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Signs that encourage internalized recycling: Clinical validation, weak messages and "creative elaboration"☆

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ABSTRACT

Two experiments examined clinical validation's ability to increase examination of a persuasive message and increase long-term recycling. In Experiment 1, validating (acknowledging) recycling's inconvenience decreased criticism of the persuasive message, supporting validation's ability to reduce reactance and open the reader to new ideas. Validation did not improve attitudes towards the sign's author, removing liking for the communicator as an alternate explanation for attitude change. In Experiment 2, different recycling signs were created from a 2(no validation/validation) by 2(weak/strong arguments) factorial design, and placed in university buildings. The validation weak sign increased recycling more than the validation strong sign, especially after the signs were removed. We suggest that validation induced people to scrutinize the weak message and use their existing pro-recycling attitudes to "creatively elaborate" it. Discussion emphasizes clinical validation and the Elaboration Likelihood Model as theoretical tools, as well as the potential for thought provoking signs to have long-term effects.

Instructional signs are a common way to guide behaviors in public settings. How effective are they? Are signs limited to short-term impacts, directing behavior only when the signs are in view? Or can we design them so that they influence both immediate and long-term behaviors? One purpose of this article is to explore the technique of "validating complaints" as a way to reduce reactance and increase positive reactions to the sign, thereby increasing a sign's long-term impact. An additional purpose is to stimulate research, theory and practice about the value of "thought provoking" messages for long-term attitude and behavior change.

This line of research is based on cognitive processing models of persuasion, extended to situations in which people initially agree with the message (Elaboration Likelihood Model, Petty & Cacioppo, 1986; see also Heuristic/Systematic Model, or HSM, Chaiken, 1987). The Elaboration Likelihood Model (ELM) is typically used to study reactions to messages with which people disagree, and the research suggests a sign should provide strong arguments so that when people scrutinize and elaborate on the message, they are persuaded by it. In contrast, the present research explores a previously ignored implication of the ELM model. We suggest that when message recipients agree with the sign's request, it may be more effective to use nonspecific, weak or provocative arguments because readers engage in "positive elaboration"; they agree with the message but disagree with the particulars, and think about their own pro-message arguments as they react to the message. ELM suggests that this extra cognitive effort should result in more accessible and durable attitudes that continue to remind one to recycle, even when the sign is not present.

1. Theoretical background

According to Petty and Cacioppo's (1986) ELM, there are two general routes to persuasion, or, in the present case, ways of reacting to an instructional sign. One is the peripheral route, which means that people use nonmessage cues to decide how to respond, rather than really thinking about the message. Nonmessage cues include such features as whether the communicator is familiar or popular, or whether there are few or many arguments in the message.

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Instructional signs often have this quality, operating like "prompts" to stimulate behavior. People comply with the sign, but do not think about their actions, and as a result they do not continue the behavior when the sign is absent (Werner, Stoll, Birch, & White, 2002). In contrast, ELM proposes a "central route" which involves careful examination and elaboration of arguments. Central route processing of cogent arguments can lead to "strong" attitudes, that is, attitudes that persist over time, resist subsequent contrary messages, and are more likely to guide behavior (Petty, Haugtvedt, & Smith, 1995). Several attitude models agree that active processing of the information increases attitude accessibility, which is a key determinant of whether attitudes guide behaviors (ELM; HSM; Fazio's MODE, 1990, 1995). "Accessibility" refers to how quickly an attitude comes to mind; people may have a favorable attitude towards recycling, but if it is not activated (is not salient), it cannot guide behavior. Through examination and elaboration of the issue, people develop accessible cognitions and attitudes that maintain their behavior even without a sign to remind them.

The standard paradigm for showing whether peripheral or central route processing occurs is to provide some participants with a weak message, made up of fatuous arguments, and present others with a strong message, based on cogent, rational arguments. If peripheral processing occurs, there is no difference in the persuasiveness of weak and strong messages. However, if central route processing occurs, attitude change is higher in the strong message than in the weak message condition. According to the theory, when central processing is activated, people carefully examine the message they are given, and if the message is weak, they reject it, but if it is strong, they accept it. To verify that central route processing occurred, participants are asked to list what they were thinking about as they read or listened to the message (Petty & Cacioppo, 1986). Under central route processing, participants' thoughts are negative and rejecting of a weak message, but positive and accepting of a strong message. In contrast to this view, we will argue that when people are induced to scrutinize a weak message *with which they agree*, they will engage in positive elaboration and become even more committed to the behavior.

