THE ELABORATION LIKELIHOOD MODEL OF PERSUASION

Background

The field of persuasion research and practice is constantly on the lookout for ways to develop and deliver message content that can effectively raise awareness, generate desired attitudes, build confidence, establish social norms, engage audiences emotionally, and ultimately influence behaviour. However, the large body of literature and case studies synonymous with this field highlight the challenges of such a task, with persuasive endeavours often generating a range of mixed results, specifically on matters of important public policy (Rucker & Petty, 2006).

Some of these results might represent a lingering artefact of the dominant thinking in persuasion research that occurred prior to the 1970s, involving variables and assumptions that investigators and practitioners continue to explore today as critical determinants of effective persuasion (which remains usually framed as positive and desired changes in audience attitudes and behaviour, although attitudes might just be one component of a behaviour change attempt). Such variables include characteristics of the message source (e.g., attractiveness, credibility), the message itself (e.g., level of complexity, number of arguments, rational or emotional appeals), the message recipient (e.g., mood, intelligence, involvement in the issue), and the context in which the message is presented (e.g., type of media, level of distraction in the communication environment) (Petty, Barden, & Wheeler, 2009).

For many of these variables, it was initially thought they had a single effect on persuasion—they either enhanced the success of a persuasion attempt or reduced it. For example, associating a message with an expert source, increasing the number of positive arguments in favour of the advocated position, and high recipient intelligence were all intuitively expected to enhance persuasion efforts. While early research initially offered support for the notion that individual factors had a single effect on persuasion through a single process, it soon became apparent that the single effect "story" was not so simple. What emerged was a lack of consistent findings and agreement, casting doubt over some previous fundamental persuasion assumptions. For example, one study would support traditional assumptions and show that using an expert source enhanced persuasion. However, other studies would either show no such impact or, more alarmingly, a reduced impact on persuasion efforts. Similarly, some studies found that increasing the number of positive arguments in a message did not always lead to greater or more sustained attitude change, and that negative emotions could be used to increase persuasion rather than decrease it as previously thought. What made this particularly problematic was the uncertainty surrounding the conditions under which each of these effects was apparent and the processes involved in producing them (Petty, Rucker, Blizer, & Cacioppo, 2004; Wagner & Petty, 2011).

It was against this backdrop that a number of "dual process models of information processing" were developed in the 1970s and 1980s. These models set out to provide researchers and practitioners with a means of understanding and predicting the multiple ways in which attitudes might be formed or changed (as well as for how long) based on the amount and nature of thinking that a person does

about a message. The most influential of these models was the Elaboration Likelihood Model of Persuasion (Petty & Cacioppo, 1986, 1996), which is the focus of this "think piece" prepared for the partners of BehaviourWorks Australia, in particular The Shannon Company.

An overview of the ELM

The elaboration likelihood model of persuasion (ELM) is essentially a theory about the thinking processes that might occur when we attempt to change a person's attitude through communication, the different effects that particular persuasion variables play within these processes, and the strength of the judgements that result (see Figure 1). Unlike the "single effect story" of earlier models, the ELM believes that any one variable can influence attitudes in a number of different ways and can serve to either increase or decrease persuasion through several different mechanisms (Petty et al., 2004).

At its core, and as the name suggests, the ELM assumes that individuals can differ in how carefully and extensively they think about a message and the position, object or behaviour it is advocating. That is, in any given context, the amount of elaboration or thinking a person does about a message or issue can vary from low to high along an "elaboration continuum". Individuals can think a lot, a moderate amount, or indeed very little about a message, and the amount of thinking they engage in goes a long way in explaining *how* people will be persuaded (if at all) (Wagner & Petty, 2011).

