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Are Positive Interventions Always Beneficial?

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Abstract. Can people improve their lives by smiling more, trying to have a better posture, and by thinking about good memories? Can individuals become more successful by deliberatively engaging in positive actions and thoughts? Do people feel better by following recommendations from naïve psychology? In the present article we discuss these questions, noting that although some popular interventions thought to be universally beneficial (e.g., inductions of happiness, self-affirmation, empowerment, self-distancing) can sometimes yield positive outcomes, at other times the outcomes can also be negative. Taking an empirical approach based on experimental evidence, we postulate that understanding the underlying processes discovered in the science of persuasion is the key for specifying why, when, and for whom these practical initiatives are more likely to work or to backfire.

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Are inductions of happiness and affirmation always desirable?

Popular interventions aimed at helping people often rely on positive inductions such as getting people to express positive affect (e.g., by smiling; Judge & Ilies, 2004; Lyubomirsky & Layous, 2013) and expressing their most important values (self-affirmation; Cohen et al., 2009; Walton & Wilson, 2018). The idea is that when people smile (Strack et al., 1988) or think of happy memories (Rusting & DeHart, 2000; Sedikides & Skowronski, 2020; Werner-Seidler & Moulds, 2012) they feel good. Similarly, expressing important values allows people to feel good and protected (Ferrer & Cohen, 2019).

Unlike popular wisdom suggests (Wiseman, 2012, 2013), a close look at the science of persuasion reveals that these techniques can increase evaluation and well-being in some cases but decrease it in others. We argue that process-oriented research suggests that although most positive inductions produce the desired effects at least some of the time, in other cases the opposite effects can emerge. This argument is based on the idea that the effects of interventions depend on the psychological processes by which they operate (Petty & Briñol, 2020). Briefly, the key idea is the impact of any variable depends on the amount and direction of thoughts people generate in response to the induction (Petty & Cacioppo, 1986), and the perceived validity of those thoughts (i.e., whether people feel good about their thoughts or have confidence in their correctness; Briñol & Petty, 2009).

For example, consider the multiple processes by which feeling happy can influence judgments and behaviors according to the Elaboration Likelihood Model (Petty & Briñol, 2015). Happy states can lead to good or bad outcomes depending on the circumstances. A happy state can lead to more positive evaluations when the emotion serves as a simple valence cue when people are not thinking much (e.g., if I feel good, I must like it), or by biasing thinking (making positive thoughts more accessible) when people are motivated and able to think, or even by serving as an argument (e.g., happiness can be seen as evidence that a joke is good). This positive effect is in accord with popular wisdom and much empirical research: feeling good is associated with seeing everything in a positive light regardless of whether you are engaged in low or high thinking (Forgas, 1995; Petty et al., 1993). However, when the extent of thinking is not constrained to be low or high by other variables (e.g., high personal relevance), feeling happy could reduce processing of a cogent message thereby reducing its impact (Mackie & Worth, 1989; Schwarz & Clore, 1983; Wegener et al., 1995).

Happiness can not only change the amount or direction of thinking (processes of primary cognition) but can

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also validate what people already think when the induction is salient after thoughts are generated. This mechanism of thought validation is a process of meta-cognition (secondary cognition) that involves thinking about our own thinking. Meta-cognition is important because secondary thoughts can magnify, attenuate, or even reverse the impact of primary cognitions (Briñol & DeMarree, 2012). Under high thinking conditions, feeling good following thinking can validate what we think increasing the impact of positive thoughts (making people feel especially good) compared to a sad state, but can also magnify the effects of negative thoughts (leading people to feel more poorly than in a sad state; Briñol, Petty, & Barden, 2007; Huntsinger et al., 2014). Ironically, feeling good about a bad thought increases the chance that people act on that negative thought (e.g., Huntsinger, 2013; Paredes et al., 2013). In sum, although happiness may often produce positive outcomes, the underlying process by which this occurs can vary, leading to negative outcomes depending on the circumstances. When happiness validates negative thoughts or when it reduces thinking about relevant information then happiness produces unwanted results.

