

**Can Interpretation Really Make a Difference?  
Answers to Four Questions from Cognitive and Behavioral Psychology**

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**Abstract**

Opinions abound regarding the pathways through which interpreters can make a difference in how audiences think, feel and behave with respect to things they interpret. Drawing on theory and a growing body of research in the cognitive and behavioral sciences, this presentation attempts answers to four key questions regarding the ways in which interpreters can purposefully make such differences: Does increasing visitors' knowledge about something influence their attitudes about it? How much mental effort must audiences give in order for attitudinal impacts to occur? Do visitors' attitudes toward things predict their behaviors toward those things? And, what can interpreters purposefully do to influence visitor behavior? The paper discusses representative research findings corresponding to each of the four questions and presents a model, based on the TORE™ framework for thematic interpretation, depicting the pathways through which interpreters can make a difference on purpose.

**Keywords**

attitudes, behavior, EROT framework, knowledge gain, interpretation, persuasive communication, provocation, TORE model

## **Can Interpretation Really Make a Difference? Answers to Four Questions from Cognitive and Behavioral Psychology**

Interpreters everywhere want to make some kind of “difference” in how their audiences think, feel, and (given the opportunity) possibly behave with respect to the places, features and concepts they interpret. Since interpretation involves imparting knowledge, a common assumption is that if an interpreter can deepen a visitor’s knowledge about something (the thinking part), then an impact on attitude (the feeling part) ought to result. In the cognitive and behavioral sciences, this is sometimes referred to as the “learning leads to liking hypothesis” (Cacioppo and Petty 1989). In addition, if an attitude is impacted, then a corresponding impact on behavior is expected.

However the “learning leads to liking hypothesis” has not fared well in experimental studies, and psychologists now understand that a more complex picture is involved (Ajzen 1992; Holbrook et al. 2005). Especially important in this bigger picture is the audience’s role in attending to and processing the information presented. According to a lot of research, whether and how much interpretation can influence a visitor’s attitude about something will depend mainly on how much it provokes the visitor to think about the information it presents, and of course, the visitor’s prior attitude (Chaiken 1980; Petty and Cacioppo 1986). This view is consistent with Tilden’s (1957) advice that interpretation should be aimed at provoking visitors to think on their own, rather than simply teaching them the facts (i.e., “provocation” versus “instruction”). Questions arise, therefore, as to how much provocation is actually necessary for an interpreter to influence a visitor’s attitude and whether having such an impact would lead to certain behaviors.

This paper draws on a growing body of research in cognitive and behavioral sciences to provide answers to four key questions about how interpreters can make such differences. These questions include: Does increasing visitors’ knowledge about something influence their attitudes about it? How much mental effort must audiences give in order for attitudinal impacts to occur? Do visitors’ attitudes toward things predict their behaviors toward those things? And, finally, what can interpreters purposefully do to influence visitor behavior?

### **Question 1: Does increasing visitors’ knowledge about something influence their attitudes about it?**

The answer to this question is, it depends. An attitude is a positive or negative evaluation of something (e.g., a good-bad or like-dislike evaluation). Certainly, our attitudes about things are based on what we “know” or “think” about them, but most research does not support the assumption that increasing visitors’ general factual knowledge about something will necessarily influence their attitudes in any particular direction (Holbrook 2005; Wiles and Hall 2003). That is, learning does not necessarily lead to liking or caring. Our attitude about something is usually based on a very small number of truly pertinent beliefs we have about it (Ajzen 1991; Ajzen and Fishbein 2005; Fishbein and Ajzen 1975). Unless the knowledge an interpreter imparts to a visitor happens to impact one of those truly pertinent beliefs, it’s doubtful the visitor’s attitude will be impacted

(Ham and Krumpe 1996). And, of course, the pertinent beliefs will vary from visitor to visitor. For this, and other reasons, studies have shown that even interpretive programs that produce large increases in visitors' knowledge don't often impact attitudes (e.g., Cable, and Knudson, et al. 1987; Doering et al. 1999, Knapp and Barrie 1998; Lee and Balchin 1995; Morgan et al. 1997, 2003; Orams 1997; Peart 1984; Pettus 1976; Tubb 2003; and Wiles and Hall 2005).

It's also important to remember that "influence" implies three possible outcomes of interest: (1) changing an existing attitude, (2) reinforcing an existing attitude, or (3) bringing about a new attitude that didn't exist before. Although interpreters often talk about the need to "change" visitors' attitudes in this or that direction, there is little evidence that this is possible in most interpretive encounters. First, it would be necessary to know in advance which of the visitors' beliefs need to be targeted (i.e., which ones are truly pertinent to the attitude). Second, visitors may arrive with attitudes that are the result of a lot of thinking and sometimes direct experience. Achieving a long-term impact on one of these "hardened" attitudes is a tall order (Chaiken 1980; Petty and Cacioppo 1986; Roggenbuck 1992; Trafimow and Borrie 1999; Verplanken and Wood 2006). And finally, we must realize that the window of communication opportunity is much too brief in many interpretive encounters (usually less than an hour and sometimes only a few seconds) to realistically expect strong and enduring attitude impacts.

