborate insight in the applicability of narratives in occupational safety. Although the outcomes of this research could not prove that adding a narrative to a traditional safety warning was more effective than just the traditional safety warning, this does not mean that narrative occupational safety communication should not be given attention anymore. Some indications were found that a higher level of transportation, identification and emotion (at least to some extent) lead to safer behavioural intentions and also during the data-collection, it became clear that some of the companies already tried to incorporate real-life victim stories in their safety communication in order to be more convincing.

Follow-up research should therefore focus on other and more elaborate ways to incorporate narrative persuasion into occupational safety communication, taking into account factors that were outside the scope of this study, like a more elaborate pilot study to test the materials among the target group of the study. For example, other ways of storytelling, like visual narratives, could be studied in the OSH context, as there might exist other, more effective ways to incorporate storytelling in safety communication than written narratives, especially in low-skilled labour organisations. Next, when looking at cultural differences influencing the effectiveness of narrative persuasion in safety communication, it would be interesting to compare countries that are less close together in distance and in culture, for example a European and a non-European country. Resistance to persuasion, as explained by Petty and Cacioppo (1986), Knowles and Lynn (2004) and Slater and Rouner (2002) is an important barrier for successful persuasive communication and could therefore be a focal point for follow-up research as well. Resistance to persuasion might possibly also be culturally dependent (Kolodziej-smith, Friesen, & Yaprak, 2013), so if the level of resistance to a persuasive attempt would be measured and related to culture, it could become clearer if and why narrative persuasion would be an effective or an ineffective method in specific OSH communication cases.

During this research, it appeared that companies take great care of the development of more effective safety communication already. Companies were eager to speak about their

experiences and the different methods of safety communication they used or had used in the past, like 'toolbox-meetings'. Although companies at first seemed uninterested to cooperate in a study like this, the stigma that exists around talking about accidents on the work floor was abolished completely by the desire of companies to learn about other, new ways to ensure their employees' safety. Effective follow-up research on occupational safety communication can therefore only be executed in collaboration with companies and their employees, as great insights come from interviews and dialogues with the target-group of these safety messages.

Bibliography

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211. [http://doi.org/10.1016/0749-5978\(91\)90020-T](http://doi.org/10.1016/0749-5978(91)90020-T)
- Appel, M., Gnambs, T., Richter, T., & Green, M. C. (2015). The Transportation Scale–Short Form (TS–SF). *Media Psychology*, 18(2), 243–266. <http://doi.org/10.1080/15213269.2014.987400>
- Bandura, A. (2004). Health promotion by social cognitive means. *Health Education & Behavior : The Official Publication of the Society for Public Health Education*, 31(2), 143–64. <http://doi.org/10.1177/1090198104263660>
- BGZ Wegvervoer. (n.d.). *Veilig Werken met de Heftruck Brochure*. Retrieved from https://www.fnv.nl/site/brochures_en_folders/veilig_werken_met_de_heftruck_brochure.pdf
- Busselle, R., & Bilandzic, H. (2009). Measuring Narrative Engagement. *Media Psychology*, 12(4), 321–347. <http://doi.org/10.1080/15213260903287259>
- Busselle, R. W. (2001). Television exposure, perceived realism, and exemplar accessibility in the social judgment process. *Media Psychology*, 3(1), 43–67. http://doi.org/http://dx.doi.org/10.1207/S1532785XMEP0301_03
- Cohen, J. (2001). Defining Identification: A Theoretical Look at the Identification of Audiences with Media Characters. *Mass Communication & Society*, 4(3), 245–264. <http://doi.org/10.1207/S15327825MCS0403>
- Coulter, C., Michael, C., & Poynor, L. (2007). Storytelling as pedagogy: An unexpected outcome of narrative inquiry. *Curriculum Inquiry*, 37(2), 103–122. <http://doi.org/10.1111/j.1467-873X.2007.00375.x>
- Cullen, E. T. (2002). TELL ME A STORY : USING NARRATIVE TO TEACH SAFETY TO SKILLED BLUE-COLLAR WORKERS By Spokane Research Laboratory , National Institute for Occupational Safety and Health Centers for Disease Control and Prevention. *Strategies*.
- Culpepper, R. a., & Watts, L. (1999). Measuring cultural dimensions at the individual level: An examination of the Dorfman and Howell (1988) scales and Robertson and Hoffman (1999) scale. *Academy of Strategic and and Organizational Leadership Journal*, 3(1), 22–34. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.200.6073&rep=rep1&type=pdf#page=24>
- De Graaf, A. (2015). *Vragenlijst aspecten van Narrative Engagement*.
- de Graaf, A., Hoeken, H., Sanders, J., & Beentjes, H. (2009). The role of dimensions of narrative engagement in narrative persuasion. *Communications*, 34(4), 385–405. <http://doi.org/10.1515/COMM.2009.024>
- de Graaf, a., Hoeken, H., Sanders, J., & Beentjes, J. W. J. (2012). Identification as a Mechanism of Narrative Persuasion. *Communication Research*, 39(6), 802–823. <http://doi.org/10.1177/0093650211408594>
- EU OSH. (n.d.-a). National Focal Points. Retrieved from <https://osha.europa.eu/en/about-eu-osha/national-focal-points>
- EU OSH. (n.d.-b). Strategic Framework. Retrieved March 1, 2016, from https://oshwiki.eu/wiki/EU_OSH_Strategic_framework
- Eurostat. (2014). Number of non-fatal and fatal accidents at work, 2012. Retrieved March 21, 2016, from [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Number_of_non_fatal_and_fatal_accidents_at_work_2012_\(%C2%B9\)_\(persons\)_YB15.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Number_of_non_fatal_and_fatal_accidents_at_work_2012_(%C2%B9)_(persons)_YB15.png)

