

The Role of Emotions in Decision-Making

How Feeling Shapes Judgement, Choice and Moral Reasoning

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Abstract: *For much of the twentieth century, psychology and economics treated decision-making as an essentially rational exercise in which emotion appeared only as interference. That assumption no longer holds. This paper examines how emotion shapes human judgement and choice, and argues that feeling is not an obstacle to reasoning but a condition of it. It reviews the limitations of the rational-agent model and proposes a structured account built on four established theoretical foundations: the somatic marker hypothesis, the broaden-and-build theory of positive emotion, the social intuitionist model of moral judgement, and the appraisal-tendency framework. Drawing on a review of the literature, a detailed account of the emotion-to-decision process, illustrative figures and comparative tables, and four documented lines of case evidence from clinical neuroscience, experimental gambling tasks, moral dilemma research and behavioural economics, the study shows how emotion narrows an otherwise unmanageable field of options, attaches personal value to outcomes and makes judgement possible at all. The paper sets out how distinct emotions exert separable and predictable effects on risk perception, examines applications in clinical practice, law, leadership and artificial intelligence, and weighs the advantages of an emotion-integrated model against the systematic distortions the same mechanisms produce. The central finding is that the practical aim is not the removal of emotion from decision-making, which the clinical evidence suggests is neither possible nor desirable, but the cultivation of emotional awareness sufficient to use it well.*

Keywords: emotion, decision-making, somatic marker hypothesis, moral judgement, cognitive bias, appraisal tendency, emotional intelligence, behavioural economics

1. Introduction

Decision-making occupies a larger part of ordinary life than is usually acknowledged. Choices range from the trivial- what to eat, which route to take- to those that shape a life, such as the selection of a career or the commitment to a relationship. Historically, both psychology and economics approached this territory on the assumption that people decide by reasoning: by weighing costs against benefits and selecting the option of greatest expected value.

A substantial body of research now indicates that this account is incomplete. Emotions determine which options are noticed, how they are valued, and which is finally chosen. Psychological research has established that emotions are not by-products of decision-making, nor interruptions to an otherwise orderly process; they are constituent elements that determine how situations are appraised, judged and resolved.

The motivation for studying the subject is direct. Impaired emotional processing produces impaired judgement, a finding with immediate clinical consequence. Leaders and policymakers decide under uncertainty and time pressure, where feeling does much of the work that deliberation cannot complete in time. Artificial systems designed on purely rational models fail to reproduce the flexibility of human choice. To neglect emotion is to leave the account of decision-making unfinished.

This paper analyses how emotion produces this influence. Section 2 reviews the existing body of work. Section 3 sets out the rational model and its limits, and Section 4 proposes a structured framework organised around four channels of emotional influence. Section 5 examines the principal theoretical foundations in turn, while Sections 6 and 7 describe the emotion-to-decision process and the separable

effects of distinct emotions. Sections 8 and 9 cover applications across domains and the documented case evidence. The remaining sections address distortion, regulation, advantages, limitations, best practice and future scope, before the paper concludes.

2. Literature Review

The proposition that feeling participates in reasoning is old, but its formal study intensified only when neuroscience made the underlying mechanisms observable. Early work in this tradition established that patients with lesions to emotion-processing regions retained intact logical capacity while losing the ability to decide effectively (Bechara, Damasio, Damasio, & Anderson, 1994). This finding, which contradicted the prevailing model directly, gave the field its founding evidence.

Damasio (1994) developed the observation into the somatic marker hypothesis, arguing that bodily emotional signals attach value to represented outcomes and thereby make choice tractable. A parallel strand in positive psychology, most influentially Fredrickson (2001), examined the opposite pole: how positive affect broadens the momentary repertoire of thought and action and builds durable psychological resources.