The second and third outcomes, however, are more plausible. Reinforcement (or strengthening) of an existing attitude happens when interpreters present information that visitors either already know or new information that is supportive of and consistent with the attitude visitors already had. While some believe that reinforcement is nothing more than preaching to the choir, others believe that reinforcement is necessary for maintaining the support of existing constituencies (Beaumont 2001; Storksdieck et al. 2005).

The final possible outcome (bringing about a completely new attitude) is probably more important than some interpreters recognize. Interpretation of cultural and natural heritage often presents visitors with new and fascinating ideas they had never before considered. Consequently, they don't arrive with preconceived notions or attitudes about these things. While they can only understand the interpreter's new ideas in the context of what they already know and think, the ideas themselves are new enough that the attitudes visitors form about them are, for all intents and purposes, a first impression. Many believe this to be interpretation's highest purpose, particularly when the primary goal of interpretation is to enhance visitors' experiences.

## **Question 2: How much mental effort must audiences give in order for attitudinal impacts to occur?**

While Freeman Tilden reminded us that interpretation's chief aim is to provoke visitors to think on their own, he didn't offer advice on just how much provocation might be needed to impact a visitor's attitude. Since this would vary from situation to situation, a more pertinent question is what an interpreter hopes to achieve through impacting

visitors' attitudes and how long s/he would like the impact to last. Much research shows that making a strong and lasting impact on someone's attitude about something requires that they invest a lot of mental effort in thinking about the information being presented (e.g., Cacioppo et al. 1994; Chaiken 1980; Petty and Cacioppo 1986). In other words, if interpreters want their audiences to leave with attitudes that are strong, enduring and resistant to counter-argumentation later on, then they must provoke their audiences to give deliberate thought and careful consideration to the ideas presented. And furthermore, the thinking the visitors do must generate in their minds a preponderance of "pro" thoughts (i.e., agreeable reactions and supportive conclusions) for the interpretation to have its desired effect (Petty et al. 1992). If a lot of disagreement occurs in the person's mind while thinking about the information, the interpretation may backfire, resulting in a well-documented "boomerang effect" (Griffin 2000).

However, many interpretive encounters are simply too short-lived for lasting attitude impacts to occur readily. And even when the window of communication opportunity is wider, audiences' attentions wander and distractions occur, making effortful consideration of the full presentation of ideas difficult, if not impossible. The tendency for audiences in these situations is to "forage," attending to this, giving a momentary thought to that, and using contextual clues to make some general sense of the whole. Studies have demonstrated that an audience giving effortful consideration to a communicator's ideas is unlikely under these circumstances, and consequently, achieving strong and enduring impacts on their attitudes is often an unrealistic expectation (Petty et al. 1992).

Studies also suggest, however, that even very brief and fragmented communication opportunities can be successful in causing modest attitude impacts (Novey and Hall 2007; Petty and Cacioppo 1986). These attitude impacts aren't as strong or enduring as those resulting from more effortful thought, but they may be sufficient to achieve short-term outcomes, such as enhancing a visitor's experience or persuading visitors to behave in certain ways in the immediate time frame (e.g., to stay on a designated trail, or not to pick the flowers or feed the wildlife). Thus, even when visitors give comparatively little mental effort to the details of presented information, sufficient attitude impact can occur for them to enjoy the experience and possibly even behave in certain ways, as long as the opportunity to engage in those behaviors occurs in the immediate or very short time frame. Only a minimal degree of mental effort may be required for these so-called "peripheral" (or "heuristic") impacts to occur—much less than the effort required for stronger, longer-lasting impacts (Chaiken 1980; Liu and Sibley 2004; Petty et al. 1983; Werner et al. 1998).

### **Question 3: Do visitors' attitudes toward things predict their behaviors toward those things?**

The answer to this question is, again, yes and no. It all depends on what the word "things" refers to. In psychology, it is well established that when a measured attitude is matched to its object (literally, the "attitude object") it will likely be predictive (Ajzen

2005; Ajzen and Fishbein 2005; Sutton 1998). However, when the attitude is only generally related to the object, predictability is weak (Ajzen 2005; Bamberg 2003). For example, a person's attitude about religion, god, or morality is not going to be a very good predictor of whether that person attends church next Sunday. If we wanted to predict church-going next Sunday, then we would need to know the person's attitude toward that specific behavior (Fishbein and Ajzen 1974). Likewise, if we wanted to predict whether a person would begin a recycling program at home, it would not help us much to know that person's attitude toward the environment, or about conservation, or even about recycling generally. To be able to predict whether the person would recycle at home, we would need to know that person's attitude toward recycling at her/his home.

