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PSYCHOLOGICAL FOUNDATIONS OF DECISION-MAKING: COGNITIVE AND VALUE-BASED PREDICTORS OF RATIONAL AND INTUITIVE STYLES

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ABSTRACT

The present Decision-making is a fundamental cognitive process that underlies nearly every domain of human behaviour. The present study examined the psychological foundations of decision-making by investigating the contributions of personal values and moral reasoning to rational and intuitive decision-making styles. A sample of 201 emerging adults completed standardised questionnaires measuring decision-making style, value orientations, and moral reasoning capacity. Correlation and regression analyses were employed to examine the relationships among these variables. Results indicated significant associations between moral reasoning and rational decision-making, and between value orientations and intuitive decision-making styles. These findings suggest that decision-making is not a purely cognitive event but is deeply embedded within an individual's moral and value framework. Theoretical and practical implications for psychological research and applied settings are discussed.

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INTRODUCTION

Human decision-making has long occupied a central place in psychological inquiry. From early normative frameworks that conceived of the individual as a rational actor maximising utility (von Neumann & Morgenstern, 1944) to contemporary dual-process accounts that recognise both deliberate and automatic modes of judgment (Kahneman, 2011), the field has progressively acknowledged the complexity underlying even seemingly simple choices. Despite this progress, comparatively little attention has been devoted to the role that personal values and moral reasoning play in shaping everyday decision-making, particularly within non-clinical populations such as university students. Decision-making style refers to the habitual patterns by which individuals approach consequential choices. Two styles have received extensive empirical support: rational decision-making, characterised by systematic information search and deliberate evaluation of alternatives, and intuitive decision-making, which relies on affectively laden impressions and gut-level responses (Scott & Bruce, 1995). These styles map broadly onto the two systems described in dual-process theory (Evans, 2008; Kahneman, 2011). System 1 processing is fast, automatic, and experiential, while System 2 is slow, deliberate, and analytic (Epstein *et al.*, 1996). Empirical work has linked rational decision-making to higher analytical ability and override of

initial intuitions (Stanovich & West, 2000; Pennycook *et al.*, 2019), and intuitive decision-making to emotional intelligence and experiential learning (Betsch, 2008). However, neither style is uniformly superior; their relative effectiveness depends on task structure, expertise, and the diagnosticity of available affect (Dane & Pratt, 2007). While cognitive factors such as working memory and metacognitive skill have been extensively linked to decision-making style, the moral and value dimensions of this process remain comparatively understudied. Values are trans-situational desiderata that serve as guiding principles in a person's life (Schwartz, 1992). Schwartz's (1992) theory identifies ten basic value types — including benevolence, universalism, and achievement — organised along two bipolar dimensions: self-enhancement versus self-transcendence, and openness to change versus conservation. These value priorities predict a range of attitudinal and behavioural outcomes, often operating through affect-laden appraisals rather than deliberate reasoning (Verplanken & Holland, 2002; Hitlin & Piliavin, 2004). Theoretically, strongly held values may function as affective heuristics — providing rapid, emotionally coded signals about the desirability of options (Slovic *et al.*, 2007) — suggesting that individuals with more coherent value systems may be more reliant on intuitive processing. Moral reasoning, defined as the cognitive process by which individuals evaluate actions

