Organizational Justice and Social Threat/Reward Appraisals: A Conceptual Review of Employee Motivation from a Neuroleadership Perspective

Davut KOÇ

Faculty of Economics and Administrative Sciences, Department of Business Administration, Istanbul Rumeli University, Istanbul, Türkiye.

DOI: https://doi.org/10.51244/IJRSI.2026.1310000099

Received: 21 October 2026; Accepted: 26 October 2026; Published: 02 November 2026

ABSTRACT

Organizational justice refers to employees' perceptions of fair treatment in resource distribution, decision-making, interpersonal interaction, and information sharing. Social neuroscience research examines how experiences of fairness and unfairness may relate to processes involved in reward, threat, and social appraisal. This conceptual narrative review discusses organizational justice and psychological and neurobiological accounts of motivation from a neuroleadership perspective. The model distinguishes leadership behaviors, such as transparent communication, employee voice, consistent criteria, and respectful treatment, from employees' fairness judgments. SCARF organizes appraisals of the social meaning of situations in terms of threat or reward; self-determination theory addresses the satisfaction of basic psychological needs and the quality of motivation. The main model variables are defined at the individual level, while psychological safety is treated at the team level in P4. Job performance, organizational commitment, collaboration, and creativity are individual employee outcomes. The proposed relationships have not been empirically tested.

Keywords: Organizational Justice, Neuroleadership, Employee Motivation, Social Neuroscience, SCARF Model.

1. INTRODUCTION

Perceptions of justice are regarded as a key variable in explaining employees' attitudes and behaviors toward their organizations. Organizational justice is a social phenomenon that reveals how employees in an organizational structure understand their relationship with leaders and managers (Beugré & Baron, 2001). The concept of justice has been debated extensively throughout human history and is expected to remain a frequent subject of debate in the future (Tuna, 2013). It concerns individuals in terms of how it is understood and organizational structures in terms of behavior (Tuna, 2013).

In organizational life, employees care not only about how much pay, bonus, or promotion they receive, but also about the processes through which these outcomes are produced, how they are treated, and the reasons behind decisions. Research on organizational justice has shown that distributive, procedural, interpersonal, and informational justice are associated with employee job satisfaction, organizational commitment, organizational citizenship behavior, performance, and withdrawal behavior (Cohen-Charash & Spector, 2001; Colquitt et al., 2001). When organizational stakeholders perceive leaders' or managers' conduct as fair, this can substantially benefit organizational effectiveness. Greater employee motivation and stronger organizational commitment are important to organizational success, and organizational justice plays a significant role in supporting them (Lee et al., 2000). When stakeholders perceive organizational practices and leaders' actions as fair, they tend to develop positive attitudes toward both the organization and its leaders; the opposite can lead to harmful outcomes and negative attitudes (Yürür, 2018).

In traditional organizational behavior approaches, justice has largely been explained through cognitive appraisals, social comparisons, and reciprocal relationships. Social neuroscience research examines how experiences of fairness and unfairness are associated with processes involved in reward and threat processing.

These findings must be transferred to organizational settings with due regard for contextual and measurement limitations. The emotional and behavioral responses to social exclusion and injustice (Beugré, 2009) provide a basis for discussing the relationship between organizational justice and motivation across levels; however, these links alone do not prove that a particular neural mechanism operates in organizational settings.

Rapidly changing market conditions and increasingly digital management practices are reshaping employees' perceptions of justice and motivation in contemporary business. Traditional organizational behavior literature has generally treated the relationship between justice and motivation as a "rational and cognitive" process, yet it has been less able to explain the deeper mechanisms behind people's immediate, emotional, and sometimes irrational responses to injustice. This makes it more difficult for managers to anticipate and manage employee behavior (Colquitt, 2001; Greenberg, 1990).

Despite the extensive body of management research, relationships between organizational justice and employee motivation are commonly explained through social comparison, reciprocity, and justice appraisals (Adams, 1965; Colquitt, 2001). This study brings together the four dimensions of organizational justice, the social appraisal domains in the SCARF framework, and psychological and neurobiological accounts of motivation in an integrated conceptual discussion. It proposes a model to explain the possible processes through which justice perceptions may be associated with employee motivation. Its theoretical contribution is to connect these literatures and make visible the possible links among justice perceptions, threat/reward appraisals, psychological safety, and autonomous motivation. The model's pathways have not been empirically tested in this study and are presented as theoretical propositions for future research.