This principle of matching an attitude to the specific behavior we want to predict has important practical implications for interpretation in natural and cultural settings. For example, if we wanted to predict whether visitors in a natural area will stay on a designated trail rather than straying from the trail, we would need to know their attitude toward staying on that trail. That is, we would want to know their attitude about the *behavior* we want them to engage in. It would not help us much to know their general attitudes toward related things (such as their attitudes about nature, the environment, or conservation). We would need to know whether their attitude toward staying on that specific trail is positive or negative. If it is negative, we could predict with some accuracy that they are likely to walk off-trail. But if it is positive, we could be equally confident that they will stay on the trail (Ham and Weiler 2005).

If we now wanted to use interpretation to persuade the off-trail visitors to stay on the designated trail, we would need to get information from both groups about their truly pertinent beliefs with respect to staying on the trail. If, when we compare the beliefs of off-trail and on-trail walkers, we find that one or more are very different between the two groups, then those would be the beliefs we would target with an interpretive theme (Fishbein and Yzer 2003; von Haeften et al. 2001). Studies indeed show that if we can identify ahead of time the set of truly pertinent beliefs visitors already have about a behavior we desire of them, and if we can then determine which of those beliefs distinguish current "doers" from "non-doers," then emphasizing those beliefs via interpretation can increase the likelihood of persuading visitors to behave as we want (Fishbein and Manfredo 1992; Ham and Weiler 2005; Lackey and Ham 2004). This is particularly important in places where misguided or uninformed behaviors can threaten fragile environs or visitor safety.

Going back to question 2, there is reason to believe that on-site interpretation can achieve an immediate impact on attitudes and related behaviors regardless of whether visitors were provoked to a lot, or just a little, thought. Although these impacts are stronger and longer-lasting when they result from effortful thought, an immediate and short-term impact is possible in either case. So although an interpreter's opportunity to impart a theme may be very brief (e.g., via a 45-minute talk or 100-word sign or wayside exhibit), if the theme is relevant enough to attract the audience's attention and if the interpreter develops it in a reasonably compelling way, short-term impacts on visitors' attitudes and behavior are possible (Petty and Cacioppo 1986).

#### **Question 4: What can interpreters purposefully do to influence visitor behavior?**

The key to answering this question lies in the answers to the preceding three. When interpreters present strongly relevant themes, their audiences are provoked to think in theme-related ways. Theme-related thinking impacts beliefs about the interpreter's topic, which, in turn, can impact attitudes and ways of behaving that are consistent with those beliefs. This is the theoretical view that guided development of the TORE™ model of thematic interpretation and its predecessor, the EROT framework (Ham 1992; Ham et al. 2005). Based on over a century of cognitive research, this framework says that for any communication to be successful, it must be *enjoyable* to the audience, *relevant* to what they already know and care about, *organized* for easy processing, and it must make a compelling point (communicate a relevant *theme*). Since themes and beliefs are one in the same (Ham and Krumpal 1986), a practical implication for interpreters is that presenting strong themes in an ERO way gives them a better chance of making a purposeful difference in how their audiences think, feel and possibly behave with respect to the things they interpret. These are the pathways depicted by the large arrows in Figure 1.

In the best-case (“stronger path”) scenario, when an interpreter's theme is strong (box *a*) and s/he delivers it in a way that motivates the audience to focus on it and process it (box *b*), it provokes the audience to think and make meanings related to what is being presented (box *c*).<sup>1</sup> Depending on how well these meanings fit the people's existing beliefs, reinforcement, change or the creation of new beliefs will result (box *d*). The new status quo can, in turn, influence the people's attitudes (i.e., what they like, dislike, or care about) with respect to the theme that was developed (box *e*)<sup>2</sup>. If these attitudes are strong enough, we would expect them to lead to behavioral choices that are consistent with them (box *f*).<sup>3</sup> If an attitude was the result of a lot of provocation, it would be stronger, more enduring, and more predictive of future behavior. However, if the attitude occurred as a result of less thinking, it would be weaker and shorter-lived, but possibly still predictive of behavior in the immediate time frame. This possibility is shown by the small (“weaker path”) arrow directly connecting box *c* to box *e* (and bypassing box *d*).