against ethical principles, represents a complementary but distinct construct. Kohlberg's (1969) stage model holds that moral reasoning develops from preconventional through conventional to postconventional levels, with higher stages requiring abstraction, perspective-taking, and principled rule application — capacities that overlap substantially with rational, analytic processing (Rest, 1986). Research supports links between moral reasoning and decision quality in business ethics (Trevino & Youngblood, 1990), medical contexts (Drane, 1984), and everyday choices (Thoma, 1994). Higher moral reasoning is associated with reduced susceptibility to self-serving bias and greater openness to alternative perspectives (Narvaez & Rest, 1995) — both hallmarks of systematic, deliberative decision-making. Despite this theoretical convergence, the existing literature is characterised by several notable gaps. First, values and moral reasoning have largely been studied in isolation from decision-making style: values research has examined attitudinal and behavioural outcomes without attending to cognitive style, while decision-style research has focused on personality and cognitive predictors without integrating the moral-value domain (Hitlin & Piliavin, 2004; Scott & Bruce, 1995). Second, the dominant paradigm in moral psychology has relied on hypothetical dilemma tasks (e.g., trolley problems, Heinz dilemma), which measure reasoning about contrived scenarios rather than habitual decision style in everyday life (Narvaez & Rest, 1995). Whether moral reasoning shapes the way people characteristically approach real decisions remains largely untested. Third, most decision-style research has treated rational and intuitive styles as separate constructs without examining whether moral and value predictors differentiate between them, leaving open the question of whether these two modes of processing have distinct psychological foundations. Finally, the population of emerging adults — aged 18 to 25, a period characterised by identity formation and increasing autonomy in consequential life choices (Arnett, 2000) — has received disproportionately little attention in decision-style research relative to its developmental significance.

The present study addresses these gaps by simultaneously examining moral reasoning and multiple value dimensions as predictors of both rational and intuitive decision-making styles in a sample of 201 emerging adults. Values were assessed using the Life Values Inventory (LVI; Brown & Crace, 2002), moral reasoning using the Moral Reasoning Questionnaire (MRQ; Lim & Chapman, 2022), and decision-making style using the Decision Style Scale (DSS; Hamilton *et al.*, 2016). Stepwise regression analyses were employed to identify which value dimensions and moral reasoning scores independently predicted each style. It was hypothesised that relational and transcendent value dimensions — specifically Belonging and Spirituality — would predict intuitive decision-making given their affective character, while duty-oriented values — specifically Responsibility — would predict rational decision-making, reflecting their deliberative and principled nature. Moral reasoning was expected to predict rational decision-making more strongly than intuitive, consistent with its overlap with analytic processing. Understanding these relationships carries significance for educational, organisational, and counselling contexts where awareness of how values and moral development shape decision style can inform intervention design and professional training. The findings also contribute to theoretical models of decision-making by situating cognitive style within a broader moral-

psychological framework, particularly within the underexplored population of emerging adults.

METHODS

Participants: The sample comprised 201 emerging adults (aged 18–25 years) enrolled in regular college or university programmes. Purposive sampling was employed to ensure that participants met the specific inclusion criteria of the study. Eligible participants were unmarried, currently attending college or university, and able to comprehend basic English. Individuals with chronic illness or physical disabilities were excluded, as these conditions could introduce confounds into the assessment of cognitive and value-based processes. All participants provided informed consent prior to participation. The study employed a cross-sectional predictive design to examine the predictive relationships among the study variables.

Measures: Decision-Making Style. The Decision Style Scale (DSS; Hamilton *et al.*, 2016) is a 10-item self-report measure comprising two five-item subscales: rational decision-making, which reflects a deliberate, analytic approach, and intuitive decision-making, which reflects reliance on instinct and gut feeling. Items are rated on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). The DSS demonstrates strong factorial validity and internal consistency across multiple validation samples (Hamilton *et al.*, 2016). Personal Values. The Life Values Inventory (LVI; Brown & Crace, 2002) is a 42-item instrument measuring 14 value orientations on a 5-point Likert scale. For the present study, five subscales theoretically relevant to decision-making were examined as predictors: Belonging, Responsibility, Spirituality, Independence, and Concern for Others. The LVI has demonstrated sound reliability and established convergent, divergent, and predictive validity (Brown & Crace, 2002). Moral Reasoning. The Moral Reasoning Questionnaire (MRQ; Lim & Chapman, 2022) is a 26-item scale grounded in Kohlberg's (1984) stage theory of moral development, designed for group administration. It assesses the cognitive processes by which individuals evaluate ethical dilemmas and has demonstrated sound reliability and validity across validation studies (Lim & Chapman, 2022).