As with happiness, self-affirmation can produce a good evaluation in some cases (e.g., when validating positive self-thoughts) but a bad evaluation in others (when validating negative self-thoughts; Briñol, Petty, Gallardo, et al., 2007). Thus, self-affirmation can polarize judgments when it follows thinking, thereby magnifying the impact of whatever dominant thought is accessible at the time (e.g., Keitman & Stankov, 2007; Mirels et al., 2002; Vohs et al., 2013). For example, Wood et al., (2009) revealed that having participants express self-affirmations (e.g., "yes, I can" or "I am stronger everyday") led to good outcomes for those with positive thoughts (individuals high in self-esteem), but to negative outcomes for those with negative thoughts (for those with low self-esteem; see, Baumeister, et al., 2003; Brummelman et al., 2014, for additional examples).

In the most recent example of this category, Gallardo et al. (2020) demonstrated that the feeling of confidence that comes from self-affirmation can magnify whatever mental content is accessible in mind. In this set of experiments, participants were asked to think about the conflict they experienced after engaging in a counter-attitudinal behavior (negative thoughts), or about themselves (positive thoughts). Following this manipulation of thought direction, participants were assigned to either receive a self-affirmation or a self-doubt induction. As expected, self-affirmation had opposite effects depending on what thoughts were salient in a person's mind. When people had positive thoughts, affirming an important part of the self led to a good outcome (e.g., less impact of conflict, and reduced cognitive dissonance). However, when people focused on the conflict experienced (a negative thought), the very same self-affirmation induction validated the conflict and led to opposite results. This finding is consistent with previous research showing that metacognitive confidence can paradoxically validate all kinds of negative thoughts, magnifying the impact of doubts, conflicting reactions, and psychological ambivalence (Clarkson et al., 2008; Luttrell et al., 2016; Wichman, et al., 2010). Taken together, these examples suggest that careful consideration of the thoughts that are likely to be validated by inductions of affirmation is critical for specifying when affirmation inductions are likely to work in the desired direction or to lead to undesired effects.

Similar to self-affirmation, research in self-efficacy (another variable associated with confidence) has also been found to improve positive outcomes (e.g., performance) in some cases (Bandura & Locke, 2003) but to hinder performance in other cases (e.g., Stone, 1994; Vancouver & Kendall, 2006. The general idea is that positive interventions generally considered as sources of good outcomes can also lead to negative results depending on the underlying process by which they operate (Grant, & Schwartz, 2011; Pierce & Aguinis, 2013).

In sum, careful consideration of the thoughts that are likely to be validated by inductions of happiness and affirmation is critical for specifying when these inductions are likely to work or to lead to boomerang effects. Although for illustrative purposes we focused our examples on happiness and affirmation, other positive inductions could be potentially analyzed from the same point of view, including approach behaviors (Price & Harmon-Jones, 2016), touching (Jakubiak & Feeney, 2017), laughing (Martin, 2001; Provine, 2004), and using nodding, mimicry, synchrony, and warmth (e.g., Arnold & Winkielman, 2020; Guyer et al., 2019; Reich et al., 2014; Roscoe, 2017, van der Wal & Kok, 2019). Next, we examine one of these possibilities as an additional illustration.

Is empowerment always desirable?

Beyond happiness and affirmation, popular interventions often rely on other positive inductions such as getting people to assume powerful postures (Huang et al., 2011; Huang & Aaker, 2019; Körner et al., 2019), communicate using powerful language (Blankenship & Holtgraves, 2005; Klofstad, 2016), as well as utilizing other expressions of power (Holland et al., 2017; Schubert, 2020). Indeed, some trends emphasize feeling powerful as a means of becoming more successful across different domains of life (Burgmer & Englich, 2012; Lammers et al., 2013; Michalak, et al., 2014; Nair et al., 2014; Peper et al., 2018). Rather than being inherently beneficial, persuasion science has revealed how the confidence that comes from feelings of power following

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thinking can magnify whatever mental content is accessible (Briñol, Petty, Durso, et al., 2017). For example, recent research has shown that feelings of confidence that come from power and other positive inductions can increase favorable self-evaluations (Briñol et al., 2009; Carroll et al., 2020) and physical performance (Horcajo et al., 2019) when people are thinking about their strengths, but decrease these self-evaluations and performance when they are thinking about their weaknesses.

The key point is that considering the direction and the validity of thoughts can be helpful in understanding apparently contradictory sets of results often obtained for power inductions. For example, power can increase or decrease cooperation or competition (DeMarree et al., 2014; Hirsh et al., 2011), pro or anti-social behavior (DeCelles et al., 2012; DeMarree et al., 2012), and action or inaction (Durso et al., 2016), depending on whether the validated thoughts are positive or negative to begin with.

