

The argument from example in health communication

Persuading and enabling patients to live a healthier life

Hans Hoeken¹, Anniëk Boeijinga² and José Sanders²

¹ Utrecht University | ² Radboud University Nijmegen

The argument from example is frequently used in health communication interventions. Some of these arguments are narrative in nature, in the sense that they relate a series of logically related events containing an experiencing agonist. In this article, research on narrative persuasion is discussed in order to show how such narrative arguments from examples can influence the target audience's beliefs about the possibility that a certain action will lead to certain consequences, the desirability of such consequences, as well as provide the target audience with ways by which to circumvent obstacles that prevent them from putting their intentions into actions. As such, narrative arguments from example can serve the needs of both people who still need to be motivated to change their behavior as those of people who already intend to adapt their behavior but fail to put this intention into action.

Keywords: argument from example, health communication, narrative persuasion

1. Introduction

A healthier lifestyle can prevent the onset of serious diseases as well as increase people's feeling of physical and mental wellbeing. This is why physicians try to persuade their patients to, for instance, eat more healthily and exercise more. One of the arguments physicians have at their disposal to attain this goal is the argument from example. These examples can describe another person's actions and consequences, thereby constituting a more or less elaborate narrative. Research on narratives has shown that stories can be an effective means to influence people's beliefs, attitudes, and behaviors (see, for a meta-analysis: Braddock and Dillard 2016; Shen, Sheer and Li 2015). In this paper, we will address the question whether

and to what extent such effects can be achieved by arguments from example. To that end, we will start with a discussion of what the determinants of people's health behavior are in order to identify the target claims for these arguments.

2. Communicating with non-intenders, intenders and actors

Health communication interventions typically aim to change people's behavioral intentions, as it is believed that such a change is the best guarantee for behavioral change. Much progress has been made in the identification of the intentions' determinants, thereby providing targets for communication campaigns (Fishbein and Ajzen 2011). Such campaigns typically aim to change people's beliefs about the desirable outcomes of the propagated behavior (or the risks of continuing the current one). If people change their beliefs accordingly, this should result in a change in behavioral intention, which in turn should result in behavioral changes.

However, there is considerable evidence for what is called the intention-behavior gap (Webb and Sheeran 2006). That is, despite a campaign's success in changing intentions, the subsequent change in behavior is often modest or absent. In a study of the relation between intention and health behaviors, it appeared that only 53% of the people intending to perform a particular healthy behavior acted upon this intention (Sheeran 2002). Although intention change may be necessary for subsequent behavior change, it appears far from sufficient to bring this change about.

Schwarzer (2008) has developed the Health Action Process Approach (HAPA) to chart the factors that may be responsible for this gap. He distinguishes between people who already perform the healthy behavior, the so-called actors, and those who do not. In most approaches to health communication, these non-actors are considered a homogeneous group, typically consisting of people who yet need to be motivated to adopt a healthier lifestyle. Schwarzer (2008), however, distinguishes between non-actors who indeed need to be motivated to change their lifestyle, the so-called non-intenders, and non-actors who already intend to adopt a healthier lifestyle but have failed to put this intention into action, the so-called intenders.

According to the HAPA-model, the lack of motivation of the non-intenders is the result of three factors: (1) the extent to which people feel at risk because of their current lifestyle (risk perception), (2) their expectations about the outcomes of adopting the advocated healthier lifestyle (outcome expectancies), and (3) the extent to which they feel capable of carrying out the healthy life behaviors (self-efficacy). For the intenders, a different picture arises. They are already convinced of the risks they run because of their current lifestyle and hold favorable expectations about the alternative behavior but have not yet put their intention into action because they (1) fail to get started or (2) are unable to navigate obstacles.

An illustration of how these factors can play out is reported by Boeijinga, Hoeken and Sanders (2016), who interviewed Dutch truck drivers about their health. Although many Dutch truckers lead a relatively unhealthy life, the interviews revealed that they valued health without exception. Some compared themselves to colleagues who were in worse conditions and therefore felt that their health was not at risk (low risk perception). What is more, many expected that leading a more healthy life would imply a less enjoyable life; they expected to have to live on a diet of green salad and water instead of meatballs and beer. Finally, lack of will power to resist temptations or to exercise were also mentioned as factors influencing these truckers' unhealthy behavior (self-efficacy). Other truck drivers did report the intention to lead a healthier life. These intenders rather pointed towards obstacles that prevented them from putting their good intention into action, such as, the lack of exercising facilities on the road; long working hours that prevented them from shopping for healthy food or going to the gym; and family members expecting them to sit down and watch television together when home at last.

Non-intenders may require different types of argument than intenders. Schwarzer (2008) considers the non-intenders to be in the motivational phase because they need to be *motivated* to change their lifestyle. Given the determinants of the intention, this requires convincing them that their current lifestyle puts their health at risk, that the advocated lifestyle will have more positive outcomes than negative ones, and that they are capable of performing these healthy lifestyle behaviors. The intenders, on the other hand, do not need to be convinced of all this: they are in the volitional phase and need information on how to circumvent the obstacles that prevent them from living a healthier life. More specifically, they would benefit from information on how to plan when and where to perform the new behavior (the so-called action planning) and how to deal with the obstacles blocking their way to a healthier life (the so-called coping planning).