Where people fall along this continuum is determined by considering their ***motivation*** and ***ability*** to process the message presented to them. A person's motivation can be influenced by several variables, such as the perceived personal relevance of the issue, general enjoyment of thinking (some people simply like thinking more than others!), and being personally responsible for processing the message. For example, if a person has a family history of cancer, he or she might be particularly motivated to carefully consider information on new cancer screening technologies, especially if they are charged with passing this information on to other family members looking for guidance. Ability refers to an individual needing the resources and skills to understand and attend to a message. Several factors impact on this ability, such as intelligence, time available to engage in the message, a person's level of actual or perceived knowledge (e.g., an individual is likely to elaborate and respond more to messages when they are aligned to pre-existing knowledge structures), the amount of distraction in the communication environment (e.g., a noisy environment might inhibit a person's ability to think), and the number of message repetitions (i.e., with increasing amounts of message repetition, people are better able to comprehend, scrutinise and recall the arguments conveyed in a message) (Rucker & Petty, 2006; Wagner & Petty, 2011).

Factors that influence a recipient's motivation and ability may therefore be specific to the communication context or internal to the person. In combination, when motivation and ability to think are high, individuals are inclined to go down a "central route to persuasion" (the left-hand-side of Figure 1), but when motivation is low or ability to process is hindered, people are more likely to go down a "peripheral route to persuasion" (the right-hand-side of Figure 1).

Figure 1: The Elaboration Likelihood Model of Persuasion
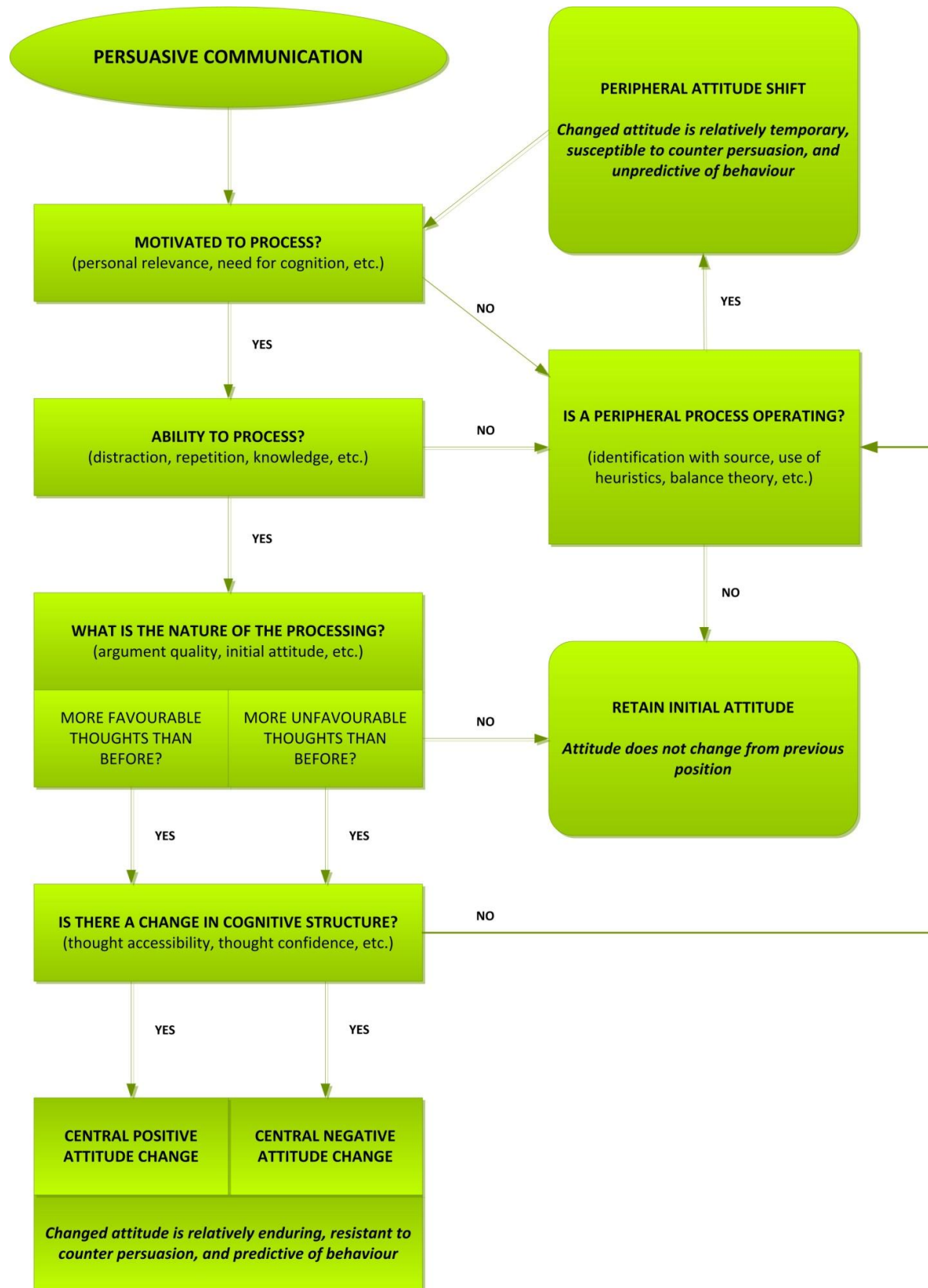
Source: Petty, Briñol, and Priester (2009)

