

Editorial

THE INTENTION-BEHAVIOR GAP AND THE ROLE OF PSYCHOLOGY IN THE TRANSITION TO A CIRCULAR ECONOMY

Why do people resist adopting a different lifestyle or changing their habits? How can we spur positive change that leads to a more sustainable and equitable society? Answering these questions is crucial to building a circular economy and reducing waste. Engaging citizens and understanding why they might resist to change is essential to making progress efficiently and without delay.

In this regard, psychology can offer valuable insights. For example, one issue that psychological research has extensively examined is the intention-behavior gap (Sheeran & Webb, 2016) - that is, people's difficulty in translating intentions into actual behavior. This is something many of us have experienced at some point, such as when we intended to start a diet, exercise more, or quit smoking.

To understand why the intention-behavior gap exists, it helps to look briefly at dual-process theories (Kahneman, 2011). Psychologists identify two main thinking systems: the intuitive system and the analytical system. The intuitive system is fast, based on feelings and associative mechanisms, and does not require much effort. The analytical system is slower, relies on conscious reasoning, uses learned rules, and requires cognitive effort in terms of attention and memory. While the intuitive system generates quick, rough solutions, the analytical system is supposed to vet and, if necessary, override them. However, this vetting process is cognitively demanding. As a result, the analytical system often functions as a permissive controller, allowing the intuitive system to dominate in order to conserve energy.

From this perspective, we see that forming good intentions-such as eating less meat, recycling, or buying more sustainable products-is relatively easy. Acting on those intentions, however, can feel burdensome. We may enjoy meat, recycling demands attentiveness, and sustainable products are often more expensive. Without strong motivation, our intuitive system generates justifications to avoid these tasks (sometimes even embracing blatantly false information), and our permissive analytical system accepts or even bolsters these rationalizations-a process known as motivated reasoning.

Here, motivation is key. A young person who is deeply concerned about environmental degradation may walk to work under the summer sun, buy second-hand clothes, and meticulously sort their waste. Others may do none of these things. Most people fall somewhere in between, acting sustainably when it's meaningful or convenient-for ex-

ample, biking to work but only when the weather is pleasant.

These justifications are often driven by affective reactions-automatic, emotional responses that guide our perceptions of risks and benefits (the affect heuristic; Slovic et al., 2007). One telling example is public skepticism toward green chemistry. Many people associate synthetic substances with negative emotions (a phenomenon called chemophobia; Saleh et al., 2019), viewing them as risky and unnatural. In contrast, natural substances evoke positive feelings and are seen as safer and healthier. For instance, people are more accepting of the same level of risk when it comes from traditional meat than from cultured meat, simply because the latter is perceived as more artificial.

Research also shows that additions to natural products reduce perceived naturalness more than removals. For example, adding pulp to orange juice makes it seem less natural than removing it. Similarly, saying a gene was added to an organism (versus removed) reduces perceived naturalness more sharply.

These insights have important implications for the transition to a circular economy. When we introduce sustainable alternatives to traditional products, we must consider these psychological dynamics. For example, producing recycled textiles for the fashion industry often involves chemical additives. This can trigger resistance, as consumers may believe unsubstantiated claims (e.g., "these chemicals will irritate the skin")-beliefs that can be exploited by those seeking to preserve the status quo.

To prevent such resistance, we must harness psychology to understand public perceptions and design effective communication strategies-strategies that reassure consumers without concealing information or potential risks. These can include emotionally positive labeling, effective framing, incentives, and clear, transparent messaging that counters irrational beliefs.

Another crucial factor is context. People's behavior is heavily influenced by the environment in which they make decisions. Take the fashion industry: it's increasingly difficult to resist buying new clothes. Many consumers receive frequent promotional emails from favorite brands, and a single click leads them straight to an online shop. From there, it's easy to select a size, add items to the cart, and pay-sometimes with a stored payment method that streamlines the process. Some enjoy in-store shopping, but for many, the convenience and low cost of online fashion are

irresistible. Over time, repeated visits to vendor websites reinforce the urge to purchase-especially during sales.

Some interventions have targeted these contextual cues, such as encouraging people to unsubscribe from marketing emails or making second-hand purchases and clothing rental options more convenient-for example, by offering these alternatives alongside new clothing options and highlighting favorable cost comparisons. New technologies like on-demand clothes may also help reduce over-production. However, public acceptance of these solutions remains uncertain. Some individuals may feel uncomfortable with second-hand clothing due to hygiene concerns. Likewise, on-demand clothes could raise privacy issues or significantly alter the shopping experience in ways some may find off-putting.

In this editorial, I have emphasized the importance of understanding the psychological roots of resistance to sustainability-oriented innovations. Doing so can accelerate the transition to a circular economy and a more sustainable society-but only if done ethically. It must not become a way to impose lifestyles that people are unwilling to adopt. We have already seen how top-down initiatives

can backfire. Citizens have the right to voice concerns and reject proposed solutions. Policymakers must listen, explain clearly why certain approaches are supported by science, and engage in participatory decision-making wherever possible.

Enrico Rubaltelli *

*Department of Developmental Psychology and Socialization
University of Padova, via Venezia, 8, 35131, Italy*

* enrico.rubaltelli@unipd.it

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