Two Cheers for the ELM:

Strengths and Shortcomings After Three Decades

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Abstract

The elaboration likelihood model of persuasion (ELM) represents a significant step forward in the understanding of persuasion processes, because it emphasizes variability in issue-relevant thinking and because it points to the possibility that a given variable might play multiple roles in persuasion. But its treatment of argument quality is unsatisfactory, some key claims are misleading, and it is not a theory of persuasion (but of attitude change).

Two Cheers for the ELM:

Strengths and Shortcomings After Three Decades

The elaboration likelihood model of persuasion (ELM) is a particularly prominent perspective in the study of persuasion, and justifiably so (for the original detailed presentation, see Petty & Cacioppo, 1986; for a more recent briefer treatment, see Petty & Briñol, 2012). This paper discusses what I take to be two especially important contributions that the ELM has made to the study of persuasion and what I think are three matters of concern.

Two Key Contributions

Elaboration Variation

One of the ELM's especially noteworthy contributions to the study of persuasion is its emphasis on the variable character of issue-relevant thinking (elaboration). Because the extensiveness of issue-relevant thinking varies (from person to person, from situation to situation, etc.), how persuasion works varies—and the central factors influencing persuasive success correspondingly vary. Under conditions of low elaboration, the effects of simple heuristic principles will prevail; this represents the peripheral route to persuasion. When extensive elaboration is undertaken, the valence of that elaboration (it favorableness to the position advocated) has more influence; this represents the central route to persuasion.

But it's not just the general insight (which might arguably be said to be shared with some other frameworks) that's valuable. The ELM used this in an especially fruitful way to reveal and organize a variety of relevant empirical relationships, involving (inter alia) need for cognition, distraction, involvement, argument quality, communicator credibility, and so forth. The consequence has been that it is possible to see order in what otherwise might look like a welter

of conflicting findings—so long as one attends closely to the possibility of variation in the degree of elaboration.

For example, consider the effects (on persuasive outcomes) of variations in the recipient's liking for the communicator. Unsurprisingly, liked communicators are generally more effective than disliked communicators, but that effect can vary from case to case. Such heterogeneity of effect, however, is exactly what the ELM would lead one to expect: where liking is serving as a peripheral cue, it ought to play a greater role in influencing persuasive outcomes under conditions of low elaboration—and a lesser one under conditions of high elaboration.

Multiple Roles for Persuasion Variables

The second contribution I would single out is the ELM's emphasizing that a given variable might play multiple roles in persuasion. This is an especially distinctive contribution, and one I think is underappreciated.

To grasp the main idea here, start with the recognition that different routes to persuasion are possible (the central and peripheral routes). With that in mind, then, it should be easy to see that, in the abstract, a given variable might affect persuasion in three possible ways. First, it might influence which route to persuasion is activated (by influencing the degree of elaboration). Second, it might influence persuasive outcomes when peripheral-route persuasion is activated (e.g., by serving as a peripheral cue). Third, it might influence persuasive outcomes when central-route persuasion is activated (by influencing the valence of elaboration).[1]

The ELM emphasizes that a given variable can play more than one of these roles (e.g., Petty & Cacioppo, 1986, pp. 204–215). So, for example, communicator attractiveness might influence the amount of elaboration (drawing attention toward or away from the message), might

serve as a peripheral cue (triggering some liking-implies-correctness heuristic), or might influence elaboration valence (e.g., in beauty-product ads, attractiveness might function as a kind of argument).

As perhaps is easily appreciated, this way of thinking points to the possibility of substantial complexity in persuasion processes and effects. Because a variable can serve different functions, simple generalizations about the effect of a given variable are likely to be elusive. For example: Increasing a communicator's attractiveness might either enhance persuasion (e.g., if attractiveness operates as a peripheral cue that activates a liking heuristic, if attractiveness enhances message scrutiny and the message contains strong arguments, if attractiveness reduces message scrutiny and the message contains weak arguments, or if greater attractiveness encourages positive elaboration by serving as an argument) or inhibit persuasion (e.g., if attractiveness enhances message scrutiny and the message contains weak arguments, or if attractiveness reduces message scrutiny and the message contains strong arguments).

For all that the idea of multiple-roles-for-variables is an important advance, it cannot be said to yet be fully realized. One needs to be able to identify when a variable is likely to play one or another role, and much remains to be done on that question.

The ELM does offer a general guideline here, based on the overall likelihood of elaboration (Petty, Wegener, Fabrigar, Priester, & Cacioppo, 1993, p. 354), as follows: When elaboration is low, then if a variable affects attitude change, it probably does so by serving as a peripheral cue. When elaboration is high, then if a variable affects attitude change, it probably does so by influencing elaboration valence. When elaboration is moderate, then the effects of a variable on attitude change are likely to arise from affecting the degree of elaboration.