The central route to persuasion

If a person is motivated and able to think carefully about a message (e.g., high personal relevance, few distractions), then he or she is likely to follow the central route to persuasion. In the central route, individuals carefully consider the elements of the message in order to determine whether its proposal makes sense and will benefit them in some way. Specifically, the central route to persuasion involves a focus on the strength of the *message arguments*, which are the pieces of information in the message intended to provide evidence for the communicator's point of view. If the arguments are "strong", then engaged individuals will generate predominantly favourable thoughts in response to the message and will experience attitude change in the advocated direction (as a result of more favourable thoughts being triggered than negative ones). However, if the message contains "weak" arguments, then thoughtful receivers may generate more unfavourable than favourable thoughts in response to the message (i.e., the weaker arguments "fail" under heavier scrutiny) and will experience either no attitude change or a change in the opposite direction. Whether an argument is strong or weak is largely an empirical question that can be explored through testing different message content and ascertaining whether favourable or unfavourable thoughts were generated (Petty, Briñol, et al., 2009; Wagner & Petty, 2011).

Of course, thinking a great deal about a message does not mean that the recipient will process the arguments in an objective manner, as the interpretation of the message arguments can be biased by various factors. For example, individuals often consider arguments consistent with pre-existing attitudes to be stronger than arguments opposing their pre-existing attitudes. Also, emotions can bias recipient evaluation of persuasive arguments. Specifically, high elaboration participants have been shown to evaluate persuasive arguments more favourably when they are in a happy rather than a neutral state. Given these findings, it is important to note that persuasion by the central route does not necessarily involve impartial consideration of a message's arguments (Wagner & Petty, 2011).

The peripheral route to persuasion

In our daily lives, we often lack the motivation or ability to carefully consider every piece of persuasive communication in the way characterised by the central route. Attitude (and even behaviour) change can occur nonetheless, as some persuasion processes require little consideration of the arguments contained in a message. In the ELM, such processes are organised under the peripheral route to persuasion, and involve mechanisms where message recipients use simple cues or mental shortcuts as a means of processing the information contained in a message. For example, a cue might involve an emotional state (e.g., "happiness") that becomes associated with the message's advocated position in a positive way, or a recipient might simply agree with a message without any careful consideration of the arguments on the basis that it is being delivered by a perceived expert on the matter (activating a mental shortcut based on "experts are generally correct"). Other common shortcuts that people might take include counting the number of arguments (rather than scrutinising them) presented in a message, or looking at the responses of other people who are exposed to the same message as a cue to how most people respond. To this end, under the peripheral route, the strength of the message arguments can be of little consequence to forming or changing attitudes. Although these shortcuts do not involve thoughtful consideration of the content of a message, the peripheral route can nevertheless be effective in leading to persuasive impacts on attitudes and behaviour, at least in the short-term (Petty, Barden, et al., 2009).

While the distinction between central and peripheral routes to persuasion provides an intuitive account of how people might broadly process information, the reality is that both central and peripheral processes can influence attitudes simultaneously. But as elaboration likelihood increases, central route processes are likely to dominate in their impact of attitudes over more peripheral processes (Petty, Barden, et al., 2009).