Schwarzer (2008) reviews seven empirical studies that provide evidence in support of the importance of distinguishing the volitional phase from the motivational phase. Interventions that specifically focus on aspects of the volitional phase, i.e., action planning and coping planning, can be very effective in bringing about the required behavioral change. In case of health compromising behaviors such as overeating and lack of physical exercise, the relevance lies in the fact that most people already have knowledge about the risks associated with overeating and under-exercising, and are already motivated to adopt a healthier lifestyle. Instead of communicating about what people already know, providing them with information on how to act upon their intentions is a promising strategy. In all of these cases, the argument from example may be of use.

3. The argument from example: Its use and strength

The argument from example is a well-established argument scheme that is recognized as such in most classifications of argument schemes (see, e.g., Hithcock and Wagemans 2011; Schellens and De Jong 2004; Walton, Reed and Macagno 2008). In this type of argument, a specific case, or a limited number of cases, is provided in support of a more general claim. As argued by Schellens and De Jong (2004), the argument can be employed to support claims about the likelihood that some event will occur. For instance, the argument can be used in support of the claim that a certain medication will work for all people because it worked for one's neighbor. Schellens and De Jong argue that the argument can also support normative claims about whether something is sometimes, or always, good or appropriate, for instance, by supporting the claim that taking sleeping pills can have undesirable side-effects by referring to headaches, dizziness, and reduced libido.

The argument from example is used frequently in health communication. In an analysis of public information brochures and leaflets, Schellens and De Jong (2004) found that the argument from example was among the most frequently used argument types in these documents, only second to causal arguments that spelled out generic consequences of health behaviors. Similarly, in a corpus analysis of health interventions targeting truck drivers, Boeijinga et al. (2017a) also found that the argument from example was employed frequently. In both studies, it is concluded that this type of argument is mainly used to support claims about the desirability (or undesirability) of certain consequences and to support claims about the feasibility of the advocated behavior, for instance, by providing examples to support the claim that one can easily include exercise in one's daily routines by referring to the possibility of walking or riding a bike. None of the studies found cases in which the argument from example was used to support claims about the likelihood that a certain consequence would occur as a result of a certain behavior.

This absence of the argument from example in support of claims about the likelihood of consequences suggests that designers of these interventions have doubts about its persuasion potential. To evaluate a specific argument's strength, one needs criteria. Depending on the argument scheme at hand, different criteria apply. In the case of the argument from example, the example's typicality as well as the number of examples have been proposed as the most important criteria (see, for a review, Hoeken, Šorm and Schellens 2014: 85). Lay people without explicit training in argumentation theory are relatively knowledgeable about different argument schemes and the criteria that apply to them (Schellens, Šorm, Timmers and Hoeken 2017). Indeed, people proved to be more willing to accept claims when supported by two examples compared to one, and when supported

by typical examples compared to atypical ones (Hoeken et al. 2014), as well as when the claim was supported by statistics instead of a single example (Hoeken and Hustinx 2009; Hornikx 2018; Hornikx and Hoeken 2007). In the next section, we will take a closer look at the different forms the argument from example can take.

4. Narrative aspects of the argument from example

In studies on the persuasiveness of different types of argument, the focus is often on the type of evidence provided in support of the claim. In the case of the argument from example, the evidence is often labeled as “narrative evidence” (e.g., Allen and Preiss 1997; Zebregs, Van den Putte, Neijens and De Graaf 2015), “story evidence” (e.g., Baesler and Burgoon 1994), and “anecdotal evidence” (Greene, Campo and Banerjee 2010; Hoeken 2001). These labels suggest that an important characteristic of the argument from example is its narrative nature. Toolan (2001, p. 8) defines narrative as: “a perceived sequence of non-randomly connected events, typically involving, as the experiencing agonist, humans or quasi-humans, or other sentient beings, from whose experience we humans can ‘learn.’”

Not all arguments from example are of a narrative nature. For instance, in an argument from example supporting the claim about the undesirable side-effects of sleeping pills the examples may refer to headaches and dizziness. Such categories do neither involve events nor agonists experiencing these events. When events and agonists are present, arguments from examples can be characterized as narratives. Greene et al. (2010), for instance, had participants read a half page story about a young woman who used tanning beds and later developed skin cancer. In this case, there are two events (using tanning beds, developing skin cancer), that are non-randomly connected (as a causal connection between the two is suggested), and which include an experiencing agonist (the young woman). In a similar vein, De Wit et al. (2008) applied a story about a young gay man who contracted the Hepatitis B Virus supposedly as a result of a number of sexual encounters. Hoeken and Hustinx (2009) used anecdotal evidence that consisted of only one or two sentences. In supporting the claim that installing relaxation rooms in offices will lead to less absenteeism, the argument from example read: ‘Thomas Kepers works in a large office in the Randstad conurbation. He has not had to call in sick since he started using the relaxation room on the second floor.’ This evidence, though minimalist, meets the criteria set by Toolan (2001) as it contains related events and an experiencing agonist. It did not, however, lead to a stronger acceptance of the claim.