As noted, this is important because empowering people to take action plays a critical role in many interventions (Bailey et al., 2017; Hertwig & Grüne-Yanoff, 2017; Howell et al., 2015; Kim et al., 2018; Jorm, 2012; Pratto, 2016). In sum, by attending to the underlying processes of change, researchers and practitioners can identity when feeling powerful is going to be beneficial and when it is going to be detrimental.

Can self-distancing backfire?

Other popular approaches have succeeded in getting people to self-distance when feelings were analyzed. For example, cueing people to analyze their negative past experiences from a self-distanced (vs. from a self-immersed) perspective makes a significant difference across a variety of health-related outcomes (Finkel et al., 2013; Kross & Ayduk, 2017). Many contemporary approaches are designed to help people avoid using their unwanted thoughts by separating from them (see Bernstein et al., 2015; Briñol et al., 2019, for recent reviews). For example, mindfulness techniques have found that separating from one's thoughts can reduce the impact of unpleasant thoughts therefore increasing well-being (e.g., Hart et al., 2013; Kang et al., 2013; Lindsay et al., 2018). Other research has shown that merely priming people with hygiene (e.g., by having participants wash their hands) is capable of mitigating the guilt associated with immoral decisions (Lee & Schwarz, 2011). The question however, is to what extent distancing from thoughts is always beneficial?

According to our process-based analysis, creating distance from thoughts (either through perspective, mindfulness, cleansing, or other means) will decrease the use not only of negative thoughts (making people feel better) but also reduce the use of positive thoughts (making people feel worse; cf. Xu et al., 2012). In fact, research on self-persuasion has demonstrated that physical distance (Briñol et al., 2013), and other forms of separation from one's thoughts, can either increase or decrease positive outcomes (Gascó et al., 2018; Paredes et al., 2019; Santos et al., 2019). Again, taking process into account contributes to maximizing the chances to get the desired outcomes with many interventions.

Is the meaning of positive variables always the same?

It is important to make an additional remark regarding how people interpret interventions. For most people in most situations, the variables involved in many popular interventions often have a common meaning. The question is to what extent smiling, affirmations, and power always have a clear and positive association? Notably, the meaning associated with these variables can vary across individuals, situations, and cultures. For example, smiling can not only be a positive sign but can also be a negative sign (e.g., when a smile is a smirk indicating laughing at, or trivializing an idea, or even when it reminds people they want to change their bad mood; Labroo et al., 2014; Söderkvist et al., 2018). Furthermore, positive emotions such as awe and hope are associated with pleasantness but also with other appraisals such as uncertainty, and those doubts can be selectively activated to dominate the situation (Briñol, Petty, Stavraki, et al., 2018; Lerner & Keltner, 2001; Lerner et al., 2015).

Just as positive emotions have different appraisals, other experiences can also be appraised differently (Briñol, Petty, Santos, et al., 2018). For example, feeling powerful often has a clear positive association (e.g., validity, authority, pleasantness; Galinsky et al., 2003; Kifer et al., 2013). However, the experience of power can sometimes include appraisals of negative valence (e.g., power is bad when associated with corruption and abuse) and uncertainty (e.g., powerful people are sometimes wrong due to incompetence or carelessness), and an *avoidance orientation* (e.g., power can paralyze; Durso et al., 2016; see also, Cesario & Johnson, 2018; Cesario & McDonald, 2013; Lammers et al., 2017).

As is the case with feelings of power, the effect of ease is meaning dependent (Clarkson et al., 2016; Labroo & Kim, 2009; Labroo & Pocheptsova, 2016; Unkelbach, 2006). People generally perceive ease (and other positive phenomenon, such as fluency, and flow) by default as something good and therefore associated with high validity and thought usage. However, Briñol et al. (2006) demonstrated that if these naïve theories regarding the meaning of ease vary (e.g., to indicate simplicity or stupidity), then ease can lead to the opposite outcomes (e.g., less thought usage).

