

FORUM

## Perceived Message Effectiveness Meets the Requirements of a Reliable, Valid, and Efficient Measure of Persuasiveness

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In every science, the measurement of core quantities requires valid tools: usually a set of procedures or operations. Measurement procedures may vary considerably for assessing the same core attribute. For example, the attribute of physical distance (or length) can be measured in many ways, including the familiar micrometer, ruler, and tape measure, but also the less familiar infrared Helium–Xenon laser interferometry, X-raying opaque materials, Gunter’s chain for surveying (circa 1620), radio navigation using transponders, and rangefinders (as deployed in World War II), among many other techniques.

All these tools measure the distance between two points in space comparing the measured distance to some established standard to obtain length. Some procedures are very precise; some expensive; some cheap and easy; and some are designed for specific applications and are necessarily inappropriate for other applications. All of them need to meet core criteria that we might identify as reliability and validity. Using a ruler to measure very large or very small distances will show the ruler to be imprecise. Using laser-based optical techniques to carry out simple measurements of a person’s height will be very precise, but very expensive and resource intensive.

The bottom line is obvious: we need measurement tools (i.e., procedures) that are reliable (consistent), valid (accurate), and efficient (precise enough) for the task at hand. Denying that a ruler is a good measure of distance because it cannot determine the diameter of the nucleus of uranium 238 is silly, because it is very useful in a wide variety of other tasks where its reliability, validity, and low resource consumption are clear. So it is with perceived message effectiveness (PME) and its close cousins, such as perceived argument strength (PAS).

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O'Keefe's (2018) conclusions about PME lead us astray. PME is a useful tool for the measurement of how persuasive a message can be when applied to the right target population, a large set of messages, or messages that vary in their characteristics and in PME. Our lab has generated evidence of PME's utility, most of which was not included in O'Keefe's (2018) meta-analysis.<sup>1</sup>

One group of studies uses PME (or PAS) to sort the persuasive impact of messages, but tests their impact on biobehavioral outcomes rather than self-reported psychosocial outcomes. The second group uses sets of randomly-assigned messages that vary in their aggregate PME, showing causal impact on behavioral-oriented outcomes.

### **Perceived Message Effectiveness Predicts Biobehavioral Outcomes**

Messages varying in PME (or PAS) have had predictable main effects on heart rate and skin conductance (Kang, Cappella, Strasser, & Lerman, 2009; Strasser et al., 2009), cotinine levels (Wang et al., 2013), neural activation (Weber, Huskey, Mangus, Westcott-Baker, & Turner, 2014), and genetic differences and brain reactivity (Falcone et al., 2011). Similarly, messages varying in PME (or PAS) have had predictable moderating effects on visual attention (Sanders-Jackson et al., 2011), objective memory (Lee & Cappella, 2013), and physiological responding (Kang et al., 2009). In all these studies, messages were selected in advance from a large pool using PME and PAS measures on separate but parallel populations; messages so selected were tested subsequently in the targeted population.

### **Aggregate Perceived Message Effectiveness Predicts Behavioral Outcomes**

Bigsby, Cappella, and Seitz (2013) exposed smokers to four anti-smoking ads randomly selected from a large pool, de facto creating variable amounts of "persuasive impact" as measured by aggregate scores of PME. The degree of aggregate PME predicted intentions to quit and to reduce consumption of tobacco. A similar procedure was conducted with exposure to a random selection of tobacco warning labels and intentions to quit (Morgan, Sutton, Yang, & Cappella, 2018). In a third study, anti-smoking PSAs tailored to be high in PME for the individual smoker predicted intentions and subsequent quitting behaviors (Kim, Yang, Kim, & Cappella, 2017).

### **Conclusion**

These studies indicate that PME (and PAS) are valid indicators of effective messages, helpful in guiding the selection of messages for theory-testing and campaign implementation. Researchers can use PME (and PAS) to sort messages that vary sufficiently in objective attributes and perceived effectiveness. Trying to differentiate infinitesimal differences between messages with a blunt (but efficient) instrument is a fool's errand. But so is trying to differentiate the effectiveness of many different

messages, one message at a time, using gold standards requiring large samples and long-term behavioral outcomes. Let's not promote either kind of foolishness.

Communication research into message effects must have a tool like PME (and PAS), because scientific research needs efficient shortcuts that are reliable and predictively valid. Just as physical scientists have developed a variety of procedures to assess length and would not employ the most precise procedure every time distance is to be measured, so it is with PME. These measurement tools do not need to be infinitely precise, and should not be deployed as if they are. PME measures use resources efficiently, allowing the evaluation of many message implementations before more careful (and expensive) testing is carried out.

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## Note

- 1 The Bigsby, Cappella, & Seitz (2013) article is included in O'Keefe's reference bibliography

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