Procedure: Data were collected through a self-report questionnaire battery administered in group settings at participants' respective institutions. The battery included the DSS, LVI, and MRQ, presented in a fixed order. Participants completed the instruments in approximately 30–40 minutes. Upon completion, all participants were debriefed regarding the purpose of the study and informed of their right to withdraw their data without consequence.

Data Analysis: Data were analysed using IBM SPSS Statistics (Version 22). Preliminary analyses included descriptive statistics and examination of distributional assumptions for all study variables. Pearson product-moment correlations were computed to examine bivariate relationships among values subscales, moral reasoning, and rational and intuitive decision-making. Stepwise multiple regression analyses were subsequently conducted to identify which value dimensions and moral reasoning scores significantly predicted each decision-making style; stepwise entry was selected to identify the most parsimonious set of predictors given the exploratory

nature of examining multiple value dimensions simultaneously, thereby reducing the risk of retaining non-contributing predictors in the final models. Rational decision-making and intuitive decision-making were treated as separate dependent variables in two independent regression models, with all value subscales and moral reasoning entered as candidate predictors. Statistical significance was set at $\alpha = .05$ throughout.

RESULTS

Descriptive Statistics: Descriptive statistics for all study variables are presented in Table 1. The mean score for moral reasoning was 81.73 (SD = 17.49), reflecting a moderate to high level of principled moral reasoning within the sample. Among the value subscales, Responsibility (M = 11.64, SD = 2.05) and Concern for Others (M = 11.70, SD = 2.13) obtained the highest mean scores, followed by Independence (M = 11.23, SD = 2.17), Belonging (M = 11.01, SD = 2.44), and Spirituality (M = 10.96, SD = 2.78). For decision-making style, participants scored higher on Rational Decision-Making (M = 20.38, SD = 3.02) than on Intuitive Decision-Making (M = 17.26, SD = 4.02), indicating a general preference for deliberate, analytical decision processes in this sample.

Table 1. Descriptive Statistics for Study Variables (N = 201)

Variable	M	SD	Min	Max
Moral Reasoning	81.73	17.49	36.00	121.00
Concern for Others	11.70	2.13	6.00	15.00
Belonging	11.01	2.44	5.00	15.00
Responsibility	11.64	2.05	5.00	15.00
Spirituality	10.96	2.78	4.00	15.00
Independence	11.23	2.17	4.00	15.00
Rational Decision-Making	20.38	3.02	11.00	25.00
Intuitive Decision-Making	17.26	4.02	6.00	25.00

Note. DM = Decision-Making.

Correlational Analysis: Pearson product-moment correlations among the study variables are presented in Table 2. Moral reasoning was significantly and positively correlated with Rational Decision-Making ($r = .431, p < .001$) and, to a lesser degree, with Intuitive Decision-Making ($r = .144, p < .05$). Among the value subscales, Responsibility showed the strongest association with Rational Decision-Making ($r = .439, p < .001$), while Belonging ($r = .201, p < .01$) and Spirituality ($r = .310, p < .001$) demonstrated the strongest associations with Intuitive Decision-Making. Concern for Others and Independence were also positively associated with Rational Decision-Making ($r = .223, p < .01$ and $r = .180, p < .05$, respectively). Rational and Intuitive Decision-Making were not significantly correlated with each other ($r = .133, p > .05$).

Regression Analysis: Moral Reasoning as Predictor: A stepwise regression analysis was conducted to examine whether moral reasoning predicted Rational Decision-Making. As shown in Table 3, moral reasoning was a significant positive predictor ($\beta = .431, t = 6.74, p < .001$), accounting for 18.6% of the variance in Rational Decision-Making ($R^2 = .186, \text{Adjusted } R^2 = .182, F(1, 199) = 45.44, p < .001$). A separate regression with Intuitive Decision-Making as the outcome (Table 4) revealed that moral reasoning also significantly predicted intuitive style, though with considerably smaller effect ($\beta = .144, t = 2.06, p = .041$), explaining only 2.1% of the variance ($R^2 = .021, \text{Adjusted } R^2 = .016, F(1, 199) = 4.23, p < .05$).

