Demystifying the Role of Goal-Related Processes in Explaining the Effects of Emotion on Information-Seeking Decisions

Yoann Stussi [ID] Martin Gaudré [ID] and David Sander [ID]
Swiss Center for Affective Sciences Campus Biotech, University of Geneva, Geneva, Switzerland
Department of Psychology, FPSE, University of Geneva, Geneva, Switzerland

Abstract

Adopting componential and appraisal approaches to emotion, this commentary highlights how Moors' goal-directed theory allows a deep analysis of the role of emotion in information-seeking decisions. We illustrate how (i) the opportunity to gain information can signal discrepancies with multiple goals, which are reduced by seeking or avoiding information, (ii) goalrelated appraisals and goal satisfaction may partly account for the rewarding properties of information, (iii) practical rationality can explain seemingly irrational information-seeking behaviors, and (iv) biased goal priorization and appraisal biases could lead to maladaptive information-seeking. We suggest that appraisal and goal-directed theories may complement current theoretical frameworks of information-seeking by providing a mechanistic approach to understanding how the evaluation and selection of goals, behavioral strategies, and actions influence information-seeking.

Keywords

emotion, goals, information-seeking, expected utility

A centerpiece of Moors' masterful effort in providing a typology of emotion theories is her goal-directed theory (this issue; see also Moors, 2022), which states that emotions are high-impact decisions. Although this theory departs from typical appraisal theories of emotion in various ways, both share important similarities as evaluation theories. In particular, appraisal and goal-directed theories are consistent with a componential approach, conceptualizing emotional processes as composed of an evaluation-based elicitation component that shapes a multifaceted response—including autonomic physiology, action tendencies, expression, and feeling (Sander, 2025). They moreover assign a central role to goal-related mechanisms in emotional processes. Appraisal theories posit that concern-relevance (i.e., does the event increase the probability of satisfaction or dissatisfaction toward a major concern?), goal-conduciveness (i.e., does the event facilitate or hinder goal achievement?), and control or coping potential (i.e., can the individual manage, influence, or adapt to the consequences of the event?) appraisals of an external event or internal representation are key determinants of emotion (Sander, 2025). While the goal-directed theory acknowledges a role for *stimulus* evaluation in detecting a discrepancy with an activated goal and selecting behavior, it shifts the emphasis to *response* evaluation, suggesting that the goal-relevance of the action tendency is the causal mechanism of emotional behavior (Moors et al., 2017). Below, we draw on the added value of Moors' goal-directed theory and its overlaps with appraisal theories to show how goal-related processes allow a deep analysis of the mechanisms underlying the role of emotion in information-seeking. We focus on information-seeking because it is an important yet poorly understood instance of a high-impact decision process driven by multiple goals, making the goal-directed theory particularly valuable for understanding its affective dynamics.

Corresponding authors: Yoann Stussi, Campus Biotech, CISA-University of Geneva, Chemin des Mines 9, CH-1202 Geneva, Switzerland.
Email: yoann.stussi@unige.ch

David Sander, Campus Biotech, CISA-University of Geneva, Chemin des Mines 9, CH-1202 Geneva, Switzerland.
Email: david.sander@unige.ch

Information-seeking is an integral part of everyday decision-making. Humans and animals often seek and consume information to guide their future actions but also for its own sake—even when doing so is costly (e.g., Bromberg-Martin & Monosov, 2020). This suggests that information has intrinsic value and can function as a reward (e.g., Murayama, 2022). Recent theoretical frameworks propose that the value of information is derived from multiple motives, including its utility for action, its emotional impact, and its effect on understanding the world (Sharot & Sunstein, 2020). In this view, information-seeking not only serves practical or instrumental goals, but also emotional and epistemic goals.