- Fisch, B. (2014). Narrative leadership in a quality organization: a meaningful alternative to management by measurement. *International Journal of Leadership in Education*, 17(2), 154–173. <http://doi.org/10.1080/13603124.2013.792394>
- Fleming, D. (2001). Narrative leadership: using the power of stories. *Strategy & Leadership*, 29(4). <http://doi.org/10.1108/sl.2001.26129dab.002>
- Fog, K., Budtz, C., & Yakaboylu, B. (2005). *Storytelling: Branding in practice*. *Storytelling: Branding in Practice*. <http://doi.org/10.1007/b138635>
- Green, M. C., & Donahue, J. K. (2009). Simulated worlds: Transportation into narratives. In K. D. Markman, W. M. Klein, & J. A. Suhr (Eds.), *Handbook of imagination and mental simulation* (pp. 241–256). New York: Psychology press. Retrieved from <http://sites.google.com/site/johnkdonahue2/GreenDonahuefinaldraft.pdf>
- Green, M. C., & Brock, T. C. (2000). The role of transportation in the persuasiveness of public narratives. *Journal of Personality and Social Psychology*, 79(5), 701–721. <http://doi.org/10.1037/0022-3514.79.5.701>
- Green, M. C., & Brock, T. C. (2002). In the mind's eye: Transportation-imagery model of narrative persuasion. In M. C. Green, J. J. Strange, & T. C. Brock (Eds.), *Narrative impact: Social and cognitive foundations* (pp. 315–341). Mahwah, NJ: Erlbaum. Retrieved from M:\reference\journal paper and resume\journal paper resume\ronbun_memo.iedx
- Gutierrez-Clellen, V. F., Peña, E., & Quinn, R. (1995). Accommodating cultural differences in narrative style. *Topics in Language Disorders*, 15(4), 54–67. <http://doi.org/10.1097/00011363-199508000-00006>
- Hofstede, G. H., & Hofstede, G. J. (2005). *Cultures and organizations software of the mind*. *Cultures and Organizations*. New York: McGraw-Hill. <http://doi.org/10.1057/jibs.1992.23>
- Hornikx, J., & Hoeken, H. (2007). Cultural Differences in the Persuasiveness of Evidence Types and Evidence Quality. *Communication Monographs*, 74(4), 443–463. <http://doi.org/10.1080/03637750701716578>
- Hornikx, J., van Meurs, F., & Hof, R.-J. (2013). The Effectiveness of Foreign-Language Display in Advertising for Congruent versus Incongruent Products. *Journal of International Consumer Marketing*, 25(3), 152–165. <http://doi.org/10.1080/08961530.2013.780451>
- ITM Interma. (n.d.). Heftruck Waarschuwing. Retrieved June 12, 2016, from <http://www.itminterma.nl/magazijn/stickers-en-tekstborden/instructie-stickers/heftruck-waarschuwing/>
- Kalogeras, S. (2014). *Transmedia Storytelling and the New Era of Media Convergence in Higher Education*. London: Palgrave Macmillan UK. <http://doi.org/10.1057/9781137388377>
- Knowles, E. S., & Linn, J. A. (2004). *Resistance and Persuasion*. *Resistance and Persuasion*. Mahwah, New Jersey: Lawrence Erlbaum Associates. <http://doi.org/10.4324/9781410609816>
- Kolodziej-smith, R., Friesen, D. P., & Yaprak, A. (2013). Does Culture Affect how people Receive and Resist Persuasive Messages? Research Proposals about Resistance to Persuasion in Cultural Groups. *Global Advances in Business Communication*, 2(1), 1–22.
- McQueen, A., Kreuter, M. W., Kalesan, B., & Alcaraz, K. I. (2011). Understanding narrative effects: The impact of breast cancer survivor stories on message processing, attitudes, and beliefs among African American women. *Health Psychol*, 30(6), 674–682. <http://doi.org/10.1037/a0025395>
- Mearns, K., & Yule, S. (2009). The role of national culture in determining

