

Individual-level solutions may support system-level change – if they are internalized as part of one’s social identity

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Abstract

System-level change is crucial for solving society's most pressing problems. However, individual-level interventions may be useful for creating behavioral change before system-level change is in place and for increasing necessary public support for system-level solutions. Participating in individual-level solutions may increase support for system-level solutions—especially if the individual-level solutions are internalized as part of one's social identity.

In order to address society's most pressing problems, change is needed at the system level. Chater and Loewenstein argue that behavioral scientists should focus on research that informs such system-level solutions (e.g., carbon taxes to reduce greenhouse-gas emissions) rather than promoting individual-level solutions (e.g., carbon footprint calculators), as the latter are likely insufficient, less impactful, and ultimately undermine system-level approaches. Specifically, they claim that individual-level solutions generally produce negative spillover effects that reduce public support for system-level solutions. This is an important paper and the authors do an excellent job of highlighting the potential risks of individual focused intervention. Unfortunately, many of their concerns about negative spillover are speculative and not yet backed by scientific evidence. While we agree that system-level change is crucial for solving many of society's problems and that behavioral science can (and should) be used to inform such change, we are not convinced that individual-level solutions necessarily undercut system-level solutions.

In this commentary, we argue that negative spillover is not inevitable or even common. Moreover, social identity may be key to generating positive rather than negative spillover effects between individual-level interventions and system-level solutions. As such, individual-level change is often beneficial for achieving system-level change rather than undercutting it.

Prior research on behavioral spillover effects paints a complex picture. While several studies have provided evidence for negative spillover (see Chater & Loewenstein, this issue), many other studies have also provided evidence for positive spillover effects (see Truelove et al., 2014). For example, increasing individual-level pro-environmental behavior such as recycling or conscious consumption is associated with increased political activism and support for system-level solutions such as wind power (Thøgersen & Noblet, 2012; Willis & Schor, 2012). This may suggest that individual-level interventions help build public support that is necessary for system-level policy change—through positive spillover.

Studies on spillover effects have used a variety of methodologies and measures, producing contradictory results (e.g., Carrico, 2021). For example, a meta-analysis of 77 effects from studies of behavioral interventions to promote pro-environmental behavior found an *overall positive spillover effect* on behavioral intentions, a small negative effect on actual behavior, and no effect on policy support (Maki et al., 2019). Importantly, the direction and magnitude of spillover effects also varied across interventions, suggesting that there may be ways to increase positive spillover by using specific types of interventions or targeting specific types of behaviors or processes.

Social identity has been proposed as a key moderator of spillover effects in pro-environmental behavior (Truelove et al., 2014). Specifically, when a decision to act pro-environmentally is based on a social role or identity (e.g., the identity of an environmentalist) or when initial pro-environmental behavior is attributed internally (e.g., to one's identity as an environmentalist), positive spillover (versus negative or no spillover) is more likely to occur (Truelove et al., 2014). People who reflected on pro-environmental behaviors in connection to their values or identity (relative to no reflection or identity irrelevant reflection) increased their support for a carbon tax (Sparkman et al., 2021). Furthermore, people who were reminded of their previous performance of a range of pro-environmental behaviors were more likely to make "green" product decisions due to an increase in environmental identity

(van der Werff et al., 2013). Thus, when one's social identity as someone who cares about the environment is triggered or made salient, positive spillover is more likely to occur.

A similar phenomenon has been observed during the COVID-19 pandemic. A global study of 67 nations (with nearly 50,000 participants) during the pandemic found that people who supported individual-level behavior change, including reducing social gatherings, were far more likely to support system-level policies, like reducing social crowds ($d > 0.8$; Van Bavel et al., 2022). In addition, national identification predicted engagement in and support for *both* individual- and system-level solutions, which suggests that people who cared more about protecting their social group/country were most likely to act to reduce the spread of COVID-19. Hence, this global dataset supports the idea that there may be an indirect path for individual-level interventions to increase support for system-level interventions when people are identified with a group or issue.

Finally, support for individual-level interventions may not necessarily crowd out support for system-level changes. Chater and Loewenstein describe a *crowding-out effect*; when easy-to-achieve nudges (an individual-level intervention) were presented alongside system-level policies, people supported the easier individual-level option more (Hagmann et al., 2019). However, when the small impact of nudges and the low cost of the policies were highlighted, the crowding-out effect was eliminated without diminishing support for the nudge. While Chater and Loewenstein conclude that individual-frame solutions crowd out system-frame solutions, the research they cite shows that simply highlighting the realistic potential efficacy of behavioral nudges can reduce negative spillover. Thus, it seems the effects of spillover can be easily mitigated with accurate and effective communication.

We enthusiastically share the view that individual-level interventions should *not* replace efforts for system-level policy. However, our review of the literature indicates there are situations where individual-level interventions can have positive spillover effects that benefit (or at least do not harm) system-level change. System-level change takes time and – at least in democratic societies – requires public support. Individual-level solutions could help mitigate social problems before system-level change is in place, generate support among leaders and key stakeholders, and help generate the necessary public support for system-level reform (via positive spillover effects), especially if the individual-level solutions are internalized as part of one's identity. Considering social identity as key to generating positive spillover effects may help make sense of existing literature and provide testable predictions for future investigations.

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