This study aims to develop a conceptual synthesis by discussing the relationship between organizational justice and employee motivation alongside the social neuroscience and neuroleadership (SCARF) literatures. Its theoretical contribution is to treat justice experiences not only as economic exchanges or cognitive comparisons, but also as organizational experiences that may relate to social appraisal and motivational processes. In practical terms, the model offers a neuroscience-informed framework for discussing managerial behaviors that may reduce perceptions of uncertainty and injustice. These suggestions are theoretical implications to be tested in future research, not empirically validated interventions.

2. THEORETICAL BACKGROUND

2.1. Recent Developments in Organizational Justice

The roots of organizational justice are commonly traced to John Stacey Adams's Equity Theory, developed in 1963 and 1965. Adams argued that organizational stakeholders compare their contributions (inputs, such as effort and experience) with the outcomes they receive (outputs, such as pay and rewards), and that perceived fairness in these comparisons shapes satisfaction within the organization (Adams, 1965). Individuals therefore compare the outcomes they receive for their work with those received by people working under similar conditions in other organizations. These comparisons shape their attitudes and behaviors toward their organization, its managers, and their work (Özler, 2015).

Over time, organizational justice expanded beyond the distribution of rewards to include fairness in organizational decision-making and interpersonal interactions. Organizational justice is now an important topic in organizational behavior research across disciplines. Early studies of organizational justice, grounded in equity theory, emphasized distributive justice, which concerns the fair allocation of organizational rewards and resources (Levy&Norris-Watts, 2004). Thibaut and Walker (1975) showed that justice in organizations concerns decision-making processes as well as outcomes. This approach became known as procedural justice (Leventhal, 1980). Colquitt et al.'s (2001) meta-analysis of 183 studies showed that distributive, procedural, interpersonal, and informational justice are related to one another but can each make distinct contributions to explaining employee attitudes and behaviors.

Another influential contribution to organizational justice was made by Leventhal in 1980. He identified the following principles as central to establishing fairness and trust in organizational procedures (Leventhal, 1980):

- Consistency: Justice procedures should not vary over time or across individuals.
- Bias suppression: Decision makers should avoid personal interests and prejudice.
- Accuracy: Decisions should be based on valid, clear, and accurate information.
- Correctability: Appeal or remedy mechanisms should be available for erroneous decisions.
- Representativeness: The views of stakeholders and employees should be considered in the process.
- Ethical standards: Decisions should conform to moral, ethical, and cultural standards.

Later research extended the study of justice from individual perceptions to team and organizational levels. For example, organizational justice climate explains how shared perceptions of justice within a work group relate to organizational outcomes. Whitman et al.'s (2012) meta-analysis found a significant relationship between justice climate and unit-level effectiveness. Contemporary research on justice is no longer limited to traditional issues such as pay and promotion. Remote work, algorithmic management, artificial intelligence-supported decision-making, diversity and inclusion, digital performance appraisal, employee privacy, and changing forms of work have broadened the field (Adamovic, 2023). Organizational justice should therefore be assessed not only in terms of "equality of outcomes," but also by how outcomes are produced, how employees are treated, and how explainable decisions are.

2.2. The Neurobiology of Motivation and Risk/Reward Circuits

Motivation can be described as the process of initiating behavior toward a goal, directing an individual toward a particular action, sustaining that action, and supporting the effort needed to reach the goal. Self-determination theory does not reduce motivation to external rewards; it proposes that satisfaction of the needs for autonomy, competence, and relatedness is important for high-quality, sustainable motivation (Deci et al., 2017; Ryan & Deci, 2000a). The nervous system coordinates diverse motivational behaviors required for survival, such as eating, drinking, and protection. Different motivational behaviors share underlying neural substrates (Stuber, 2023).

The neurobiological foundations of motivation cannot be explained by a single molecule or brain region; neurotransmitters, hormones, neural circuits, and environmental context all play a role. Dopamine is one neurotransmitter involved in processes related to reward expectation, learning, and goal-directed behavior.

The mesolimbic dopaminergic system includes connections between the ventral tegmental area (VTA) and the ventral striatum/nucleus accumbens. Dopaminergic responses are associated with reward learning and goal-directed choice (Le Heron et al., 2020; Schultz, 2006, 2016). Reward prediction error refers to a signal associated with the difference between an expected outcome and the outcome received. Dopamine should therefore not be described merely as a "pleasure chemical," nor should it be presented as the sole biological explanation of motivation. Aberg et al.'s (2017) study examined links between dopamine-related reward responses in the right hemisphere, creativity, and associative processing; it did not test general hippocampal memory functions or the storage of memories.