- safety\performance: Challenges for the global oil and gas industry. *Safety Science*, 47, 777–785.
- Murphy, S. T., Frank, L. B., Chatterjee, J. S., & Baezconde-Garbanati, L. (2013). Narrative versus Nonnarrative: The Role of Identification, Transportation, and Emotion in Reducing Health Disparities. *Journal of Communication*, 63(1), 116–137. <http://doi.org/10.1111/jcom.12007>
- Murphy, S. T., Frank, L. B., Moran, M. B., & Patnoe-Woodley, P. (2011). Involved, Transported, or Emotional? Exploring the Determinants of Change in Knowledge, Attitudes, and Behavior in Entertainment-Education. *Journal of Communication*, 61(3), 407–431. <http://doi.org/10.1111/j.1460-2466.2011.01554.x>
- NOS. (2016). “Zeven doden per jaar in magazijn is te veel.” Retrieved September 14, 2016, from <http://nos.nl/artikel/2131724-zeven-doden-per-jaar-in-magazijn-is-te-veel.html>
- Paul, J. A. (2013). Improving communication with foreign speakers on the shop floor. *Safety Science*, 52, 65–72. <http://doi.org/10.1016/j.ssci.2012.02.007>
- Petty, R. E., & Cacioppo, J. T. (1986). *Communication and Persuasion: Central and Peripheral Routes to Attitude Change*. *Journal of Consumer Research* (Vol. 10). New York: Springer-Verlag. Retrieved from https://books.google.nl/books?hl=nl&lr=&id=nFFDBAAAQBAJ&oi=fnd&pg=PT12&dq=Communication+and+persuasion:+Central+and+peripheral+routes+to+attitude+change.&ots=idG8CvIGn9&sig=_mJ9FURFhWMEj4dyChaamT1GQAI
- Petty, R., Heesacker, M., & Hughes, J. N. (1997). The elaboration likelihood model: Implications for the practice of school psychology. *Journal of School Psychology*, 35(2), 107–136. [http://doi.org/10.1016/S0022-4405\(97\)00003-4](http://doi.org/10.1016/S0022-4405(97)00003-4)
- Pulizzi, J. (2012). The rise of storytelling as the new marketing. *Publishing Research Quarterly*, 28(2), 116–123. <http://doi.org/10.1007/s12109-012-9264-5>
- Reniers, G., & Gidron, Y. (2013). Do cultural dimensions predict prevalence of fatal work injuries in Europe? *Safety Science*, 58, 76–80. <http://doi.org/10.1016/j.ssci.2013.03.015>
- Ricketts, M. (2007). *The use of narratives in safety and health communication*. *Dissertation Abstracts International* (Vol. 68). Manhattan: Kansas State University. Retrieved from <https://books.google.nl/books?hl=nl&lr=&id=2-6oU1XyvhoC&oi=fnd&pg=PR15&dq=he+use+of+narratives+in+safety+and+health+communication&ots=IWjBzKrUW-&sig=iFYuAH3L2rEKsnPxcCmaUMJsKGE>
- Ricketts, M., Shanteau, J., McSpadden, B., & Fernandez-Medina, K. M. (2010). Using stories to battle unintentional injuries: Narratives in safety and health communication. *Social Science and Medicine*, 70(9), 1441–1449. <http://doi.org/10.1016/j.socscimed.2009.12.036>
- Schank, R. C., & Abelson, R. P. (1996). Knowledge and memory: the real story. In R. S. Wyer (Ed.), *Choice Reviews Online* (VIII, Vol. 33, pp. 33-3602-33–3602). Hillsdale, NJ: Erlbaum. <http://doi.org/10.5860/CHOICE.33-3602>
- Schubert, U., & Dijkstra, J. J. (2009). Working safely with foreign contractors and personnel. *Safety Science*, 47(6), 786–793. <http://doi.org/10.1016/j.ssci.2008.02.001>
- Schyve, P. M. (2007). Language differences as a barrier to quality and safety in health care: The joint commission perspective. *Journal of General Internal Medicine*, 22(SUPPL. 2), 360–361. <http://doi.org/10.1007/s11606-007-0365-3>
- Slater, M. D., & Rouner, D. (2002). Entertainment-Education and Elaboration Likelihood: Understanding the Processing of Narrative Persuasion. *Communication Theory*, 12(2), 173–191. <http://doi.org/10.1111/j.1468-2885.2002.tb00265.x>