It seems that argumentation from example can cover a range from categorical one word examples such as, 'dizziness' and 'headache', via micro texts consisting of no more than a story outline to relatively well developed narratives about the actions, consequences and experiences of individuals. The evidence employed by Hoeken and Hustinx (2009) is clearly less elaborate than the ones developed by Greene et al. (2010) and De Wit et al. (2008). The elaborateness of the narrative may be relevant to its impact. An interesting case in this respect is the so-called exemplar. Zillmann (2006:S222) defines exemplars in the context of health and welfare as containing information on "a person with specifiable physical and behavioral characteristics who experiences conditions that threaten to impair, are in the process of impairing, or have impaired this person's welfare and/or who experiences conditions that promise to repair, are in the process of repairing, or have repaired such impairment". Exemplars can have a strong impact on people's opinions (see, for a review, Zillmann 2006; Zillmann and Brosius 2000). Brosius and Bathelt (1994), for instance, have shown that when the majority of exemplars express a certain preference, people generalize this majority perception to the population even if statistical information to the contrary is presented. Hoeken and Hustinx (2007) studied exemplars in the context of fundraising letters and found that these exemplars are typically generalized to the group they are supposed to represent.

The persuasive effects of this type of narrative evidence are hypothesized to result from exemplars being more vivid than the more pallid statistical evidence. Zillmann (1999:70) states that "recipients give disproportional attention to concrete, often vividly displayed events, especially to those that engage the recipients' emotions". Baesler and Burgoon (1994:584–586) also consider vividness as a plausible explanation for the persuasiveness of narrative evidence. Nisbett and Ross (1980:45) state that information "may be described as vivid, that is, as likely to attract and hold our attention to excite the imagination to the extent that it is (a) emotionally interesting, (b) concrete and imagery-provoking, and (c) proximate in a sensory, temporal, or spatial way". One could argue that central to the concept of vividness is the presence of a vivid, experiencing agonist. More elaborate narrative evidence, such as in the studies by Banerjee et al. (2010) and De Wit et al. (2008), may therefore be considered more vivid compared to the two sentences stories used by Hoeken and Hustinx (2009). In the next section, the way in which narratives can influence people's opinions will be discussed.

5. How stories influence people's attitudes

The study of Green and Brock (2000) in which they showed that narratives can influence people's attitudes has led to an avalanche of studies on whether, and along which routes narratives can persuade people. In a recent meta-analysis, Braddock and Dillard (2016) collected and analyzed 74 studies in which the persuasiveness of a narrative (compared to a non-narrative or a control group) was studied. They report relatively small ($.17 < r < .23$), yet statistically significant effects on people's beliefs, attitudes, intentions, and behavior. Shen, Sheer and Li (2015) conducted a meta-analysis of 25 studies in a health context finding quite similar results. The results of these meta-analyses thereby provide support for the concept of narrative persuasion.

Several models aim to explain *how* narratives can exert an influence on people's opinions and behaviors (see, e.g., Green and Brock 2002; Moyer-Gusé 2008; Slater and Rouner 2002). A key variable in all of these models is the extent to which the audience is swept up in the story, an experience usually referred to as transportation into the story world, and the extent to which they take an interest in a specific character's goals and well-being, an experience usually referred to as identification. Oatley (1999: 445) describes the former experience as the reader becoming "an unobserved observer in scenes of the lives of characters in the story world. He or she stands in their bedrooms, hovers at their dining tables, drives with them in their cars" whereas the latter occurs when "the reader takes on the protagonist's goals and plans" as a result of which, the reader "experiences emotions when these plans go well or badly" (Oatley 1999: 445).

Several studies point out the importance of the emotions evoked by a story for its impact on people's attitudes. Both Busselle and Bilandzic (2009) and De Graaf, Hoeken, Sanders and Beentjes (2009) found the strongest correlations between the emotions experienced on the one hand, and the resulting attitude on the other compared to other aspects of the narrative involvement experience. Zillmann (2006: s232) argues that stories that "elicit appreciable affective reactivity exert disproportional influence" and "heighten assessments of risks to personal welfare." Oatley (1999) proposed that these emotions result from the audience's concern about a character's successes or failures and that the intensity of these emotions will depend on the extent to which people care for the character. Indeed, Hoeken and Sinkeldam (2014) found that the extent of identification influenced the extent to which participants experienced sadness upon the main character's mishaps, subsequently yielding a more negative attitude toward the cause of these mishaps. A story can thus influence people's attitudes towards a certain issue because of the emotions it evokes.