Regression Analysis: Value Dimensions as Predictors: Two further stepwise regression analyses examined which value subscales predicted each decision-making style. For Intuitive Decision-Making (Table 5), Belonging entered the model in Step 1 ($\beta = .338, p < .001$) and explained 11.4% of the variance ($R^2 = .114, \text{Adjusted } R^2 = .110, F(1, 199) = 25.66, p < .001$).

The addition of Spirituality in Step 2 increased explained variance to 15.7% ($R^2 = .157, \text{Adjusted } R^2 = .149, F(2, 198) = 18.45, p < .001$), with both Belonging ($\beta = .262, p < .001$) and Spirituality ($\beta = .220, p = .002$) remaining significant predictors. For Rational Decision-Making (Table 6), Responsibility entered the model first ($\beta = .439, p < .001$), accounting for 19.3% of the variance ($R^2 = .193, \text{Adjusted } R^2 = .189, F(1, 199) = 47.48, p < .001$). Belonging entered in Step 2, incrementally improving the model to 21.0% explained variance ($R^2 = .210, \text{Adjusted } R^2 = .202, F(2, 198) = 26.27, p < .001$). In the final model, Responsibility remained the stronger predictor ($\beta = .433, p < .001$), with Belonging contributing a smaller but significant increment ($\beta = .131, p = .040$).

DISCUSSION

The present study examined moral reasoning and value orientations as predictors of rational and intuitive decision-making styles in a sample of 201 emerging adults. The findings offer converging evidence that decision-making style is not merely a cognitive preference but is deeply embedded in the moral and value architecture of the individual. Moral reasoning strongly predicted rational decision-making and modestly predicted intuitive style, while specific value dimensions differentially predicted each mode, with Belonging and Spirituality linked to intuitive processing and Responsibility to rational processing. These results are discussed below in terms of their theoretical mechanisms, cultural relevance, and practical significance.

Table 2. Intercorrelations Among Study Variables (N = 201)

	1	2	3	4	5	6	7	8
1. Moral Reasoning	—							
2. Concern for Others	.190**	—						
3. Belonging	.074	.183**	—					
4. Responsibility	.305**	.324**	.048	—				
5. Spirituality	.054	.166*	.343**	.166*	—			
6. Independence	.161*	.232**	.203**	.230**	.197**	—		
7. Rational DM	.431**	.223**	.151*	.439**	.158*	.180*	—	
8. Intuitive DM	.144*	.162*	.201**	.081	.310**	.112	.133	—

Note. DM = Decision-Making. * $p < .05$. ** $p < .01$.

Table 3. Stepwise Regression: Moral Reasoning Predicting Rational Decision-Making

Variable	B	SE B	β	t	p
(Constant)	14.29	0.92		15.46	<.001
Moral Reasoning	0.08	0.01	.431	6.74	<.001

Note. $R^2 = .186$; Adjusted $R^2 = .182$; $F(1, 199) = 45.44$, $p < .001$.

Table 4. Stepwise Regression: Moral Reasoning Predicting Intuitive Decision-Making

Variable	B	SE B	β	t	p
(Constant)	14.55	1.35		10.81	<.001
Moral Reasoning	0.03	0.02	.144	2.06	.041

Note. $R^2 = .021$; Adjusted $R^2 = .016$; $F(1, 199) = 4.23$, $p < .05$.

Table 5. Stepwise Regression: Value Dimensions Predicting Intuitive Decision-Making

Variable	B	SE B	β	t	p
Model 1					
(Constant)	11.13	1.24		8.98	<.001
Belonging	0.56	0.11	.338	5.07	<.001
Model 2					
(Constant)	9.01	1.38		6.51	<.001
Belonging	0.43	0.11	.262	3.78	<.001
Spirituality	0.32	0.10	.220	3.17	.002

Note. Model 1: $R^2 = .114$, Adjusted $R^2 = .110$, $F(1, 199) = 25.66$, $p < .001$. Model 2: $R^2 = .157$, Adjusted $R^2 = .149$, $F(2, 198) = 18.45$, $p < .001$.