- Smit, M. C., & Hoeben, J. (2013). *Arbeidsongevallenrapport 2013*. Retrieved from http://www.inspectieszw.nl/Images/Arbeidsongevallenrapport-jaar-2013_tcm335-350424.pdf
- Starren, A., Hornikx, J., & Luijters, K. (2013). Occupational safety in multicultural teams and organizations: A research agenda. *Safety Science*, 52, 43–49.
<http://doi.org/10.1016/j.ssci.2012.03.013>
- Starren, M., & Hobelman, L. (2014). *Bachelor Thesis Group Safety in Multicultural Companies*. Radboud University Nijmegen.
- Tal-Or, N., & Cohen, J. (2010). Understanding audience involvement: Conceptualizing and manipulating identification and transportation. *Poetics*, 38(4), 402–418.
<http://doi.org/10.1016/j.poetic.2010.05.004>
- Wycherley, I. (2005). *Tales for change: Using storytelling to develop people and organisation*. *Personnel Review* (Vol. 34). Retrieved from ISI:000227787800007

Appendix

Leaflet with information for supervisors

Geachte lezer,

Hierbij geef ik nadere uitleg over mijn afstudeeronderzoek naar de toepassing van verhalen (narratives) in veiligheidscommunicatie. Met mijn afstudeeronderzoek voor de Master International Business Communication aan de Radboud Universiteit in Nijmegen probeer ik een manier te vinden om veiligheidscommunicatie effectiever te maken. Verschillende onderzoeken laten zien dat het vertellen van verhalen een goede manier is om mensen ergens van te overtuigen. De toepassing hiervan op veiligheidscommunicatie in bedrijven is echter nog niet onderzocht.

Om te kunnen testen of de toevoeging van een verhaal aan een veiligheidswaarschuwing, in dit geval over een heftruckongeluk, daadwerkelijk effectiever is dan slechts de veiligheidswaarschuwing, heb ik in totaal 120 fabrieks- of werkplaatsmedewerkers nodig die voor mij een vragenlijst willen invullen die 16 tot 29 vragen bevat. Ik voer dit onderzoek zowel in België als in Nederland uit, om te kijken of cultuurverschillen eventueel ook een rol hierin spelen.

Ik zou u willen vragen of het mogelijk is dat ik langs kom om, uiteraard buiten werktijd of tijdens een pauze, deze vragenlijsten bij productiemedewerkers, monteurs of distributiemedewerkers te komen afnemen. Dit zal maximaal tien minuten tijd kosten voor de deelnemers. Waarschijnlijk zal ik meerdere bedrijven moeten contacteren om genoeg deelnemers te kunnen verkrijgen, maar alle beetjes helpen. Uiteraard is meedoen aan het onderzoek volledig anoniem, de resultaten zullen bovendien alleen voor dit afstudeeronderzoek gebruikt worden.