Apart from attitudes, can stories also influence people's risk perception. Moyer-Gusé (2008) argues that people feel more vulnerable to contract a certain health problem if they read about a character they feel similar to or identify with and who is reported to have contracted this problem. Dillard, Fagerlin, Dal Cin, Zikmund-Fisher, and Ubel (2010), for example, discovered that a narrative message, compared to an educational message, increased perceived risk for colorectal cancer and screening intention. Similar findings have been described for risk perceptions about the intention to perform prevention behavior regarding hepatitis B (De Wit et al. 2008), influenza (Prati, Pietrantonio, and Zani 2012), and sexually transmitted diseases (So & Nabi 2013).

Finally, stories often involve a hero protagonist who has a certain goal (e.g., marry the prince) and in order to obtain that goal have to conquer certain obstacles (e.g., kiss the frog) (Campbell, 1949). A goal focused story structure can be relevant for target groups who strive for a particular health goal but are uncertain about how to achieve this. According to Bandura's (1977) social cognitive theory, people can learn relevant behaviors by observing other people performing the behavior. As such, the character in a story can serve as a role model. Especially when the character has been successful in navigating obstacles, target group members may become more confident that they will be able to perform the behavior themselves. Moyer-Gusé (2008) argues that this effect on self-efficacy may be stronger if the audience identifies itself with the character. Moyer-Gusé, Chung and Jain (2011) find evidence for such an effect in a study on the impact of narratives on people's intention to talk about sexual health taboo topics. They explain this effect by the narrative's capacity to provide a scenario on how to bring up such topics in conversations.

6. The argument from example in health contexts

The argument from example can take the form of a narrative in that it can relate events experienced by an agonist.¹ Within the context of health communication, the narrative can tell what the consequences are of a certain person's actions, how this person evaluated or experienced these consequences, or how a person succeeded in overcoming obstacles when trying to conduct a certain behavior. It can

1. The experience can be told by the person involved, referring to him or herself with "I" or the experience can be described by someone else referring to this person with "he" or "she". In the former case, the argument could be considered an argument from authority, with the source deriving its authority from personal experience. In this paper, we focus on the nature of the experience related, and not on the source.

thus be employed to serve as evidence in support of claims about the likelihood that a consequence will occur as a result of a certain behavior, claims about the desirability or undesirability of consequences, and claims about the feasibility of certain actions. These different types of claims can be relevant to the different target audiences distinguished by Schwarzer (2008): the non-intenders and the intenders.

6.1 Non-intenders and the argument from example

According to Schwarzer (2008), non-intenders need to be motivated to change their current unhealthy lifestyle. Apparently, the intention toward their current behavior is more positive than the one toward the advocated behavior. This intention is believed to be determined by (1) the perception to what extent their health is at risk because of their current behavior, (2) the perception of what the outcomes will be of the advocated behavior, and (3) the perception to what extent they will be capable of implementing the advocated behavior. Each of these perceptions can be translated into claims that need to be accepted in order to turn non-intenders into intenders.

The argument from example can be employed to support the claim that the current behavior can have serious health problems by telling the story of a person who has contracted a serious disease or condition as a result of this behavior. This argument can serve as support for both the claim about the existence of these negative outcomes and the claim that the consequences are seriously undesirable. However, the acceptance of these different claims may depend on different aspects of the narrative.

With respect to the likelihood of the consequence, Moyer-Gusé (2008) argues that the extent to which the target audience identifies with and/or feels similar to the person is important. The more similar the person in the argument is perceived to be, the more likely the audience would consider itself to be at risk of suffering the same consequence. Green and Brock (2002) claim that the extent to which the audience is able to construct images of the chain of events will also influence people's beliefs in the likelihood of their occurrence. To that end, the example should give the audience enough information to construct such images. This may explain why short and shallow narratives of the kind employed by Hoeken and Hustinx (2009) are less convincing to people compared to the more elaborate narratives as the exemplars discussed by Zillmann (2006).

When using the argument from example to support claims about the undesirability of the consequences, the extent to which the audience identifies with the person in the narrative is important. The more the audience feels involved in the person's well-being, the more intense emotions they will experience as this per-

son's health deteriorates (Hoeken and Sinkeldam 2014). This means that the extent to which the audience feels similar to the person in the argument can influence the level of identification. However, representing a protagonist's perspective by relating what he or she thinks, sees, and feels, can have people identify with persons *unlike* them and with whom they would tend *not* to identify with in real life (De Graaf et al. 2012; Hoeken and Fikkers 2014; Hoeken, Kolthoff and Sanders 2016). Based on these findings, representing the person's perspective on his or her situation would result in a strong argument from example in support of a claim about the undesirable consequences of the current behavior.

By and large, the considerations above are equally applicable to using an argument from example to support beliefs about the outcomes of the advocated behavior. Again, the argument can be employed to support claims about the likelihood of the consequences occurring as a result of this change in behavior. Both perceived similarity with the person in the argument and the imaginability of the chain of events can play a role here. And with respect to the desirability, representing the person's positive take on these outcomes should lead to a stronger acceptance of the outcomes' desirability.