Table 6. Stepwise Regression: Value Dimensions Predicting Rational Decision-Making

Variable	B	SE B	β	t	p
Model 1					
(Constant)	12.83	1.11		11.53	<.001
Responsibility	0.65	0.09	.439	6.89	<.001
Model 2					
(Constant)	11.15	1.37		8.14	<.001
Responsibility	0.64	0.09	.433	6.84	<.001
Belonging	0.16	0.08	.131	2.07	.040

Note. Model 1: $R^2 = .193$, Adjusted $R^2 = .189$, $F(1, 199) = 47.48$, $p < .001$. Model 2: $R^2 = .210$, Adjusted $R^2 = .202$, $F(2, 198) = 26.27$, $p < .001$.

Moral Reasoning and Rational Decision-Making:

Mechanism: Moral reasoning was the strongest predictor of rational decision-making ($\beta = .431$, $R^2 = .186$), a finding that is theoretically coherent within dual-process frameworks. Rational decision-making corresponds to System 2 processing — slow, effortful, and rule-governed (Evans, 2008; Kahneman, 2011). Principled moral reasoning, as assessed here, similarly requires the deliberate application of abstract ethical principles across diverse situations, demanding perspective-taking, suppression of self-serving biases, and structured evaluation of consequences (Kohlberg, 1984; Rest, 1986). The cognitive operations underlying moral reasoning and rational decision-making thus share a common executive architecture: both draw on working memory, inhibitory control, and reflective reasoning (Stanovich & West, 2000). Individuals who habitually exercise these capacities in moral contexts may develop a generalised disposition toward deliberate, analytic processing that transfers to non-moral decision domains — a form of cognitive style transfer consistent with domain-general theories of executive function (Narvaez & Rest, 1995).

Why Moral Reasoning Also Predicted Intuitive Decision-Making: The modest but significant prediction of intuitive decision-making by moral reasoning ($\beta = .144$, $R^2 = .021$) is a

theoretically interesting finding that warrants careful interpretation. One account draws on the dual-process model of moral judgment itself: Haidt (2001) proposed that moral judgments are often generated rapidly through affective intuitions, with deliberative reasoning serving a post-hoc justificatory role. Recent work in moral cognition has further demonstrated that intuitive and reflective responses to moral dilemmas are dissociable but interactive, with higher reflective capacity selectively moderating — rather than replacing — intuitive moral responses (Bostyn *et al.*, 2020). On this view, individuals with developed moral reasoning may also possess a richer repertoire of morally attuned intuitions — fast, automatic responses shaped over time by repeated moral reflection — which could functionally prime the intuitive decision-making system, producing the small but real association observed. Importantly, the effect size was substantially smaller than for rational decision-making ($R^2 = .021$ vs. $.186$), consistent with the view that moral reasoning primarily feeds System 2 processing, with its influence on System 1 being secondary and indirect.

Value Dimensions and Decision Style: A Dual-Process

Interpretation: The differential prediction of intuitive versus rational decision-making by distinct value dimensions maps cleanly onto dual-process theory. Belonging and Spirituality predicted intuitive decision-making, while Responsibility predicted rational style. Within dual-process accounts, System 1 is driven by affect-laden associations (Epstein *et al.*, 1996). Belonging — the value placed on social acceptance and interpersonal connection — is inherently relational and emotionally charged. Individuals for whom belonging is a core value may automatically evaluate choices in terms of social fit and relational harmony, bypassing deliberate analysis. Similarly, Spirituality as a value reflects orientation toward transcendent meaning, which has been associated with holistic, experiential processing over analytic decomposition (Verplanken & Holland, 2002). Both values thus function as affective heuristics (Slovic *et al.*, 2007) that bias judgment toward System 1. By contrast, Responsibility — a value centred on accountability, duty, and follow-through — implies a structured, consequence-oriented approach to choices. Individuals who strongly endorse responsibility are likely motivated to consider all relevant information before deciding, precisely because the costs of oversight feel morally significant to them. This motivational link between the value of responsibility and thoroughness in decision-making aligns with self-regulation research demonstrating that accountability concerns activate deliberate processing (Tetlock, 1992). That Belonging also predicted rational style, though more modestly, suggests it can operate in both modes: when social stakes are high, belonging may motivate careful deliberation as well as intuitive responsiveness.