Consequences of the route to persuasion

The elaboration route used to form or change an attitude has a number of ramifications, as attitudes shaped by the central route will have different consequences and properties compared to those shaped by the peripheral route. In general, attitudes that result from central route processes tend to be more stable over time, resistant to counter-arguments, are likely to guide (and bias) thinking in a pro-attitudinal way, and perhaps of greatest importance, lead to attitude-consistent behaviour. Taken together, these enduring and durable outcomes are considered to represent features of a "strong attitude". As a result, attitudes produced through central route processes increase the chances of eliciting sustained behaviour change (Petty, Barden, et al., 2009; Rucker & Petty, 2006; Wagner & Petty, 2011).

Despite the obvious benefits of shaping attitudes through the central route, they are typically more difficult to achieve given the higher elaboration demands that are placed on the target audience. As such, the temptation exists to focus on producing attitudes through the less demanding peripheral route. However, such attitudes are sometimes described as a "hollow victory", as the elaboration short-cuts that are taken to create these attitudes mean that they tend to be less enduring, are vulnerable to counter arguments, and are less likely to lead to attitude-consistent behaviour (Rucker & Petty, 2006). While peripheral approaches can be quite powerful in the short term, especially when an immediate change is all that is required, the problem is that over time emotions dissipate, people's feelings about sources can change, and cues can become disassociated from the message (Wagner & Petty, 2011). In combination, these factors can undermine the basis of weaker-natured attitudes shaped by the peripheral route.

A key contribution of the ELM is therefore the proposition that it is insufficient to know simply what a person's attitude is or how much it has changed. *It is also important to know how the attitude was changed or formed in the first place*. Attitudes changed via the central route tend to be based on active thought processes resulting in a stable and strong cognitive foundation, but attitudes created by the peripheral route involve a more passive acceptance or rejection of simple cues and have a less well entrenched base. To this end, while two people might possess similar positive attitudes to an object or behaviour, these attitudes might be quite different in terms of the underlying psychological factors that lead to their formation and the consequences they might lead to (e.g., whether they will contribute to changes in behaviour)(Rucker & Petty, 2006).

Multiple roles of variables in the ELM

As the discussion so far has hinted at, the ELM postulates that any one message variable can influence persuasion through multiple ways. To this end, the same factor may be influential under both peripheral and central route elaboration conditions for different reasons. Variables might influence persuasion by either serving as an argument, operate as a simple cue, impact the amount of elaboration a message receives, bias the interpretation of the message, or affect the confidence people have in their subsequent thoughts, judgements and opinions (Wagner & Petty, 2011). The

ability of any one variable to play several roles is therefore crucial to understanding the dynamic processes of persuasion, and can serve to explain how the same variable can lead to different outcomes.