Met vriendelijke groet en bij voorbaat dank,

Gina Theunissen

Masterstudent International Business Communication
Radboud Universiteit te Nijmegen

E-mail: gina.theunissen@student.ru.nl

Telefoon: 0031 6 306 583 50

Questionnaire with narrative for Dutch company

Beste heer/mevrouw,

Allereerst hartelijk dank voor uw deelname aan mijn afstudeeronderzoek. Deze vragenlijst is een onderdeel van een onderzoek naar veiligheidscommunicatie op de werkvloer. U ziet op deze pagina een veiligheidswaarschuwing. Lees deze aandachtig door voordat u de vragenlijst invult. De vragen in deze vragenlijst gaan voor een gedeelte over deze veiligheidswaarschuwing. Lees ook de vragen goed door voordat u deze beantwoordt. De vragenlijst is volledig anoniem en de antwoorden worden alleen gebruikt voor dit onderzoek. Het invullen van de vragenlijst duurt ongeveer 10 minuten en er zijn geen foute antwoorden mogelijk, omdat er naar uw mening gevraagd wordt. Heeft u vragen, dan kunt u dat aangeven.



WAARSCHUWING

VEILIGHEIDSVOORSCHRIFT - Voorkom het omvallen van de heftruck!
Gebruik de vorken van de heftruck in de breedste positie. Zorg dat de lading voldoende stabiliteit heeft, goed ondersteund is en zich midden op de vorken bevindt. Let op bij het verladen van lange, brede of hoge lasten.

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Radboud Universiteit Nijmegen



Questionnaire with narrative for Belgian companies

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Questionnaire without narrative

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STORYTELLING IN VEILIGHEIDSCOMMUNICATIE

Resultaten van het afstudeeronderzoek

Het vertellen van verhalen wordt veel toegepast om mensen ergens van te overtuigen. Niet alleen bij kinderen blijkt dit effectief (bijvoorbeeld sprookjes met een morele boodschap), maar ook in marketing en gezondheidscommunicatie (bijvoorbeeld ervaringsverhalen van patiënten) blijkt *storytelling* goed te werken als middel om het gedrag van mensen te veranderen (meer kopen, gezonder leven etc.). Verhalen maken immers vaak veel indruk. Tot nu toe was er nog niet

onderzocht of ervaringsverhalen ook een effectieve toevoeging konden zijn voor veiligheidscommunicatie in bedrijven. Er gebeuren nog steeds relatief veel ongelukken op werkvloeren in België en in Nederland, waardoor het belangrijk is om andere en betere manieren te vinden om veiligheidsvoorschriften te communiceren. Het onderzoek waaraan u heeft meegewerkt, keek of *storytelling* daar één van was.



Relatief veel ongelukken met heftrucks



Er is veel aandacht voor veiligheid in bedrijven



Maar werken traditionele waarschuwingen wel?



Minder ongelukken door ervaringsverhalen?

HET ONDERZOEK



VRAAG A: Kun je een veiligheidswaarschuwing over een heftruck effectiever maken door er een verhaal aan toe te voegen?

VRAAG B: Spelen cultuurverschillen een rol in de voorkeur voor het soort waarschuwing?

De originele waarschuwing: Voorkom het omvallen van de heftruck! Gebruik de vorken van de heftruck in de wijdsten positie. Zorg dat de lading voldoende stabiliteit heeft, goed ondersteund is en zich midden op de vorken bevindt. Let op bij het verlaten van lange, brede of hoge lasten.