In moral psychology, Haidt (2001) proposed the social intuitionist model, contending that moral judgements arise from rapid affective intuition and that explicit reasoning typically follows to justify a conclusion already reached. The behavioural economics of Kahneman and Tversky (1979), building on their earlier work on heuristics (Tversky & Kahneman, 1974), demonstrated that departures from rational choice are neither random nor rare but systematic and predictable.

Volume 15 Issue 8, August 2026

Fully Refereed | Open Access | Double Blind Peer Reviewed Journal

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More recent work has moved from establishing that emotion matters to specifying how particular emotions matter. Loewenstein, Weber, Hsee and Welch (2001) advanced the risk-as-feelings hypothesis, showing that emotional reactions to risk frequently diverge from cognitive assessments of it and often govern behaviour when they do. Lerner, Li, Valdesolo and Kassam (2015) consolidated three decades of research into the appraisal-tendency framework, establishing that emotions of the same valence can produce opposite effects on judgement. Taken together, the literature converges on a consistent message: emotion improves decision-making when it is recognised and regulated, and distorts it when it is not. The framework proposed here builds on that consensus.

3. Background: The Rational Model and Its Limits

Before the neuroscientific evidence accumulated, most formal accounts of choice assumed a rational agent: one who holds consistent preferences, assesses probabilities accurately, and selects the option maximising expected utility. The model has genuine strengths. It is precise, mathematically tractable, and yields testable predictions. For much of the twentieth century it was the only rigorous model available, and it remains a useful normative standard against which actual behaviour can be measured. The rational model nonetheless suffers serious weaknesses as a description of what people actually do. It requires computational capacity that human beings do not possess: a genuinely exhaustive comparison of options is impossible for any decision of real complexity. It offers no account of how an agent comes to care about one outcome rather than another, treating preference as given rather than explaining it. And it predicts that removing emotional interference should improve decisions- a prediction the clinical evidence flatly contradicts.

The rational model, in short, leaves a great deal unexplained. It cannot account for why patients with intact reasoning and impaired feeling decide catastrophically; why identical options produce different choices when differently framed; or why moral judgements are held with a confidence that survives the collapse of their stated justification. It is precisely these gaps that an emotion-integrated framework is designed to close.

4. The Proposed Framework

This paper proposes that emotion be treated not as a variable disturbing an otherwise rational process, but as a functional component of that process with identifiable roles. The framework rests on two ideas. The first is that emotional influence enters decision-making through four distinct channels, each operating at a different stage. The second is a repeatable emotion-to-decision pipeline in which outcomes are felt as well as observed, and the resulting feeling informs the next cycle.

1) Replacing the rational-agent assumption

The central shift the framework requires is conceptual rather than technical: choices once explained by calculation alone must be understood as the joint product of appraisal and deliberation. This does not discard reasoning, which remains

essential for evaluating evidence and detecting error, but situates it. The contrast between the two models is summarised in Table 1.

Table 1: The rational-agent model compared with the emotion-integrated account

Dimension	Rational-agent model	Emotion-integrated model
Basis of choice	Expected utility, computed	Appraised value, felt and then examined
Speed	Slow; scales poorly with options	Rapid; option field narrowed before deliberation
Source of preference	Assumed, not explained	Generated by emotional appraisal
Error pattern	Predicts random error	Predicts systematic, directional bias
Effect of removing emotion	Predicts improvement	Predicts impairment; confirmed clinically

2) The four channels of emotional influence

Emotion enters decision-making at four separable points. It **narrows** the field, discarding options that feel wrong before they are consciously examined. It **values** outcomes, supplying the personal weight that turns a possibility into a preference. It **signals** risk, generating anticipatory responses to danger faster than deliberation can assess it. And it **commits**, sustaining a course of action against the constant temptation to reconsider. The progression is illustrated in Fig. 2.