This guideline may not be all that informative, however, because it mostly amounts to a restatement of the distinction between central and peripheral persuasion routes. For instance, the proffered principle says in effect that "when elaboration is high attitude change happens through elaboration valence and so anything that affects attitude change under such conditions does so by influencing elaboration valence." This verges on a tautology, in which by definition something that influences attitude change under conditions of high elaboration must do so by affecting elaboration valence. The value of the guideline thus turns on the degree to which there are independent assessments of whether peripheral or central processes are engaged, and such assessments are not easily had (as acknowledged by Petty & Briñol, 2006, p. 217).

However, even without a fully worked-out account of all this, one can still appreciate the importance of avoiding the mistake of thinking that a given variable can influence persuasion in only one way—and thus the ELM's emphasis on this point is an especially valuable contribution.

Three Concerns

Argument Quality

One important concern arises from the ELM's treatment of argument quality (argument strength). In ELM research, argument quality variations have been defined in terms of persuasive effects under conditions of high elaboration. To create strong-argument and weak-argument messages, arguments are pretested. A strong-argument message is defined as "one containing arguments such that when subjects are instructed to think about the message, the thoughts that they generate are predominantly favorable," and a weak-argument message is defined as one in which the arguments "are such that when subjects are instructed to think about them, the thoughts that they generate are predominantly unfavorable" (Petty & Cacioppo, 1986, p. 32).

Notice, thus: *By definition*, high-quality arguments lead to greater persuasion under conditions of higher elaboration than do low-quality arguments.

This might seem like question-begging, but in fact this was a sensible way for ELM research to proceed. The point of creating experimental "argument quality" variations was to have a methodological device for detecting the extensiveness of message processing—a means of indirectly assessing how much elaboration had been occurring. This then permits researchers to see how other variables affect elaboration. For instance, the effect on elaboration of variation in recipients' level of need for cognition (NFC) can be displayed by seeing that with low NFC recipients, there is relatively little difference in the persuasiveness of high-quality arguments and low-quality arguments, but that with high NFC recipients, there is a relatively large difference in persuasiveness. Such a pattern of effects presumably reflects NFC's effect on elaboration, because, by definition, high- and low-quality arguments differ in persuasiveness when elaboration is high.[2]

But of course this is of little help to those interested in message design. If one wants to know how to construct an effective counterattitudinal persuasive message under conditions of high elaboration, the ELM provides no guidance. The basic ELM advice in such circumstances will be "use high-quality arguments," but because argument quality has been defined in terms of effects, that advice amounts to saying "to be persuasive, use arguments that will persuade." (For more detailed discussion of this issue, see O'Keefe, 2003). And examination of ELM experimental messages suggests that the "argument quality" variation confounded a number of distinct message features, making it difficult to discern just which feature(s) might have given rise to the observed effects.

It must be said that this is a rather curious position for a theory of *persuasion* to be in: unable to specify what features make a message more or less persuasive, unable to give advice about how to be persuasive except to say "create messages that persuade people." For a theory of persuasion, this is a nontrivial defect.

Misleading Claims

A second concern to raise about the ELM is that at least some of its claims are misleading, in the sense of being open to easy misunderstanding. As a place to start in displaying this concern, consider this familiar ELM claim: "argument quality variations make a larger difference to persuasive outcomes under conditions of high elaboration than under conditions of low elaboration." This claim in some ways represents the heart of the ELM's approach, because it represents an key effect arising precisely from variations in elaboration.

But, as perhaps the preceding discussion made apparent, this is not an empirical claim; it's a tautology. *By definition* it's true that argument quality variations make more difference under conditions of higher as opposed to lower involvement. (It's true by definition, because precisely what distinguishes strong and weak arguments is their pretest empirical difference in persuasiveness under conditions of high elaboration.) Of course, this *sounds like* an empirical claim—but that's misleading. This is not a discovery, not a research finding, despite its appearance.

And a more specific version of that claim is also misleading. The more specific version is: "argument quality variations make a larger difference to persuasive outcomes under conditions of high involvement than under conditions of low involvement." That claim is misleading because, given the effect of involvement on elaboration, it also functionally amounts to a tautology.

Is there any way to salvage something empirical here? Well, yes, at least in principle. If we could identify exactly what the "active ingredient" is in ELM manipulations of "argument quality," we might see a way forward—a way to identify empirical regularities as opposed to definitional necessities.