2. Validation and central route processing

Key to this point of view is that something about the sign must invite the scrutiny and elaboration characteristic of central route processing. Research indicates that several strategies can be used to activate central route processing, such as convincing participants that a message is relevant to them, stating the message as a rhetorical question, using unusual or unexpected or even highly credible sources, and so on (Heesacker, Petty, & Cacioppo, 1983; Maheswaran & Chaiken, 1991; Petty et al., 1995; Petty & Wegener, 1999; Smith & Petty, 1996). In this article, we continue our investigation of a novel and counterintuitive strategy for increasing thoughtful message processing, the therapist's technique of validating a client's negative reactions (Werner, Byerly, White, & Kieffer, 2004; Werner et al., 2002). We began with the idea that signs to recycle may arouse reactance because they restrict the individual's choice. People may have favorable attitudes towards recycling, but they want to retain the freedom to choose whether or not to recycle; indeed, they may resent other people telling them to recycle (Brehm & Brehm, 1981). The therapeutic strategy of validation may provide a way to reduce reactance and elicit cooperation from people.

Validation is a technique developed in clinical psychology to open clients to therapeutic processes such as examining their own emotions, thinking in depth about their problems, and listening to another's feedback and perspective. The clinician validates or empathizes with a client's situation without necessarily agreeing with the client's interpretation or justification (Alexander & Parsons, 1982; Coates & Wortman, 1980; Kraus & Redman, 1986; Rogers, 1951). For example, a clinician might simply say "I am sorry this is upsetting to you" or "your distress is understandable" to reassure the client that the clinician is understanding and compassionate. In a particularly compelling example, clinicians argued that denying the reality of a client's post-partum distress would only worsen the problem. They suggested acknowledging that depression was perfectly understandable (validation) but was interfering with a woman's other responsibilities and relationships (suggesting a need for change) (Kraus & Redman, 1986). Clinicians describe validation as reducing defensiveness and increasing clients' comfort with therapy, qualities that are consistent with our desire to create signs that reduce reactance and open people to cooperating with a request to recycle.

In addition to therapeutic settings, validation has been recognized as an important component of marital harmony (Gottman, 1979) and a key feature of effective responses to consumer complaints (i.e., saying "I'm sorry you had this problem" before beginning to resolve the issue; see Werner et al., 2002, for review). In all these settings, validating complaints reduced hostility, led participants to say they felt understood, and made them more receptive to the communicator. It may be that validation can also reduce reactance to signs that ask one to recycle, thereby opening people to think about and elaborate the message.

In our recycling research, we aimed to reduce reactance and increase central route processing with signs that acknowledged and validated students' reasons for not recycling. A survey indicated that on our campus, the typical reason for not recycling is that recycling is inconvenient (Werner et al., 2002). There is usually only one recycling bin per building, and students do not want to go out of their way to use it (they ask for a recycling container next to every garbage can). Similar to the therapist who empathizes with the client's emotion but does not accept excuses or self-serving explanations, our signs acknowledged that recycling may be inconvenient but did not suggest that inconvenience was a legitimate reason for not recycling (Werner et al., 2004; Werner et al., 2002).

Previous Research on clinical validation and recycling (Werner et al., 2002, Experiment 3) used the standard ELM paradigm to ask whether "clinical validation" could activate central route processing and lead to attitude and behavior change. In a 2×2 design, they manipulated clinical validation (no mention of recycling's inconvenience/acknowledgement of inconvenience) and crossed that with either a weak ("It is the 90s") or strong ("It is important") persuasive argument for recycling aluminum cans, creating four different signs. The four signs were posted in different buildings so that different people saw each one.

Consistent with ELM theory and research, without validation and while the signs were in place, the weak and strong arguments were equally effective at inducing people to recycle, the typical "peripheral route" pattern: It appeared that people did not process the message, but instead recycled mindlessly (Petty & Cacioppo, 1986). In contrast, when the signs validated recycling's inconvenience, the strong argument resulted in significantly more recycling than the weak one. This pattern is typical of central route processing, and suggests that validation had induced people to read the arguments more closely, rejecting the weak argument while accepting the strong one. To evaluate durability of the recycling behavior, the signs were removed, and follow-up data indicated that recycling stayed high in the validation/strong message condition but remained low in the no validation/weak message condition. Thus clinical validation was supported as a strategy for inducing people to study and elaborate a sign's message.

A survey in each building provided questionnaire data that also supported the idea that cognitive elaboration of the messages had occurred. Participants in the validation/strong message condition