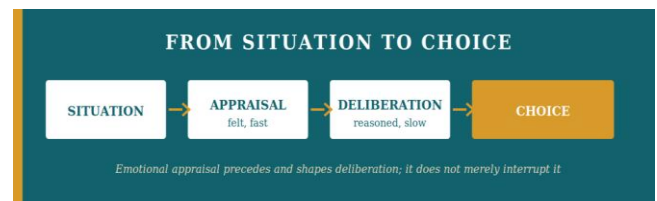


Figure 2: The four channels through which emotion enters decision-making. Schematic; heights indicate depth of commitment, not measured quantity

5. Theoretical Foundations

Four theoretical traditions supply the evidence on which the framework rests. Table 2 sets them out side by side, and the subsections that follow examine each in turn.

Table 2: The four theoretical foundations of an emotion-integrated account of decision-making.

Theory	Principal author	Central claim	Evidential base
Somatic marker hypothesis	Damasio	Bodily emotional signals attach value to options and make choice tractable	Lesion studies of the ventromedial prefrontal cortex
Broaden-and-build theory	Fredrickson	Positive emotion widens attention and builds lasting resources	Experimental studies of attention and creativity
Social intuitionist model	Haidt	Moral judgement is intuitive; reasoning follows to justify it	Moral dilemma and dumbfounding studies
Appraisal-tendency framework	Lerner and colleagues	Specific emotions carry specific, carryover effects on judgement	Induced-emotion risk and judgement experiments

1) The Somatic Marker Hypothesis

Damasio (1994) proposes that emotions function as markers assisting the evaluation of possible courses of action. In deciding whether to cross a busy road, the fear of collision prompts a wait for the signal. Fear here narrows the range of options and disposes the agent toward safety. Without such signals, decision-making becomes unmanageable, and in some cases paralyzing. The hypothesis explains a puzzle the rational model cannot: how an agent selects at all from a field of options too large to enumerate.

2) Broaden-and-build theory

Fredrickson (2001) holds that positive emotions enlarge the momentary repertoire of thought and action, and that the resources so built contribute to long-term resilience. Positive states broaden attention, encourage creativity and increase tolerance for risk; a person in good spirits may make bolder investments or pursue unfamiliar opportunities. Negative states narrow attention and encourage caution — frequently protective, but equally capable of preventing an individual from seizing a genuine opportunity.

3) The social intuitionist model

Haidt (2001) proposes that moral reasoning frequently follows judgement rather than producing it, with emotion supplying the ground of decision and reasoning supplying the subsequent justification. The evidence includes moral dumbfounding: participants maintain a judgement with undiminished confidence after every reason they offered for it has been dismantled. The finding is difficult to reconcile with any account in which reasoning generates the verdict.

6. The Appraisal-Tendency Framework

Lerner et al. (2015) established that emotions of the same valence may exert opposite effects. Fear and anger are both negative and both aversive, yet fear increases risk estimates while anger decreases them. Each emotion carries an appraisal tendency- a characteristic reading of certainty, control and agency- which persists into subsequent, unrelated judgements. This carryover explains why an emotion generated by one situation reliably distorts decisions taken in another.

1) The Emotion-to-Decision Process

Emotion converts a situation into a choice through a repeatable sequence. A situation is appraised against goals and values, producing a felt response. That response narrows the option field and assigns weight to what remains. Deliberation then examines the surviving options, a choice is made and acted upon, and the outcome is experienced emotionally as well as observed. That experience is stored, and shapes the appraisal of the next comparable situation. The loop is shown in Fig. 3.

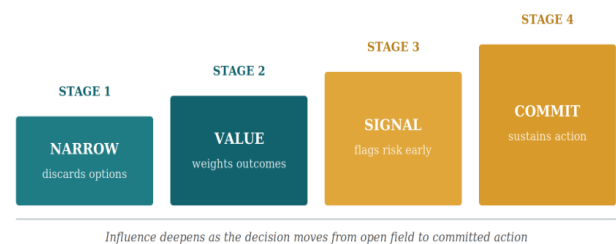


Figure 3: The emotion-to-decision cycle, including the affective feedback loop through which experience becomes intuition.

