

## Taking the Leap across the Rationale Gap: The Role of Emotions in Making the Transition to More Sustainable Materials and Technologies



The switch towards novel bio-technologies and materials in companies requires creativity and risk taking from both the manager and the relevant stakeholders. During the transition phase the manager needs to make change decisions and comparisons between alternatives under uncertainty and stick with their decisions in the face of difficulties. Typical challenges are: navigating towards a future that is difficult to predict and committing to strategic change decisions under potentially conflicting economic, social and environmental conditions. We aim to identify relevant decision criteria and emotions that can influence decisions concerning the adoption and application of novel technologies and materials in the transition to more sustainable development and production.

This research contests the notion of information processing and comparison of alternatives only being based on reason. Specifically, we investigate how emotion can complement reason under uncertain conditions. For example, we explore how specific emotions such as excitement and fear can complement rational evaluation and serve as a compass when strategic change decisions demand a comparison of different hard criteria. If switching to novel more sustainable technologies and materials did not stir any emotional reactions, such transitions would be easier to ignore altogether. As such, emotion can help the decision maker to better understand their own priorities and values, as well as the social environment. Emotion can help in choosing the alternative that feels right and fits to company values. Successful transitions to more sustainable production not only enable the company to do well, but also indirectly generate positive externalities to society.

We seek to reveal novel information regarding the interplay between emotion and reason in decision making and uncover under which conditions companies and managers will switch to new bio-technologies and materials. These insights are applied to a more holistic model that reflects the acceptance of emerging technologies, thus illuminating how diffusion of innovations can be associated with emotional support and street credibility. Emotion is treated as a baton transferred during the emergence of hypes and fashions around bioeconomy, and as a driver in more sustainable innovation. This is essential because even if the economic, social and environmental criteria for a successful innovation were met and excitement was generated within the company, the final leap into more sustainable bioeconomy also demands emotional support from the external environment.

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