In the context of the goal-directed theory, the opportunity to gain information can act as a stimulus signaling a gap between what one knows and what one wants to know (i.e., information gap; Golman & Loewenstein, 2018) or the prospect of receiving (un)desirable information. This can lead to the detection of a discrepancy with high-value goals such as maintaining predictive and coherent mental representations of the world (e.g., minimizing uncertainty or surprise), expanding knowledge, and experiencing positive affect, which are major motivations for seeking or avoiding information (e.g., Kobayashi et al., 2019). The decision to seek or avoid information then depends on goal-related appraisals of the expected information and on the expected utility of information-seeking behaviors for goal satisfaction. When the expected information is appraised as relevant and conducive to one or multiple goals, as well as controllable, information-seeking behaviors are likely to be attributed a high expected utility. Conversely, information-avoidance is likely to have a high expected utility when expected information is appraised as goal-obstructive and difficult to control, whereas expected information appraised as goal-irrelevant is likely to result in indifference.

If the goal of reducing uncertainty or the goal of acquiring knowledge is activated, the individual may select the action appraised as the most relevant to maximize information gain (assimilation), thus engaging in information-seeking behavior irrespective of the expected information's valence. By comparison, if the goal of experiencing positive affect is activated (see, e.g., Tamir, 2021), the individual may seek information when it is expected to elicit positive feelings and avoid information when it is expected to evoke negative feelings (Sharot & Sunstein, 2020). Alternatively, the individual may switch goals (accommodation), such as prioritizing the experience of positive affect over uncertainty reduction when the expected information is evaluated as positive but unlikely to fill a knowledge gap. They may also reinterpret the expected information in a way that increases its alignment with the activated goal (immunization), such as reevaluating the expected information as more likely to elicit positive feelings when the goal is to experience positive affect.

In addition to guiding information-seeking behavior, goal-related mechanisms may play a central role in shaping the rewarding properties of information. Appraisal theories predict that the more a stimulus is appraised as goal-relevant, goal-conducive, and unexpected, the more rewarding it is and the more it elicits positive affect, these predictions being shared with reinforcement-learning frameworks (Moors et al., 2021). Consistent with motivational approaches to emotion (e.g., Scarantino, 2024), the goal-directed theory predicts that the satisfaction of a high-value goal and the reduction of the discrepancy between the stimulus and the activated goal produce positive affect (Moors et al., 2021). On this basis, the opportunity to gain information may generate positive expectations when the expected information is goal-relevant, goal-conducive, and associated with action tendencies having a high expected utility for goal satisfaction. Relatedly, the consumption of information may be rewarding because it satisfies one or multiple goals. This goal-based perspective aligns with evidence showing that the opportunity to receive information about uncertain rewards—and the actual receipt of such information—activate the brain's reward circuitry (e.g., Charpentier et al., 2018).

Importantly, the multiple goals that drive information-seeking can sometimes be in competition, possibly giving rise to seemingly irrational information-seeking behaviors. In agreement with Moors' practical rationality argument stating that behaviors appearing irrational at face value can be considered rational when they effectively serve the individual's (hidden) goals, these behaviors may still be rational in satisfying the personal goal they aim to achieve. For instance, seeking information eliciting negative feelings may appear irrational at first glance, but could in fact result in a net positive outcome in satisfying a higher-value goal, such as reducing uncertainty and its associated aversive state. Another illustration is morbid curiosity, where individuals deliberately expose themselves to aversive content. Though often seen as a negative trait, morbid curiosity can satisfy epistemic, affective, and social goals, with individuals valuing aversive content for the information it provides, the sensations or emotions it evokes, or its social utility (Vivanco Carlevari et al., 2025).

Extending this goal-conflict line of reasoning, the goal-directed theory provides insights into maladaptive information-seeking, especially through goal evaluation and selection processes. Prioritizing uncertainty reduction over goals like truth-seeking can, in some cases, incite individuals to consume misinformation that satisfies immediate goals at the expense of long-term epistemic accuracy (Pennycook et al., 2021). Similarly, inflexibly attributing a higher value to uncertainty reduction over the pursuit of positive affect in situations where these goals are misaligned can lead to compulsive information-seeking behavior that undermines well-being—particularly when the relief from reducing uncertainty does not outweigh the negative affect elicited by the information itself—and increases cumulative negative