Under low elaboration conditions, persuasion variables are likely to function as simple cues rather than strong arguments, as people are unlikely scrutinise the message-relevant information for its merits related to the advocated position or behaviour. Any evaluation that is formed is therefore likely to result from simple associations or inferences that do not require much thoughtful effort. For example, a person's mood can serve as a simple cue either because the mood becomes associated with a message's advocated position, or because people infer their attitudes from their mood (e.g., "I'm feeling good right now, so this product must be great!"). Similarly, people might rely on the expertise of the message source as a mental shortcut to judge the merits of the advocated position (e.g., "My doctor says smoking is bad, so I guess it must be") (Rucker & Petty, 2006).
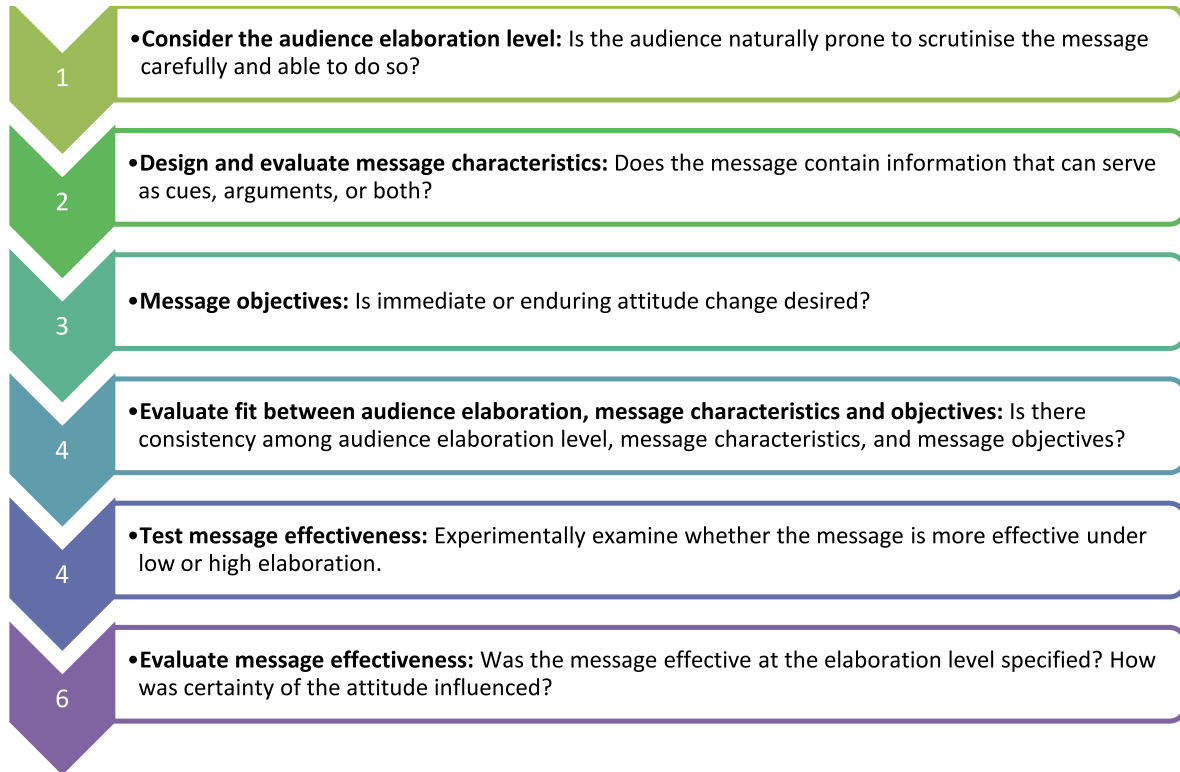
In contrast, under high elaboration conditions, persuasion variables often have relatively little impact by serving as mental shortcuts and simple cues. Instead, the merits of the persuasion variables are scrutinised in relation to the advocated position of the message. For example, if a message comes from an expert source, a person is more likely to consider how relevant the source's expertise is in the context of the message. For example, a message about the dangers of smoking from a university professor specialising in lung cancer would be more influential than a message coming from a university professor specialising in skin cancer. Under low elaboration conditions, these nuances in expertise are less likely to have an impact. Furthermore, under high elaboration conditions, a person might be more receptive to a message coming from a credible expert but more argumentative or biased in their thinking if the same message comes from someone who is scrutinised as a non-expert on the topic. They are also more likely to have greater confidence in their own judgements knowing that the information has come from a credible source (Rucker & Petty, 2006).

To summarise, the multiple roles logic of the ELM suggests that the persuasion effectiveness of any given variable cannot be tied to just one particular effect or to one particular process. From a practical perspective, the idea of multiple roles stresses the importance of carefully considering the various ways that certain characteristics of a communication can influence persuasion (either positively or negatively).

Using the ELM in practice

The transition of a theoretical framework to applied practice can sometimes be problematic, often due to a lack of guidance on how to operationalise such frameworks in real-world settings. Recognising these perceived limitations, ELM researchers have proposed a series of steps that can be applied when developing a communication intervention to influence behaviour (see Figure 2).

Figure 2: Six steps for applying the ELM in practice

1	•**Consider the audience elaboration level:** Is the audience naturally prone to scrutinise the message carefully and able to do so?
2	•**Design and evaluate message characteristics:** Does the message contain information that can serve as cues, arguments, or both?
3	•**Message objectives:** Is immediate or enduring attitude change desired?
4	•**Evaluate fit between audience elaboration, message characteristics and objectives:** Is there consistency among audience elaboration level, message characteristics, and message objectives?
4	•**Test message effectiveness:** Experimentally examine whether the message is more effective under low or high elaboration.
6	•**Evaluate message effectiveness:** Was the message effective at the elaboration level specified? How was certainty of the attitude influenced?