When supporting claims about the feasibility of the advocated behavior, the person in the argument from example can serve as a role model (Moyer-Gusé 2008). If a person is successful in a certain respect, for instance, quits smoking or starts to exercise, this may serve as evidence for the audience that it is possible to change one's behavior. For the argument to be persuasive, it will be important for the target audience to perceive the person's relevant capacities to be similar to (or even worse than) their own capacities. For instance, if the person in the smoking example is represented as someone with a very strong willpower, the target audience may consider this example less convincing if they perceive themselves as weaker on this characteristic.

6.2 Intenders and the argument from example

For intenders, the intention and its determinants are not the issue; they already have the intention to adopt a healthier lifestyle. Their failure to put this intention into action can be the result of (1) a failure to get started and (2) getting derailed (see Maio et al. 2007). In order to get started, an effective strategy is the formation of implementation intentions. This type of intention specifies the time, location, manner, and, if appropriate, with whom the action will be performed. For instance, when people intend to go jogging but fail to do so, an implementation intention would consist of intending to go jogging, from home, next Tuesday, at 19.00 o'clock, and together with your neighbor. Within the HAPA-model, the formation of implementation intentions is called action planning (Schwarzer 2008).

The second reason for people to not act upon their intentions lies in the presence of unexpected obstacles. People who want to drink less alcohol, for instance, may find it difficult to resist peer pressure when friends offer them a beer in a bar. Another example could be that people find it hard to include exercising in their daily routines. In those cases, preparing strategies to overcome these obstacles is needed. Within the HAPA-model, developing these strategies is called coping planning (Schwarzer 2008).

Both action planning and coping planning can be supported by arguments from example. The narrative of a person who developed an implementation intention can serve as a role model about how to overcome the problem of failing to get started. Likewise, the argument from example can provide a story of how a person resisted the pressure from his or her peers to drink alcohol or to include regular exercise (e.g., biking to work, taking a walk during lunch) into his or her daily routines. The argument from example serves in these conditions as evidence in support of the claim that the actual performance of the behavior is feasible.

7. What makes a convincing argument from example?

The argument from example can serve different functions in a health context depending on whether the recipient is an intender or a non-intender, and whether the argument supports claims about the desirability or undesirability of a consequence, the likelihood of a consequence's occurrence, and the feasibility of certain actions. The extent to which a narrative argument from example can support a claim about the (un)desirability of a consequence will depend on the extent to which it depicts the (un)pleasantness of the situation as it is experienced by the narrative's protagonist. This depiction can subsequently evoke relevant emotions: the target audience may feel sadness for the protagonist's suffering or joy for his or her prospering. Boeijinga et al. (2017b) had Dutch truck drivers read a story about a truck driver suffering from severe heart problems. The story evoked negative emotions which led to a more positive intention to exercise more. The intensity of emotions evoked by a narrative depended at least partly on the extent to which the audience identifies with the protagonist (Hoeken and Sinkeldam 2014). The more interest they take in the protagonist's well-being, the stronger their affective response to the character's vicissitudes will be, and the more impact the argument will have.

The extent to which a narrative argument from example can serve as a strong argument in support of the likelihood of a consequence may depend on the extent to which the events depicted evoke a realistic and vivid image in the receivers' minds. That is, people may consider an event more likely if they find it easy to

picture it in their mind's eye (Green & Brock 2002). In addition, the number and typicality of the examples can play a role too (Hoeken et al. 2014). Typicality, however, may go against similarity. For instance, when discussing the likelihood of diabetes leading to amputation, the typicality norm would call for an older person as they are more at risk to suffer this consequence. However, for a younger audience, the case of a younger person may be more persuasive as they may interpret this argument as an argument from analogy in support of the claim: how likely is it that I will suffer this consequence? So, whereas a message designer uses the narrative as an argument from example as it should be convincing to a large and potentially heterogeneous audience, the individual member of the target audience may perceive it as an argument from analogy: is this person similar (enough) to me to believe that what happened to this person will happen to me.

Third, the extent to which a narrative argument from example can support a claim about the feasibility of starting new behavior or circumventing obstacles will depend on the extent to which the person in the example functions as a role model. If the audience considers the person's actions as effective and feasible, they are more likely to adopt these action and coping planning strategies. Boeijsing et al. (2017b) had truck drivers read a story about a truck driver who wished to implement more exercising behaviors in his daily routines. He told about riding his bike to work for three of his five working days, how difficult that had been at first, but also how much pleasure he derives from that behavior now. The results showed that truck drivers experienced higher levels of coping planning abilities and higher intentions to exercise more. Again, the individual member of the target audience may consider this argument stronger or weaker based upon the perceived similarity with the person and his or her circumstances.