And in fact other researchers have made some progress in unraveling things here. It seems likely that at least one of the "active ingredients" in ELM argument-quality variations is the perceived desirability of the outcomes associated with the advocated view: The "high-quality" arguments are ones that invoked consequences that were more desirable from the recipients' point of view (Areni & Lutz, 1988; Hustinx, van Enschot, & Hoeken, 2007; van Enschot-van Dijk, Hustinx, & Hoeken, 2003; see also Johnson, Smith-McLallen, Killeya, & Levin, 2004).

For example, consider the messages in ELM studies using the topic of mandatory comprehensive senior university examinations as a graduation requirement. (This was an oft-used topic in ELM studies, and is a convenient topic to use when the research participants are university undergraduates.) The "strong argument" messages emphasized policy outcomes such as better employment opportunities and higher starting salaries; the "weak argument" messages invoked outcomes such as increased enrollments (for other examples, see Petty & Cacioppo, 1986, pp. 54–59).

That is to say, what ELM research has labeled "argument quality" variations look to functionally be variations in the desirability of the consequences of the advocated action or policy. It's not variations in (say) the presence of fallacious reasoning, or the use of weak supporting evidence, or any of the other things that might ordinarily and sensibly be collected

under the term "argument quality." Instead, the manipulation amounts to a manipulation of outcome desirability.[3]

But this means that it's possible to offer an empirical claim about the interplay of argument quality and involvement, because we can re-phrase the relevant claim this way: "consequence desirability variations make a larger difference to persuasive outcomes under conditions of higher as opposed to lower involvement." And, as just indicated, this claim enjoys some research support.

But even this revised claim is potentially misleading, because of the restricted meaning of "involvement." In ELM research, the manipulations labeled as "involvement" variations look to more perspicaciously be described as variations in the direct personal relevance of the issue. Consider, for example, how "involvement" is manipulated in ELM research using the "mandatory senior comprehensive exam" topic. The messages advocated the adoption of senior comprehensive examinations as a graduation requirement—either at the receivers' college (the high-involvement condition) or at a different, distant college (the low-involvement condition).

The ELM's treatment of "involvement" thus is a specific or narrow one. In the social-scientific research literature, the term "involvement" has been deployed in a variety of other ways, to encompass a number of different properties: connection to one's identity or sense of self, commitment to a position on the issue, the perceived importance of the issue, ego-involvement (Sherif, Sherif, & Nebergall, 1965), and so on. (For some general discussions of involvement, see Johnson & Eagly, 1989, 1990; K. D. Levin et al., 2000; Petty & Cacioppo, 1990; Slater, 2002; and Thomsen, Borgida, & Lavine, 1995. See, relatedly, Krosnick, Boninger, Chuang, Berent, & Carnot, 1993, p. 1143.)

The point to notice is that the ELM's concrete realizations of "involvement" manipulations instantiate one specific sense of "involvement," namely, direct personal relevance of the topic.[4] Other "involvement" properties cannot be assumed to have the same effects as does personal relevance.[5]

But now, as some readers will surely have noticed, we are in a position again to refashion the ELM claim under discussion. That initial claim was "*argument quality* variations make a larger difference to persuasive outcomes under conditions of higher as opposed to lower *involvement*." We can now revise that claim as follows: "*consequence desirability* variations make a larger difference to persuasive outcomes under conditions of higher as opposed to lower *personal relevance*."

This revised claim is a much more appropriate one, for several reasons: (1) It is not a tautology, but an empirical claim. (2) It better reflects the experimental manipulations used in research. And (3) it has some empirical support.

But of course, this revised claim is *very* different from the ELM original—and arguably less remarkable. The revised claim is that people care more about the relative desirability of a policy's outcomes when the policy affects them directly (as opposed to when it does not). Put this way, this is not an especially striking finding. But if instead one says "argument quality variations make a larger difference to persuasive outcomes under conditions of higher as opposed to lower involvement"—well, that sounds rather more interesting, perhaps even surprising. And that's the sense in which this ELM claim is misleading.

I've been focusing here on the narrower claim about argument quality and *involvement*, but now I want to return to the larger claim about argument quality and *elaboration*. And what I want to point to is the evidentiary gap between a claim about the effects of *personal relevance*

(the ELM's sense of "involvement") and a claim about the effects of *elaboration* generally. There's good evidence that "consequence desirability matters more under conditions of high personal relevance than under conditions of low personal relevance." But the ELM's claim is a *much* broader one: that "argument quality matters more under conditions of high elaboration than under conditions of low elaboration."