Source: Rucker and Petty (2006)

1. Consider the audience elaboration level

The first step is to consider whether recipients of the message are likely to scrutinise and attend to it carefully or process it more peripherally. As explained previously, this will largely depend on a person's motivation and ability to process the message. Although it might not be possible to consider every factor that is likely to influence the elaboration level, this is not required. The role of the first step is more about developing a rough estimate of the elaboration level of the target audience (a more thorough examination of the audience's elaboration level can be empirically tested later). For example, having some basic understanding of the audience's elaboration level could provide some insight into whether a campaign involving a celebrity describing the health benefits of not smoking will involve careful scrutiny of the presented arguments and the credibility of the celebrity, or whether recipients will simply note the celebrity and the advocated position without carefully considering the health benefits of not smoking (Rucker & Petty, 2006).

2. Design and evaluate message characteristics

After estimating the target audience's elaboration level, the second step considers what elements should be built into a persuasive message and whether they will serve as strong arguments, simple cues, or both. In other words, this step examines the available options for developing and communicating a message that fits with the audience's elaboration level. These options may involve, for example, developing substantive arguments that can withstand intense scrutiny, or components that can serve as simple cues such as a credible and engaging message source. However, as already noted, just because a message is filled with substantive arguments does not guarantee people will

process them carefully. If motivation and ability to process is low, people may simply count the number of arguments and be persuaded by this cue (Rucker & Petty, 2006). Alternatively, if a celebrity is used in a campaign as a simple cue, their experience related to the message subject could move beyond a cue status and represent a strong argument (e.g., think of the former US basketball player Magic Johnson who initially retired from basketball after being diagnosed as HIV positive and his potential role in an AIDS-prevention campaign) (Petty, Barden, et al., 2009). In these examples, certain components of a message can cater for both central and peripheral route processing options.

3. Message objectives

The third step (although it could be argued that this should be the first step) involves being clear about whether the goal of a message is to produce an enduring or immediate change in attitude (and ultimately behaviour). For example, an anti-smoking message is more likely to focus on producing an enduring and durable change, while a message asking people to make a donation to a charity is more likely to focus on a more immediate change in a particular moment in time (and context). As previously discussed, this will influence whether persuasion through the central or peripheral routes are pursued, with the former more likely to produce an enduring change, and the latter more likely to produce more immediate but short-term results. While we might hope that a choice always exists in terms of which route is pursued, this might not always be the case. In some instances, the peripheral route may be the only option, as people's motivation and ability do not always allow for more careful scrutiny of a message (e.g., a noisy and busy communication environment) (Rucker & Petty, 2006). In this context, greater thought might need to be given to the moments and contexts where central route processing might be more feasible. For example, Verplanken's (2010) "habit discontinuity hypothesis" suggests that there are times in people's lives (e.g., moving house, starting a family, changing jobs) where their former habits may be particularly vulnerable, and this may coincide with times that are more conducive to central route processing .

4. Evaluate fit between audience elaboration, message characteristics and message objectives

The fourth step looks at the level of fit between the three preceding steps. This involves examining whether there is alignment between the audience's elaboration level, the components contained in the message, and whether this might create the type of attitude (and ultimately behaviour) change that is desired. To achieve this, it is important to consider whether the elaboration level of the audience matches the level of elaboration that the message is pitched at. For example, if a message contains factors that are mostly designed to act as peripheral cues, then this is more likely to be influential under low rather than high elaboration conditions. If such an alignment exists, it should then be considered whether the type of attitude change produced (short-term or long-term) are appropriate to the objectives of the message. If there is not a match between these three components, actions should be taken to change either the elaboration level of the target audience (e.g., make the communication context less distracting; make the message more personally relevant) or the type of information contained in a message to match the level of elaboration for the desired consequences (Rucker & Petty, 2006).