2) How Specific Emotions Shape Judgement

The appraisal-tendency framework establishes that emotions are not interchangeable. Each carries a characteristic reading of the situation, and that reading persists into judgements made afterwards. Table 3 summarises the documented tendencies of the emotions most studied in this literature.

Table 3: Appraisal tendencies of distinct emotions and their documented effects on judgement

Emotion	Characteristic appraisal	Effect on risk perception	Typical decision consequence
Fear	Uncertainty; low personal control	Raises estimated risk	Excessive caution; opportunity forgone
Anger	Certainty; high control; blame assigned	Lowers estimated risk	Hasty and aggressive action
Sadness	Loss; situation beyond control	Mixed; raises willingness to transact	Accepting poor terms to change circumstances
Happiness	Certainty; environment benign	Lowers estimated risk	Broader search; also overconfidence
Disgust	Contamination; rejection	Not primarily risk-related	Divestment; harsher moral judgement

3) Fear and anxiety

Fear appraises a situation as uncertain and outside personal control. It inflates estimates of probability and severity alike, and in decision terms produces excessive caution: sound investments declined, necessary confrontations avoided, opportunities allowed to pass. Its protective function is real, but its carryover is indiscriminate- anxiety generated in one domain suppresses risk-taking in every other.

4) Anger

Anger appraises a situation as certain, controllable and attributable to another agent. Because it carries certainty, it lowers perceived risk and accelerates action, producing hasty and aggressive responses that override deliberation. That fear and anger diverge in this way, despite sharing a negative valence, is among the clearest demonstrations that valence alone is an insufficient predictor of behaviour.

5) Sadness

Sadness appraises the situation as one of loss brought about by circumstance. Its documented effect on transactional decisions is notable: sadness raises the price a person will pay and lowers the price at which they will sell, an asymmetry consistent with a motive to change one's circumstances rather than to optimise the exchange.

6) Happiness and optimism

Positive affect broadens attention and supports creative and exploratory choice, as broaden-and-build theory predicts. The same appraisal of a benign environment, however, lowers vigilance. Optimism fosters overconfidence, and overconfidence leads to the systematic underestimation of difficulty, cost and duration.

7) Applications Across Domains

The practical significance of this account is visible across professional fields, though the specific use differs. Table 4 summarises the principal applications and the outcomes they bear upon.

Table 4: Domain-wise applications of research on emotion in decision-making

Domain	Application of the evidence	Outcome addressed
Clinical practice	Assessment of decision impairment following emotional or frontal dysfunction	Capacity judgements; rehabilitation planning
Law	Recognition of affective influence on witness, juror and sentencing judgement	Consistency and fairness of verdicts
Leadership	Appeal to shared feeling alongside argument in collective decisions	Commitment and follow-through
Public policy	Attention to framing and to risk-as-feelings in communication	Public response proportionate to actual risk
Marketing	Design of choice architecture around affective response	Consumer behaviour; ethical exposure
Artificial intelligence	Valuation and salience mechanisms analogous to affective weighting	Flexible action selection under uncertainty

A common thread runs through these examples. In each case the field had previously modelled its decision-makers as reasoners, encountered behaviour the model could not predict, and improved its predictions by admitting emotion as a functional element rather than an error term.

7. Case Evidence

The general claims become concrete when examined through four documented lines of evidence.

1) Ventromedial prefrontal damage

Patients with damage to the ventromedial prefrontal cortex, a region central to emotional processing, characteristically struggle to decide (Bechara et al., 1994). Such patients set out advantages and disadvantages with intact logic and score normally on tests of intelligence and memory, yet their inability to attach feeling to alternatives produces poor and sometimes ruinous patterns of choice in employment, finance and personal life. Emotion, on this evidence, is not noise obscuring rational function; it is part of what rational function consists in.