So there's a gap between what the evidence in hand shows and what the ELM claims—two gaps, in fact: one between the evidence about consequence desirability and the claim about argument quality, and a second between the evidence about personal relevance and the claim about elaboration. With respect to that second gap: If, as the ELM depicts it, personal relevance is just one factor influencing elaboration likelihood (specifically, elaboration motivation)—if it's not an absolutely necessary condition for high elaboration—then presumably it should be possible to observe high elaboration in the absence of high personal relevance.

And so to fill those evidentiary gaps, a very specific sort of research evidence is needed: evidence that the effects observed with outcome desirability variations and personal relevance variations also obtain when (a) argument quality is varied *but outcome desirability is held constant* and (b) elaboration is varied *but personal relevance is low*. It is not plain that such evidence is in hand. (For additional discussion of this point, see O'Keefe, 2016, p. 175n20.)

Not a Theory of Persuasion

One final point to be made, less a concern or weakness than an observation about contextualizing the ELM: The ELM is not a theory of persuasion. At best, it's a theory of attitude change. To be sure, influencing attitudes is often an important aspect of persuasion; persuaders do often try to (and need to) influence people's attitudes.

But persuasion does not always require or involve attitude change. Consider, for example, that one common challenge persuaders face is the task of getting people to act consistently with their current attitudes. People may have positive attitudes about energy conservation or exercise or recycling, but not act consistently with those attitudes. In these situations, no attitude change is necessary.

The ELM does have a contribution to make concerning persuasion in such situations. Some research suggests that attitudes shaped through central-route processes are more likely to be expressed in subsequent behavior than are those arising from peripheral-route processes (e.g., Gasco, Briñol, & Horcajo, 2010; Petty, Cacioppo, & Schumann, 1983; for a general discussion, see Petty & Wegener, 1999, pp. 61-63). So if the challenge is that of encouraging attitude-consistent behavior, the ELM would recommend that persuaders try to engage central-route processes.

But getting people to act consistently with their attitudes is not necessarily always a matter only of strengthening attitudes. Sometimes, even when people have (what appear to be) perfectly strong attitudes, they may nevertheless fail to act on them—for example, when they think they are *unable* to engage in the behavior (expressed in reasoned action theory terms, low perceived behavioral control; Fishbein & Ajzen, 2010). In such situations, persuaders need guidance not readily supplied by the ELM.

Conclusion

The elaboration likelihood model of persuasion (ELM) represents a significant step forward in the understanding of persuasion processes, because it emphasizes variability in issue-relevant thinking and because it points to the possibility that a given variable might play multiple

roles in persuasion. But its treatment of argument quality is unsatisfactory, some key claims are misleading, and it is not a theory of persuasion.

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Footnotes

[1]This treatment bypasses some details discussed elsewhere (O'Keefe, 2016, p. 173n15).

[2]It is perhaps not without interest that when researchers do not pretest messages for differential effectiveness but instead use what the researchers think represent content variations in "argument quality," the hypothesized ELM effects appear to weaken (Carpenter, 2015).

[3]Of course we cannot be sure that outcome desirability is the *only* ingredient at work in those ELM messages, or that it is the only message property that interacts with elaboration in the expected way. We're in this position of uncertainty because the ELM defined argument quality in an effect-oriented way (high-quality arguments are ones that persuade people) rather than focusing on intrinsic message properties. But outcome desirability does appear to at least be a key driver of the observed effects.

[4]This treatment bypasses the question of whether more specific varieties of personal relevance might usefully be distinguished. Johnson and Eagly (1989) differentiated "outcome-relevant involvement" (in which concrete short-term outcomes or goals are engaged) and "value-relevant involvement" (in which abstract values are activated). They suggested, invoking meta-analytic evidence, that high outcome-relevant involvement produces the pattern of effects expected by the ELM (in which variations in argument strength produce corresponding variations in persuasive effects), but that high value-relevant involvement leads receivers to defend their opinions when exposed to counterattitudinal messages, regardless of whether the message contains strong or weak arguments. Petty and Cacioppo (1990) argued that the same process might underlie these apparently divergent patterns of effect. (For some further discussion, see Johnson & Eagly, 1990; Levin, Nichols, & Johnson, 2000; Park, Levine,

Westermann, Orfgen, & Foregger, 2007; Petty & Cacioppo, 1990; Petty, Cacioppo, & Haugtvedt, 1992; Slater, 2002.)

[5]To illustrate: The effects on message scrutiny might not be the same for increasing personal relevance and for increasing commitment to a position. As personal relevance increases, message scrutiny increases (the ELM phenomenon), but as position commitment increases, message scrutiny might plausibly be expected to either increase (e.g., if there are cues that message scrutiny will yield position-bolstering material) or decrease (when scrutiny looks to yield position-threatening material).