5. Test message effectiveness

This step involves experimentally examining the effectiveness of the message in persuading the target audience, and should involve several common evaluation themes. First, the message should

be compared with a no-message control condition or with alternative messages (using pre and post measures). Second, recipients' attitudes, attitude certainty, and beliefs about the message topic should be assessed. Such measures can give policy makers an overall sense of whether the message was effective in changing attitudes in the desired direction (relative to the no-message control condition), reveal whether the level of certainty associated with the attitude provides an insight into how likely it will be persistent, resistant, and predictive of behaviour, and ascertain the reasons for these newly formed or changed attitudes (in terms of whether they were formed through central or peripheral route mechanisms). If resources permit, attitudes should be examined not only immediately after message presentation but also at several later points in time. This would serve as a further check of the strength of the attitude change (Rucker & Petty, 2006).

6. Evaluate message effectiveness

Finally, it is important to make an overall determination about whether the message was effective. With the data from the previous step on attitudes, certainty, and beliefs, it is possible to explore whether the message had the intended effects. For example, did people attend to and process the strong arguments? Did people rely on cues? Were the resulting attitudes held with certainty? Depending on the answers to these questions, the message might be ready for a broader roll-out, or instead need some further fine-tuning before this takes place (Rucker & Petty, 2006).

Final remarks: Some implications for mass media campaigns

In terms of implications for mass media campaigns, there are probably three points from this overview of the ELM that are worth restating. First, although some attitudes are based on effortful thought processes where externally provided information is deemed as personally relevant and integrated into internal and stable belief structures (through central route processing), other attitudes are formed as a result of relatively simple cues contained in a message and the persuasion context. Second, any one persuasion variable (e.g., source expertise, mood) is capable of achieving persuasion by either the central or peripheral route in different situations by serving one or more roles (i.e., affecting motivation or ability to think, biasing thinking, affecting thought confidence, serving as an argument, operating as a peripheral cue). Finally, although both central and peripheral route processes can lead to similar attitudes in terms of how favourable or unfavourable they are, there are important consequences in how these attitudes were formed or changed, with more thoughtful attitude changes likely to be more enduring and "consequential" (e.g., more predictive of behaviour) than less thoughtful ones (Petty, Briñol, et al., 2009).

Taken together, if the goal of a mass media campaign is to produce durable changes in attitudes with behavioural-consistent consequences, the central route to persuasion would be the preferred persuasion strategy. But as noted previously, one of the most important determinants of motivation to process a message centrally is its perceived personal relevance. However, most mass media messages that people are exposed to are probably not perceived as directly relevant or have few immediate consequences in their eyes. As such, many of these messages are given cursory attention or processed primarily as peripheral cues. An important goal of any persuasion strategy aimed at achieving enduring change will therefore be to heighten people's motivation to think about the message by increasing its perceived personal relevance or employing other techniques to enhance processing (e.g., framing arguments as questions) (Petty, Briñol, et al., 2009). Such attempts can be viewed in the work of The Shannon Company, with the Worksafe advertisements seeking to amplify

the personal relevance of workplace safety by emphasising the connection to returning home safely to family and friends, and using the survivors from the Black Saturday fires to push the "fire ready" campaign to people living in fire prone areas.

In addition to providing guidance in the development of mass media campaigns, frameworks such as the ELM can offer a means of diagnosing past mass media campaigns, especially in situations where certain messages did not deliver the scale of expected attitude and behaviour change. According to the logic of the ELM, there are a number of reasons why this might be the case. First, the information contained in a message might have been perceived as irrelevant, or might have led to unfavourable rather than favourable reactions. Second, despite achieving desirable attitude changes, people might lack confidence in these changes, and if they were triggered based on simple peripheral cues rather than more elaborate processing, they are not likely to persist over time. Finally, even if central attitudes were produced, the ability of people to act on these attitudes might be restricted by a lack of skills, resources or opportunities, or undermined by competing social norms (in other words, attitudes are just one component of a bigger picture of determinants related to behaviour change) (Fishbein & Ajzen, 2010; Petty, Briñol, et al., 2009).

In conclusion, the ELM and other dual-process models of information processing represent a significant progression in thinking since earlier optimistic (and potentially concerning) notions that the mere presentation of information was sufficient to produce persuasion outcomes, and the subsequent pessimistic view when these results were not forthcoming that mass media campaigns are ineffective. Models such as the ELM highlight how mass media and other forms of influence involve a complex web of determinants, variables and processes, and that the extent and nature of a person's thought responses to external information can at times be more important than the information itself (Petty, Briñol, et al., 2009).

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