outcomes. Congruent with this view, recent evidence suggests that individuals who are more motivated to reduce uncertainty than to seek positive information are more likely to engage in doomscrolling (Cogliati Dezza et al., 2024)—a maladaptive behavior involving compulsive consumption of bad news that cause detrimental effects on mental health. Additionally, individuals who are prone to appraise expected information as negative, goal-obstructive, or lowly controllable may avoid information that could otherwise have instrumental utility (e.g., medical screening; Sharot & Sunstein, 2020). In contrast, the tendency to overestimate the probability of good news and underestimate the probability of bad news (e.g., optimism bias) may nonselectively increase information-seeking and result in an overexposure to negative information and adverse effects on well-being (Sharot & Sunstein, 2020). Accordingly, biases in goal prioritization and goal-related appraisal processes may exert a prominent influence on maladaptive information-seeking.

Building on the goal-directed theory, it could be suggested that maladaptive information-seeking behaviors stem from over- or underestimates of values and expectancies during goal-directed processes (see Buabang et al., 2025). This hypothesis departs from accounts that attribute a key function to habits in the initiation and execution of problematic information-seeking behaviors, such as doomscrolling or excessive social media use (Turner et al., 2025; Wuensch et al., 2025). By shifting the focus from ingrained habits to inaccurate decision processes, the alternative conceptualization offered by the goal-directed theory could open new avenues for research, particularly in identifying the relative contributions of goal-directed and habitual processes and their interplay to maladaptive information-seeking.

In conclusion, we suggest that appraisal and goal-directed theories hold promise for complementing and extending current theoretical frameworks of information-seeking (see Erdemli et al., 2025). Indeed, they provide a mechanistic approach of how emotion shapes information-seeking, detailing how individuals attribute value to stimuli, goals, behavioral strategies, and actions, and placing goal-related mechanisms at the forefront of information-seeking decisions. Accordingly, a deep understanding of emotional processes is crucial to elucidate the mechanisms underlying not only affective phenomena, but also behavior and cognition (Dukes et al., 2021; Stussi, 2025; Stussi et al., 2024), as perfectly illustrated by Moors' goal-directed theory.

Author Contributions

YS contributed to conceptualization, writing–original draft, and writing–review and editing; MG contributed to conceptualization and writing–review and editing; DS contributed to conceptualization, writing–review and editing, and supervision.

Declaration of Conflicting Interests

Funding

ORCID iDs

Yoann Stussi https://orcid.org/0000-0002-8601-6737
Martin Gaudré https://orcid.org/0009-0009-2097-7023
David Sander https://orcid.org/0000-0003-1266-9361

References

Bromberg-Martin, E. S., & Monosov, I. E. (2020). Neural circuitry of information seeking. *Current Opinion in Behavioral Sciences*, *35*, 62–70. https://doi.org/10.1016/j.cobeha.2020.07.006

Buabang, E. K., Köster, M., Hogarth, L., & Moors, A. (2025). Critical review of the habit theory in substance use disorder and application of Moors' goal-directed theory. *Current Addiction Reports*, *12*(1), Article 47. https://doi.org/10.1007/s40429-025-00651-w

Charpentier, C. J., Bromberg-Martin, E. S., & Sharot, T. (2018). Valuation of knowledge and ignorance in mesolimbic reward circuitry. *Proceedings of the National Academy of Sciences*, *115*(31), E7255–E7264. https://doi.org/10.1073/pnas.1800547115

Cogliati Dezza, I., Molinaro, G., & Verguts, T. (2024). When cognition overshadows affect, maladaptive information-seeking arises [Preprint]. *PsyArXiv*. https://doi.org/10.31234/osf.io/2yu9e

Dukes, D., Abrams, K., Adolphs, R., Ahmed, M. E., Beatty, A., Berridge, K. C., Broomhall, S., Brosch, T., Campos, J. J., Clay, Z., Clément, F., Cunningham, W. A., Damasio, A., Damasio, H., D'Arms, J., Davidson, J. W., de Gelder, B., Deonna, J., de Sousa, R., …, Sander, D. (2021). The rise of affectivism. *Nature Human Behaviour*, *5*(7), 816–820. https://doi.org/10.1038/s41562-021-01130-8