8. Conclusion and discussion

The argument from example is a frequently used type of argument in health communication. It can be, and is, used to support claims about the (un)desirability of certain consequences, about the likelihood that certain behaviors will result in certain consequences, and about the feasibility of specific behaviors. The acceptance of the desirability and likelihood claims are especially relevant to people who yet need to be motivated to adopt a healthier lifestyle. For them, pointing out the undesirable outcomes of their current behavior may change their risk perception while pointing out the desirable outcomes of the propagated behavior, may change their outcome expectancies. For people who already intend to adopt a healthier lifestyle but yet need to put this intention into action, claims about how to implement these intentions and how to navigate obstacles are more relevant.

Again, the argument from example can provide support for the feasibility of these behaviors.

In this paper, we focus on a specific type of argument from example, namely the examples that can be considered a narrative. Following Toolan's (2001) definition, we consider a narrative example as consisting of a sequence of related events involving an experiencing agonist. Based on recent research on narrative persuasion, we identified different ways in which narratives are capable of influencing people's opinions, attitudes, and behaviors. The most relevant appeared to be (1) the emotions evoked by the narrative's character's vicissitudes which relates to the consequence's desirability, (2) the ease and vividness with which the audience can depict the consequence(s) as a result of the actions which relates to the likelihood of the consequence's occurrence, and (3) the extent to which the person in the example can serve as a role model to conduct certain action which relates to the feasibility of action and coping planning.

When evaluating arguments, people in principle know and can apply normative criteria that distinguish strong from weak arguments (Schellens et al. 2017). In the case of the argument from example, the number and typicality of the examples have been proposed as relevant criteria. The question is whether these are the only, or even the most important criteria people use to evaluate a narrative argument from example. Based on narrative persuasion research, the extent to which the audience identifies with the person in the narrative appears relevant as it strengthens the emotional response to this person's vicissitudes. One of the drivers of identification may be perceived similarity. Hoeken et al. (2016) found that law students identified more strongly with a lawyer in a story whereas medical students identified more strongly with a General Practitioner in a story.

The extent to which the audience perceives the person in the narrative as similar may have repercussions that go beyond the experiencing of emotions. Rather than a general perception of how likely it is that certain behaviors will yield certain consequences, the audience may answer the question: is it conceivable that this consequence will occur if I behave in this way? In this case, the argument from example is interpreted as an argument from analogy and the perceived similarity between the audience member and the person in the narrative becomes a highly relevant criterion. The same holds for the argument from example in support of a feasibility claim. If the character is perceived as possessing capacities that exceed those of the audience member, its role model function is likely to fail.

Finally, an important question is how elaborate an argument from example has to be to evoke emotions, increase likelihood estimates, or increase one's efficacy perceptions and planning strategies. The two sentences arguments employed by Hoeken and Hustinx (2009) are probably too sketchy to evoke concern for the person's well-being. Studies on narrative persuasion typically used

longer narratives. Boeijinga et al. (2017b), for instance, used stories consisting of about 850 words. In addition, these narratives are usually not integrated in a persuasion context. It would be interesting to study exemplars, as these short narratives lie on the continuum between the full-fledged stories and short case information. It would be interesting to study to what extent, for which claims, and through which processes such narrative arguments from example can help patients to improve their well-being.

References

- Allen, Mike, and Raymond Preiss. 1997. "Comparing the persuasiveness of narrative and statistical evidence using meta-analysis." *Communication Research Reports* 14: 125–131. <https://doi.org/10.1080/08824099709388654>
- Baesler, James, and Judee Burgoon. 1994. "The temporal effects of story and statistical evidence on belief change." *Communication Research*, 21(5): 582–602. <https://doi.org/10.1177/009365094021005002>
- Bandura, Albert. 1977. "Self-efficacy: toward a unifying theory of behavioral change." *Psychological review*, 84(2): 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Boeijinga, Anniek, Hans Hoeken, and José Sanders. 2016. "Health promotion in the trucking setting: Understanding Dutch truck drivers' road to health lifestyle changes." *Work*, 55(2): 385–397. <https://doi.org/10.3233/WOR-162409>
- Boeijinga, Anniek, Hans Hoeken, and José Sanders. 2017a. "An analysis of health promotion materials for Dutch truck drivers: off target and too difficult?" *Work*, 56: 539–549. <https://doi.org/10.3233/WOR-172503>
- Boeijinga, Anniek, Hans Hoeken, and José Sanders. 2017b. "The persuasive effects of risk perception-focused versus planning strategies-focused health narratives targeting Dutch truck drivers." *International Journal of Communication*, 11: 5007–5026.
- Braddock, Kurt and James Dillard. 2016. "Meta-analytic Evidence For the Persuasive Effect of Narratives on Beliefs, Attitudes, Intentions, and Behaviors." *Communication Monographs*, 83 (4): 446–67. <https://doi.org/10.1080/03637751.2015.1128555>
- Busselle, Rick, and Helena Bilandzic 2009. "Measuring narrative engagement." *Media Psychology*, 12 (4): 321–347. <https://doi.org/10.1080/15213260903287259>
- De Graaf, Anneke, Hans Hoeken, José Sanders, and Johannes Beentjes. 2009. "The role of dimensions of narrative engagement in narrative persuasion." *Communications*, 34 (4): 385–405. <https://doi.org/10.1515/COMM.2009.024>
- De Graaf, Anneke, Hans Hoeken, José Sanders, and Johannes Beentjes. 2012. "Identification as a mechanism of narrative persuasion." *Communication Research*, 39 (6): 802–821. <https://doi.org/10.1177/0093650211408594>
- De Wit, John, Enny Das, and Raymond Vet. 2008. "What works best: Objective statistics or a personal testimonial? An assessment of the persuasive effects of different types of message evidence on risk perception." *Health Psychology*, 27(1): 110–115. <https://doi.org/10.1037/0278-6133.27.1.110>