Figure 1 isn't presented as a causal model of how things will necessarily work every time, but it depicts the main events of interest in the TORE™ model and is based on a large body of research evidence. As the diagram illustrates, the interpreter's theme is the key to starting this process. Since its role on the audience side is to provide a focal point

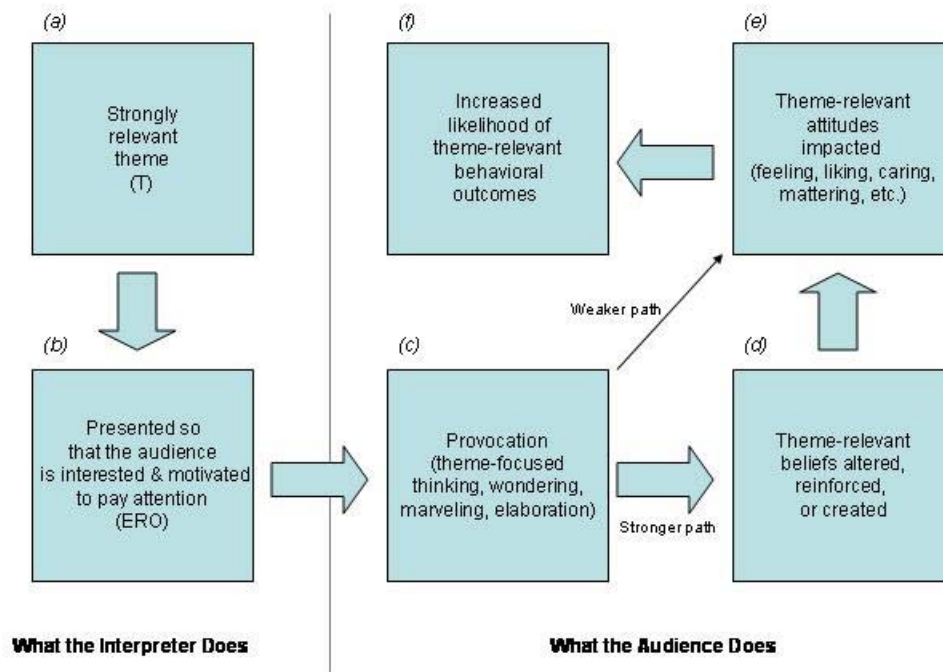
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<sup>1</sup> Box *c* (provocation) is where interpretation's oft-cited role in enhancing visitor experience mainly occurs. See, for example, Ham (2002), Pearce and Moscardo (1998), and Tourism Tasmania (2003).

<sup>2</sup> Studies on the elaboration likelihood model have repeatedly demonstrated that high-relevance themes are likely to provoke thinking (elaboration) and that when such thinking occurs, strong attitude impacts are more possible. However, even milder levels of provocation can produce short-term attitude impacts. See Petty and Cacioppo (1986) and Petty et al. (1992) for reviews of this research.

<sup>3</sup> Ajzen (2005) and Ajzen and Fishbein (2005) summarize research that backs up this sequence of impacts (beliefs influence attitudes which, in turn, guide corresponding behavior. Fazio (1995), Fazio and Towles-Schwen (1999) and Holland et al. (2002) have demonstrated ways in which strong attitudes can be especially predictive of future behavior, whereas weaker attitudes may still impact immediate or short-term behaviors.

for thinking, it must *matter* to the audience and be *easy* to process.<sup>4</sup> And the more it matters, the more likely an interpreter’s impact will follow the stronger path in Figure 1.



**Figure 1. The TORE™ model. Pathways to making a difference with thematic interpretation.**

### Summary and Conclusion

Making a purposeful difference in how audiences think, feel, and possibly behave is easier when interpreters can envision the pathways and mechanisms through which such a difference can be made. A vast body of research suggests that when interpreters present strongly relevant themes, an audience is provoked to think in theme-related ways. Theme-related thinking impacts beliefs, which, in turn, impact attitudes and ways of behaving that are consistent with those beliefs. The strength and duration of these impacts depends on whether individuals in an audience are provoked to think a lot, or just a little,

<sup>4</sup> One could make the argument that any assemblage of interesting facts could provoke thinking, whether or not they were chosen and developed with a theme in mind. And this is correct. However, in the model shown here, an interpreter’s theme provides an essential focal point for provocation. Without this focus, the meanings an audience makes from an interpretive encounter would otherwise be scattered or even random. To strongly impact an audience’s attitude about a place, thing or concept, the place, thing or concept itself needs to be the focus of their thinking (Ajzen and Fishbein, 2005; Petty and Cacioppo, 1986). When an interpreter’s theme is strong, it provides this focus.

about the topic. But short-term attitudinal and behavioral impacts are possible either way. However, since themes and beliefs are one in the same, interpreters who make compelling presentations of strongly relevant themes stand the greatest chance of having enduring impacts on their audiences.

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