2) The Iowa Gambling Task

In this experimental paradigm, participants draw from card decks of differing risk and reward. Healthy participants begin to avoid the disadvantageous decks, and generate anticipatory physiological responses when reaching toward them, before

they can articulate why. Patients with ventromedial damage produce no such response and continue selecting from the losing decks even after they can state which are disadvantageous. Knowing, in these results, proves insufficient without feeling.

3) Moral dilemma research

Studies of moral judgement present participants with dilemmas designed to separate emotional response from calculated outcome. Judgements shift according to the immediacy and personal character of the harm involved, rather than tracking consequences consistently. Participants frequently maintain a verdict after every justification they have offered for it has been shown to fail- the pattern Haidt (2001) advances as evidence that intuition precedes and reasoning follows.

4) Framing effects in behavioural economics

Kahneman and Tversky (1979) demonstrated that logically equivalent options produce systematically different choices when framed as gains rather than losses. Emotion drives heuristics such as the availability bias, in which likelihood is judged by the ease with which instances come to mind, or the framing effect itself (Tversky & Kahneman, 1974). Because these effects are directional and reproducible, they can be anticipated and, to a degree, corrected — which is what makes the research practically valuable in marketing, public policy and healthcare.

5) When Emotion Misleads

Emotion is not uniformly beneficial. The same mechanisms that make choice possible also distort it, and the distortions follow recognisable patterns. Fig. 4 sets out the principal failure modes.

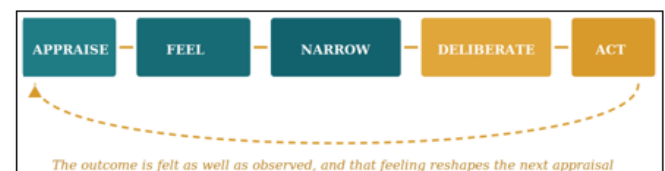


Figure 4: Recognised failure modes of emotional influence on judgement.

Two features of these distortions deserve emphasis. First, they are systematic rather than random: the direction of error can be predicted from the emotion involved, which is what distinguishes this account from a simple claim that feeling makes people unreliable. Second, they are largely invisible from the inside. An anxious person does not experience inflated risk estimates as inflated; the risk simply appears large. This is why awareness, rather than effort, is the operative remedy.

6) Emotional Intelligence and Regulation

Ordinary choices- what to eat, whom to trust- are emotionally informed throughout. Nostalgia inclines a person toward familiar food; excitement inclines another toward the unfamiliar. Even in professional settings, the gut feeling to which experienced practitioners appeal is generally an emotionally encoded judgement drawing on knowledge not consciously retrievable.

Emotional intelligence, as characterised by Goleman (1995), involves recognising emotional information, managing it and putting it to use. Individuals higher in this capacity tend to decide more effectively, not because they feel less, but because they understand the influence of what they feel without being governed by it. Table 5 sets out practices supported by the research.

Table 5: Regulation practices and the distortions each is intended to address

Practice	What it addresses	Mechanism
Naming the emotion	Carryover from unrelated events	Identifying the source weakens its transfer
Delaying consequential choices	Anger and acute fear	Allows the appraisal to decay before commitment
Reframing the option	Gain-loss framing effects	Exposes the equivalence the frame concealed
Seeking a dissenting view	Optimism and overconfidence	Introduces an appraisal not shared by the decider
Recording the reasoning	Post-hoc justification	Fixes the stated grounds before the outcome is known

8. Advantages of an Emotion-Integrated Account

- **Explanatory completeness.** It accounts for clinical findings that the rational model predicts should not occur.
- **Predictive precision.** Because appraisal tendencies are specific, the direction of error can be anticipated rather than merely noted.
- **Tractability of choice.** It explains how agents select from option fields too large to enumerate.
- **Grounding of preference.** It supplies an origin for values that the rational model assumes without explaining.
- **Practical remedy.** Identifying the emotion involved suggests the correction, which a general warning about bias does not.
- **Cross-domain application.** The same account informs clinical, legal, commercial and computational practice.