- Dillard, Amanda, Angela Fagerlin, Sonya Dal Cin, Brian Zikmund-Fisher, and Peter Ubel. 2010. "Narratives that address affective forecasting errors reduce perceived barriers to colorectal cancer screening." *Social Science & Medicine*, 71(1): 45–52. <https://doi.org/10.1016/j.socscimed.2010.02.038>
- Fishbein, Martin, and Icek Ajzen. 2011. *Predicting and changing behavior: The reasoned action approach*. Taylor & Francis.
- Green, Melanie, and Timothy Brock. 2000. "The role of transportation in the persuasiveness of public narratives." *Journal of Personality and Social Psychology*, 79 (5): 701–721. <https://doi.org/10.1037//0022-3514.79.5.701>
- Green, Melanie, and Timothy Brock. 2002. "In the mind's eye: Transportation-Imagery Model of narrative persuasion." In *Narrative impact: Social and cognitive foundations*, ed. by Melanie C. Green, Jeffrey J. Strange, and Timothy C. Brock, 315–341. Mahwah, NJ: Lawrence Erlbaum.
- Greene, Kathryn, Shelly Campo, and Smita C. Banerjee. 2010. "Comparing normative, anecdotal, and statistical risk evidence to discourage tanning bed use." *Communication Quarterly* 58 (2): 111–132. <https://doi.org/10.1080/01463371003773366>
- Hitchcock, David, and Jean Wagemans. 2011. "The pragma-dialectical account of argument schemes." In *Keeping in touch with pragma-dialectics*, ed. by Eveline Feteris, Bart Garssen, and Francisca Snoeck Henkemans, 185–205. Amsterdam: John Benjamins. <https://doi.org/10.1075/z.163.13hit>
- Hoeken, Hans. 2001. "Anecdotal, statistical, and causal evidence: Their perceived and actual persuasiveness." *Argumentation* 15 (4): 425–437. <https://doi.org/10.1023/A:1012075630523>
- Hoeken, Hans, and Karin Flikkers. 2014. "Issue-relevant thinking and identification as mechanisms of narrative persuasion." *Poetics*, 44: 84–99. <https://doi.org/10.1016/j.poetic.2014.05.001>
- Hoeken, Hans, and Letticia Hustinx. 2007. "The impact of exemplars on responsibility stereotypes in fund-raising letters." *Communication Research*, 34(6): 596–617. <https://doi.org/10.1177/0093650207307898>
- Hoeken, Hans, and Letticia Hustinx. 2009. "When is statistical evidence superior to anecdotal evidence? The role of argument type." *Human Communication Research*, 35: 491–510. <https://doi.org/10.1111/j.1468-2958.2009.01360.x>
- Hoeken, Hans, and Jop Sinkeldam. 2014. "The role of identification and emotion and perception of just outcome in evoking emotions in narrative persuasion." *Journal of Communication*, 64 (5): 935–955. <https://doi.org/10.1111/jcom.12114>
- Hoeken, Hans, Ester Šorm, and Peter Jan Schellens. 2014. "Arguing about beliefs: Lay people's criteria to distinguish strong arguments from weak ones." *Thinking & Reasoning*, 20 (1): 77–98. <https://doi.org/10.1080/13546783.2013.807303>
- Hoeken, Hans, Matthijs Kolthoff, and José Sanders. 2016. "Story perspective and character similarity as drivers of identification and narrative persuasion." *Human Communication Research*, 42 (2): 292–311. <https://doi.org/10.1111/hcre.12076>
- Hornikx, Jos. 2018. "Combining anecdotal and statistical evidence in real-life discourse: Comprehension and persuasiveness." *Discourse Processes*, 55 (3): 324–336. <https://doi.org/10.1080/0163853X.2017.1312195>
- Hornikx, Jos, and Hans Hoeken. 2007. "Cultural differences in the persuasiveness of evidence types and evidence quality." *Communication Monographs* 74 (4): 443–463. <https://doi.org/10.1080/03637750701716578>