Cultural Interpretation: Indian Emerging Adults: The sample comprised Indian emerging adults, a context that lends particular cultural texture to the findings. Indian society is characterised by collectivist values in which belonging, relational harmony, and social embeddedness are central to identity (Triandis, 1995). The strong prediction of intuitive decision-making by Belonging in this sample may therefore reflect a culturally normative tendency to rely on socially attuned, affect-laden judgment — a mode of processing that is adaptive within interdependent cultural contexts. Spirituality, too, occupies a prominent place in Indian everyday life and may function as a more active cognitive-affective schema for

Indian emerging adults than in Western samples, rendering its link to intuitive processing particularly strong. Conversely, the primacy of Responsibility in predicting rational decision-making may reflect the salience of duty-based moral frameworks (dharma) in Indian cultural psychology, wherein responsibility to family and society provides a structured evaluative framework for consequential choices (Snarey&Keljo, 1991). These culturally grounded interpretations, while speculative, highlight the importance of replicating these findings across diverse cultural contexts. The present findings carry several practical implications. In career counselling and educational settings, awareness that students' habitual decision styles are shaped by their value orientations and moral development can inform more personalised guidance. Counsellors working with emerging adults can assess dominant values and moral reasoning levels as a foundation for understanding how clients approach decisions, and tailor interventions accordingly — for instance, helping responsibility-oriented students leverage their deliberative strengths, or supporting belonging-oriented students to supplement intuitive judgments with structured reflection. In ethics education and professional training programmes, the link between moral reasoning and rational decision style suggests that cultivating principled moral thinking may simultaneously strengthen analytic decision competence. Curricula that engage students with real-world ethical dilemmas, perspective-taking exercises, and principled argumentation may therefore have downstream benefits for decision quality beyond the moral domain. For organisations, particularly those operating in high-stakes environments such as healthcare, law, and public policy, understanding employees' value profiles may help predict their preferred decision approaches and flag contexts in which additional structure or deliberation support is warranted.

Several limitations warrant consideration. First, the cross-sectional predictive design precludes causal inference; the directionality of relationships between values, moral reasoning, and decision style cannot be established. Longitudinal designs tracking moral development and decision-style consolidation across emerging adulthood would be valuable. Second, the sample was drawn exclusively from Indian university settings, limiting generalisability to other cultural and educational contexts. Third, all constructs were assessed through self-report, introducing the possibility of shared method variance. Future research would benefit from incorporating behavioural decision tasks to validate self-reported style, and from including observer ratings of moral reasoning quality alongside questionnaire measures. Future studies should also examine additional value dimensions not included here, potential moderators such as gender and socioeconomic background, and mediating mechanisms — for instance, whether the effect of moral reasoning on rational decision-making is mediated by need for cognition or cognitive reflection ability. Cross-cultural replications comparing collectivist and individualist samples would help establish the boundary conditions of the cultural interpretation proposed above.

CONCLUSION

The present study demonstrates that moral reasoning and personal values are important psychological foundations of decision-making style in emerging adulthood. Moral reasoning

showed a strong association with rational decision-making, reflecting the shared cognitive demands of principled evaluation and deliberate choice. Relational and transcendent values such as Belonging and Spirituality predicted intuitive decision-making, while Responsibility predicted rational decision-making through its link with accountability and thoroughness. Collectively, these findings suggest that decision style is not merely a cognitive preference but is embedded within individuals' moral reasoning and value orientations, highlighting the importance of understanding both what individuals value and how they think when examining decision processes.

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