9. Limitations and Challenges

The account is neither complete nor free of difficulty. Several problems recur.

- **Measurement.** Emotion is inferred from self-report, physiology or behaviour, each of which is imperfect and none of which measures the construct directly.
- **Induced versus natural emotion.** Much of the evidence rests on emotions induced in a laboratory, which may differ in intensity and duration from those arising in life.
- **Cultural variation.** Appraisal patterns and display norms differ across cultures, and the research base is drawn disproportionately from a narrow range of populations.
- **Individual difference.** Sensitivity to emotional influence varies considerably between people, limiting the precision of population-level predictions.
- **Risk of misapplication.** The same findings that support better decisions also support more effective manipulation, an ethical exposure that grows as the methods improve.
- **Boundary with cognition.** Emotion and cognition are separable in theory more cleanly than in the brain, and the

distinction may be an artefact of how the question was first posed.

10. Best Practices in Applying the Evidence

Experience across the applied literature suggests that the findings translate into better decisions only under disciplined conditions. A practical sequence is shown in Fig. 5.

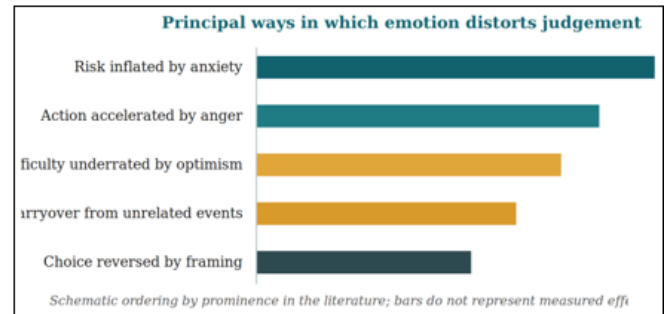


Figure 5: A five-step sequence for applying the evidence to a consequential decision.

Several principles recur. Practitioners begin by noticing the affective state rather than the option, since the state shapes how every option will appear. They distinguish emotion arising from the decision itself, which is informative, from emotion carried in from elsewhere, which is not. They delay commitment under anger and acute fear, where the appraisal is strongest and decays fastest. They seek a view from someone who does not share the state. Finally, they record the reasoning before the outcome is known, which is the only reliable protection against justification constructed afterwards.

11. Future Scope

Several directions are likely to shape the next phase of this research. Affective neuroscience continues to refine the mapping between specific appraisals and neural activity, which may eventually permit the prediction of decision tendencies from physiological measurement rather than self-report. Cross-cultural work is beginning to establish which appraisal tendencies are general and which are local, addressing the narrowness of the existing evidence base.

The most consequential frontier may be computational. Systems designed to act under uncertainty face the same problem emotion evolved to solve: how to select from an option field too large to evaluate exhaustively. Valuation and salience mechanisms in artificial agents are functionally analogous to affective weighting, and progress in each field increasingly informs the other. At the same time, the growing precision of this research raises its ethical stakes. Methods that help a person recognise their own emotional distortion also help others exploit it, and the governance of that capability- in advertising, political communication and algorithmic design- is likely to become as important as the science itself.

12. Conclusion

Emotions are neither the enemies of reason nor an afterthought to decision-making. They are essential to the way human beings navigate choice: they narrow an unmanageable field, attach personal value to outcomes, signal risk faster than deliberation can assess it, and sustain commitment once a course is set. The clinical evidence is decisive on this point- where the capacity to feel is lost, the capacity to decide is lost with it, and intact reasoning does not compensate.

Left unexamined, the same faculties produce bias, impulsivity and error, and they do so in directions that are systematic and therefore predictable. The aim, accordingly, is not to eliminate emotion from decision-making, which the evidence suggests would be self-defeating, but to recognise its operation and develop the capacity to use it well. As research continues to clarify the relation between emotion and reason, the resulting understanding promises better personal decisions, healthier relationships and more considerate communities.

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