- Maio, Gregory R., Bas Verplanken, Antony Manstead, Wolfgang Stroebe, Charles Abraham, Paschal Sheeran, and Mark Conner. 2007. "Social psychological factors in lifestyle change and their relevance to policy." *Social Issues and Policy Review*, 1 (1): 99–137. <https://doi.org/10.1111/j.1751-2409.2007.00005.x>
- Moyer-Gusé, Emily. 2008. "Toward a theory of entertainment persuasion: Explaining the persuasive effects of entertainment-education messages." *Communication Theory*, 18 (3): 407–425. <https://doi.org/10.1111/j.1468-2885.2008.00328.x>
- Moyer-Gusé, Emily, Adrienne H. Chung, and Parul Jain. 2011. "Identification with characters and discussion of taboo topics after exposure to an entertainment narrative about sexual health." *Journal of Communication*, 61(3): 387–406. <https://doi.org/10.1111/j.1460-2466.2011.01551.x>
- Nisbett, Richard E., and Lee Ross. 1980. *Human inference: Strategies and shortcomings of social judgment*. Prentice-Hall.
- Oatley, Keith. 1999. "Meeting of minds: Dialogue, sympathy, and identification in reading fiction." *Poetics*, 28 (5–6): 439–454. [https://doi.org/10.1016/S0304-422X\(99\)00011-X](https://doi.org/10.1016/S0304-422X(99)00011-X)
- Prati, Gabriele, Luca Pietrantoni, and Bruna Zani. 2012. "Influenza vaccination: The persuasiveness of messages among people aged 65 years and older." *Health Communication*, 27(5): 413–420. <https://doi.org/10.1080/10410236.2011.606523>
- Schellens, Peter Jan, and Menno De Jong. 2004. "Argumentation Schemes in Persuasive Brochures." *Argumentation*, 18(3): 295–323. <https://doi.org/10.1023/B:ARGU.0000046707.68172.35>
- Schellens, Peter Jan, Ester Šorm, Rian Timmers, and Hans Hoeken. 2017. "Laypeople's Evaluation of Arguments: Are Criteria for Argument Quality Scheme-Specific?" *Argumentation*, 31(4):681–703. <https://doi.org/10.1007/s10503-016-9418-2>
- Schwarzer, Ralf. 2008. "Modeling Health Behavior Change: How to Predict and Modify the Adoption and Maintenance of Health Behaviors." *Applied Psychology*, 57(1):1–29. <https://doi.org/10.1111/j.1464-0597.2007.00325.x>
- Sheeran, Paschal. 2002. "Intention – behavior relations: A conceptual and empirical review." *European review of social psychology*, 12(1): 1–36. <https://doi.org/10.1080/14792772143000003>
- Shen, Fuyuan, Vivian Sheer and Ruobing Li. 2015. "Impact of Narratives on Persuasion in Health Communication: A Meta-Analysis." *Journal of Advertising*, 44 (2): 105–113. <https://doi.org/10.1080/00913367.2015.1018467>
- Slater, Michael, and Donna Rouner. 2002. "Entertainment-education and elaboration likelihood: Understanding the processing of narrative persuasion." *Communication Theory*, 12 (2): 173–191. <https://doi.org/10.1111/j.1468-2885.2002.tb00265.x>
- So, Jiyeon, and Robin Nabi. 2013. "Reduction of perceived social distance as an explanation for media's influence on personal risk perceptions: A test of the risk convergence model." *Human Communication Research*, 39(3): 317–338. <https://doi.org/10.1111/hcre.12005>
- Toolan, Michael. 2001. *Narrative: a critical linguistic introduction* (2nd Ed.). London: Routledge.
- Walton, Douglas, Christopher Reed, and Fabrizio Macagno. 2008. *Argumentation schemes*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511802034>
- Webb, Thomas, and Paschal Sheeran. 2006. "Does changing behavioral intentions engender behavior change? A meta-analysis of the experimental evidence." *Psychological bulletin*, 132(2): 249–268. <https://doi.org/10.1037/0033-2909.132.2.249>

- Zebregs, Simon, Bas van den Putte, Peter Neijens, and Anneke de Graaf. 2015. "The differential impact of statistical and narrative evidence on beliefs, attitude, and intention: A meta-analysis." *Health communication*, 30(3): 282–289.
<https://doi.org/10.1080/10410236.2013.842528>
- Zillmann, Dolf. 1999. "Exemplification theory: Judging the whole by some of its parts." *Media Psychology*, 1(1): 69–94. https://doi.org/10.1207/s1532785xmep0101_5
- Zillmann, Dolf. 2006. "Exemplification effects in the promotion of safety and health." *Journal of Communication*, 56(1): 221–237. <https://doi.org/10.1111/j.1460-2466.2006.00291.x>
- Zillmann, Dolf, and Hans-Bernd Brosius. 2000. *Exemplification in communication: The influence of case reports on the perception of issues*. Mahwah, NJ: Routledge.

Address for correspondence

Hans Hoeken
UiL OTS, Utrecht University
Trans 10
3512 JK Utrecht
The Netherlands
j.a.l.hoeken@uu.nl

Co-author information

Anniek Boeijinga
CLS
Radboud University Nijmegen
anniekboeijinga@gmail.com

José Sanders
CLS
Radboud University Nijmegen
j.sanders@let.ru.nl