Erdemli, A., Audrin, C., & Sander, D. (2025). An integrative appraisal model of epistemic curiosity. *Affective Science*. Advance online publication. https://doi.org/10.1007/s42761-025-00328-7

Golman, R., & Loewenstein, G. (2018). Information gaps: A theory of preferences regarding the presence and absence of information. *Decision*, *5*(3), 143–164. https://doi.org/10.1037/dec0000068

Kobayashi, K., Ravaioli, S., Baranès, A., Woodford, M., & Gottlieb, J. (2019). Diverse motives for human curiosity. *Nature Human Behaviour*, *3*(6), 587–595. https://doi.org/10.1038/s41562-019-0589-3

Moors, A. (2022). *Demystifying emotions: A typology of theories in psychology and philosophy*. Cambridge University Press.

Moors, A., Boddez, Y., & De Houwer, J. (2017). The power of goal-directed processes in the causation of emotional and other actions. *Emotion Review*, *9*(4), 310–318. https://doi.org/10.1177/1754073916669595

Moors, A., Van de Cruys, S., & Pourtois, G. (2021). Comparison of the determinants for positive and negative affect proposed by appraisal theories, goal-directed theories, and predictive processing theories. *Current Opinion in Behavioral Sciences*, *39*, 147–152. https://doi.org/10.1016/j.cobeha.2021.03.015

Murayama, K. (2022). A reward-learning framework of knowledge acquisition: An integrated account of curiosity, interest, and intrinsic–extrinsic rewards. *Psychological Review*, *129*(1), 175–198. https://doi.org/10.1037/rev0000349

Pennycook, G., Epstein, Z., Mosleh, M., Arechar, A. A., Eckles, D., & Rand, D. G. (2021). Shifting attention to accuracy can reduce misinformation online. *Nature*, *592*(7855), 590–595. https://doi.org/10.1038/s41586-021-03344-2

Sander, D. (2025). Theories of emotion for human affective neuroscience. In J. Armony & P. Vuilleumier (Eds.), *The Cambridge handbook of human affective neuroscience* (2nd ed., pp. 7–32). Cambridge University Press.

Scarantino, A. (2024). Motivational theories of emotions in philosophy and affective science. In A. Scarantino (Ed.), *Emotion theory: The Routledge*

comprehensive guide (1st ed., pp. 429–466). Routledge. https://doi.org/10.4324/9781315559940-23

Sharot, T., & Sunstein, C. R. (2020). How people decide what they want to know. *Nature Human Behaviour*, *4*(1), 14–19. https://doi.org/10.1038/s41562-019-0793-1

Stussi, Y. (2025). Affective and computational determinants of threat extinction biases. *Behaviour Research and Therapy*, *192*, Article 104804. https://doi.org/10.1016/j.brat.2025.104804

Stussi, Y., Dukes, D., & Sander, D. (2024). The added value of affective processes for models of human cognition and learning. *Behavioral and Brain Sciences*, *47*, Article e165. https://doi.org/10.1017/S0140525X24000207

Tamir, M. (2021). Effortful emotion regulation as a unique form of cybernetic control. *Perspectives on Psychological Science*, *16*(1), 94–117. https://doi.org/10.1177/1745691620922199

Turner, G., Ferguson, A. M., Katiyar, T., Palminteri, S., & Orben, A. (2025). Old strategies, new environments: Reinforcement learning on social media. *Biological Psychiatry*, *97*(10), 989–1001. https://doi.org/10.1016/j.biopsych.2024.12.012

Vivanco Carlevari, A., Oosterwijk, S, & van Kleef, G. A. (2025). Why do people engage with the suffering of strangers? Exploring epistemic, eudaimonic, social, and affective motives. *Cognition and Emotion*, *39*(3), 614–634. https://doi.org/10.1080/02699931.2024.2385691

Wuensch, L., Stussi, Y., Vernede, T., Murray, R. J., Sander, D., Péron, J., & Pool, E. R. (2025). Differential influence of habit components on compulsive and problematic reward-seeking behaviors. *PLoS Mental Health*, *2*(5), Article e0000323. https://doi.org/10.1371/journal.pmen.0000323