Het ervaringsverhaal: Antoine, 45 jaar, werkte 12 jaar bij een productiebedrijf. Hij bestuurd hier regelmatig een heftruck volgeladen met materiaal. Antoine vertelt: "Ik zette voor korte ritjes vaak de vorken niet helemaal in de wijdsten positie. Dat ging immers altijd goed." In januari dit jaar ging het echter mis tijdens een ritje van ongeveer 400 meter. De lading lag niet stabiel op de vorken en de heftruck verloor zijn balans. Antoine weet weinig meer van het ongeluk, maar volgens collega's, die getuigen waren van het drama, probeerde hij de heftruck nog tot stilstand te brengen. De heftruck viel toch om en Antoine kon niet snel genoeg ontkomen. Hij kwam bekneld te zitten onder de omgevallen heftruck. Antoine raakte zwaargewond door de klap, zijn beide benen werden geheel verbrijzeld door het gewicht. Nu, een aantal maanden na het ongeluk, weet Antoine dat hij ontzettend veel geluk heeft gehad. Heftruckongelukken hebben vaak een dodelijke afloop. Antoine zal nooit meer aan het werk kunnen. "De geestelijke en lichamelijke gevolgen van het ongeluk doen mij en mijn gezin veel verdriet". - Antoine heeft twee kinderen van 3 en 5 jaar. Het productiebedrijf waar Antoine werkte, gaat investeren in betere voorlichting, maar Antoine vindt dat de verantwoordelijkheid voor een groot deel ook bij de werknemer ligt. "Na een aantal jaren ervaring werd ik onvoorzichtiger. De risico's leken kleiner doordat het altijd goed was gegaan. Mijn eigen onzorgvuldigheid had helaas ernstige gevolgen."

WAT KUNT U MET DE RESULTATEN?

Dit onderzoek heeft niet kunnen bewijzen dat een veiligheidswaarschuwing met een verhaal effectiever is dan een traditionele veiligheidswaarschuwing. Dat betekent echter niet dat *storytelling* niet op een andere manier gebruikt kan worden in veiligheidscommunicatie. Hiervoor is meer onderzoek nodig.

Naar aanleiding van dit onderzoek is mijn advies aan bedrijven om te blijven zoeken naar manieren om de werkvloer veiliger te maken, ook samen met de werknemers zelf. Respondenten waarmee ik heb gesproken gaven aan dat er vaak al gewerkt wordt met toolbox meetings en ervaringsverhalen, beiden gerelateerd aan de theorieën over *storytelling*. Hopelijk kan onderzoek in de toekomst bijdragen aan een nog effectievere manier van veiligheidscommunicatie.

Voor vragen of opmerkingen kunt u mailen naar gina.theunissen@student.ru.nl

DE RESULTATEN

Antwoord op vraag A: De waarschuwing met verhaal werkte helaas NIET beter dan de traditionele waarschuwing

Er waren GEEN cultuurverschillen* tussen Belgische en Nederlandse respondenten.

Foutje in het onderzoek: de vorken staan wél op de smalste positie als er géén of een kleine lading op ligt!



Belgische respondenten raden veilig heftruckgebruik eerder aan bij collega's dan Nederlandse respondenten.

Belgische participanten vonden de waarschuwing en het verhaal relevanter en realistischer dan Nederlandse respondenten.

Antwoord op vraag B: Hoewel onzekerheidsvermijding en masculiniteit* niet verschilden tussen Belgische en Nederlandse respondenten, gaven respondenten met een relatief hoge onzekerheidsvermijding aan zich in hogere mate te identificeren als 'iemand die zich aan de veiligheidsvoorschriften houdt' dan respondenten met een relatief lage onzekerheidsvermijding.

Respondenten die tijdens het lezen in hoge mate getransporteerd** raakten in het verhaal, hadden meer intentie om de heftruck veilig te gebruiken dan respondenten die in mindere mate getransporteerd raakten in het verhaal.

* cultuurverschillen zijn voor dit onderzoek gemeten met slechts twee cultuurdimensies (onzekerheidsvermijding en masculiniteit), omdat deze mogelijk in verband staan met veiligheidsgedrag. Meer hierover kunt u lezen op geert-hofstede.com/national-culture.html

** Transportatie betekent hier de mate waarin iemand opgaat in het verhaal tijdens het lezen

Onderzoek naar veiligheidscommunicatie is cruciaal om het aantal incidenten te kunnen verminderen. Door mee te werken aan dit onderzoek heeft u er niet alleen voor gezorgd dat ik kan afstuderen, u laat ook zien dat u wilt investeren in de veiligheid van uw bedrijf. Het was enorm interessant om dit onderzoek te doen en ik heb veel geleerd. Ik wil u hartelijk bedanken voor uw medewerking.



HARTELIJK DANK!



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