The idea is that rather than being inherently beneficial, variables associated with confidence (like power, ease, etc.) can lead to positive outcomes in some cases

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but, also, lead to negative outcomes in other cases depending on how they are construed. As an additional example consider work on matching. Indeed, one of the most impactful methods for enhancing a persuasive proposal is to match an aspect of the proposal (i.e., its content, source) to an aspect of the person receiving it. This *personalized matching* in persuasion (also commonly known as tailoring, targeting, or personalizing) is universally thought to be beneficial. Against this popular view suggesting that "matching is always good", Teeny et al. (in press) have recently revealed that the effects of matching can vary as a function of meaning. That is, although matching and other fit experiences are often associated with positive meanings (e.g., rightness, familiarity, relevance, authenticity) and positive outcomes (e.g., more persuasion, satisfaction, etc.), they can also be perceived as attempts at manipulating, invasions of privacy, unfair calls, or boring approaches leading to negative outcomes.

Recent research demonstrates that even the meaning of "change" per se can vary to be associated with high validity (e.g., growth, improvement, and education) or low validity (vulnerability, flip-flopping, instability; Briñol et al., 2015; Ford & Troy, 2019; O'Keefe et al., 2018). In sum, we argue that that it is the meaning of an experience and not the experience itself that matters for understanding whether a treatment produces the desired effect or backfires.

Can we make a deliberatively use of psychological interventions for self-change?

Another practical matter to consider is the question of whether interventions can be used deliberatively to produce changes in one's own psychological processes. In other words, can people intentionally use physical actions such as smiling or power posing, and mental activities such as thinking about one's values or positive memories, to improve their lives? The response to this question is two-fold.

On the one hand, many positive psychology initiatives that involve deliberative self-change have been proven useful in getting people to feel good (Seligman et al., 2005; Zhang et al., 2014), especially when considered from a dialectical point of view that also includes recognition and acceptance of both positivity and negativity (Burkeman, 2013; Lomas & Ivtzan, 2015). Also, people can deliberately choose to experience a given emotion when they think that those emotions can help them to achieve a desired goal (e.g., Tamir & Ford, 2012). Furthermore, people can intentionally adjust their judgments to reduce (Wegener & Petty, 1997; Mello et al., 2020) or enhance (e.g., McCaslin et al., 2010) the effect of any variable in the desired direction. Taken together, these examples suggest that people can deliberatively use psychological strategies designed to improve their well-being and other desired outcomes.

On the other hand, a different set of research paradigms suggest that the effects of many interventions (e.g., retrieving past memories of happiness) can be reduced or even eliminated when people become aware of their incidental nature (e.g., Schwarz & Clore, 1983). Also, strategically thinking about emotional states can reduce their intensity and subsequent usage by reducing mystery (Wilson et al., 2005) and increasing rumination (Lyubomirsky et al., 2006). Therefore, it is not clear whether people can use their memories and actions to intentionally influence their feelings and evaluations, at least in all cases. Just as it is difficult to be happy when intentionally trying (Mauss et al., 2011; Schooler et al., 2003), so too is it difficult to initiate and maintain enjoyable thoughts intentionally (Wilson et al., 2019). Also, it is difficult to intentionally generate and express good memories while deliberatively avoiding bad ones (Gandarillas et al., 2018; Tormala et al., 2007; Wegner et al., 1993). Finally, placebo expectations are less impactful when deliberatively choosing to use them to improve evaluations and well-being (e.g., Geers et al., 2019). Taken together, these examples suggest that the strategic use of psychological strategies to promote self-change can be more challenging than anticipated.

Conclusion

It is now clear from the research we reviewed, that positive actions and mindsets can produce different (even opposite) effects depending on the circumstances. The questions analyzed throughout this review suggest that any given phenomenon can produce multiple effects (positive and negative) by operating through multiple processes that work under specific conditions.

Although our analysis was focused on positive inductions, it is important to note that negative inductions can also produce either negative or positive outcomes when examined from the point of view of the processes by which they operate. For example, research has shown that aggressive displays following thinking enhanced reliance on both positive and negative thoughts (Briñol, Petty, & Requero, 2017). In fact, beyond readiness to attack, the general feeling of confidence that emerges from being prepared can be misattributed to any thoughts in mind at the time, including positive and negative thoughts irrelevant to the original domain of preparation (Carroll et al., 2020).

In sum, just as the same positive induction (e.g., affirmation, empowerment) can devalue but also enhance the evaluation of the self and others, negative inductions (e.g., aggression, anger) can either increase or decrease

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positive outcomes. We have argued that analyzing these apparently contradictory outcomes from the point of view of the fundamental processes of change can help to explain this complexity (see Petty & Briñol 2008, 2020, for an extended discussion). Therefore, maximizing the chances of designing effective interventions depends in part on understanding the psychological processes by which practical initiatives produce change.

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