This finding is relevant to working life. The difference between what an employee expects to receive for their performance and what they actually receive may affect future behavior. For example, if an employee expects a promotion after performing well but sees another employee promoted without any explanation of the criteria, the resulting negative prediction error may be experienced not only as a lost reward but also as injustice and uncertainty. The brain's reward systems are also responsive to social behavior. Evidence suggests that fair offers, compared with economically equivalent unfair offers, can be associated with greater activation in reward-related brain regions and more positive subjective evaluations (Tabibnia&Lieberman, 2007).

Experiences such as social threat, conflict, evaluation, and rejection are associated with multiple brain networks. It is therefore methodologically problematic to interpret activity in a single region, such as the OFC or ACC, as the direct and sole cause of a particular organizational emotion. Experiences of social exclusion and rejection have been associated with activity in regions such as the anterior cingulate cortex and anterior insula (Eisenberger, 2012, 2015). These findings come from specific experimental tasks and should not be treated as direct evidence of the same neural mechanism in workplace injustice.

Human information processing can differ between automatic/implicit and controlled/analytic processes; dual-process approaches provide a theoretical framework for explaining this distinction (Evans & Stanovich, 2013; Kahneman, 2011). However, mapping this distinction directly onto an anatomical hierarchy in which limbic/subcortical structures are fast and emotional while the neocortex is slow and rational is an overgeneralization. Emotion, motivation, and cognition involve interactions among multiple neural circuits, and brain regions should not be reduced to a single psychological function (LeDoux, 2012). Responses in work settings should therefore be discussed in terms of employees' appraisals and organizational conditions rather than attributed to a single brain structure.

2.3. Neuroleadership and Justice

Neuroleadership research seeks to relate leadership and management practices to findings on social, cognitive, and emotional processes in neuroscience (Rock, 2008). Within the SCARF framework, unfair promotion practices may relate to status appraisals; unclear performance criteria to certainty; micromanagement to autonomy; and exclusionary behavior to relatedness (Lynn et al., 2025; Rock, 2008). These are theoretical classifications; they do not show that specific threat responses have been measured in employees.

Management transparency is discussed in the neuroleadership literature in relation to how employees assess decision-making processes and organizational justice. Explaining the reasons for a negative decision and the process followed may relate to employees' assessments of predictability and procedural justice (Lynn et al., 2025; Rock, 2008). However, SCARF should not be treated as a rigid or reductionist neuroscience theory. It is an applied, neuroscience-informed framework used to organize social experiences and discuss management practices; its dimensions should not be assumed to correspond deterministically to single, specific brain regions (Lynn et al., 2025).

The SCARF model, developed by Rock (2008, 2011), organizes five domains through which social interactions may be appraised: status, certainty, autonomy, relatedness, and fairness. The model proposes using these domains to interpret interpersonal and organizational experiences (Rock, 2008). In this article, SCARF is a theoretical framework that helps classify experiences employees perceive as threats or rewards; it is not presented as a directly measured neural process or as a validated mediating variable.

Conceptual links can be drawn between organizational justice dimensions and SCARF domains. For example, status and respect appraisals may be related to interpersonal justice (Bies & Moag, 1986); the predictability of decision-making processes to certainty and procedural justice (Leventhal, 1980); and timely, adequate information to informational justice (Greenberg, 1990). Participation in decisions and perceived control may also be discussed in relation to the autonomy domain (Rock, 2008). These mappings are theoretical interpretations; they do not show that SCARF dimensions correspond one-to-one with organizational justice dimensions or measure a specific neurocognitive process.

Although SCARF and self-determination theory (SDT) use some similar terms, they do not measure the same constructs. Autonomy in SCARF is a situational appraisal of whether a person has choice and control in a particular social situation; autonomy in SDT is a basic psychological need concerning whether one experiences one's actions as voluntary and aligned with one's will. Relatedness in SCARF concerns whether a social context implies closeness, acceptance, or exclusion; relatedness in SDT concerns the degree to which a person's need for connection and belonging with others is satisfied. Thus, SCARF explains how a social situation is interpreted, whereas SDT explains the experience of basic need satisfaction and its relationship to the quality of motivation. The constructs may be theoretically related but should not be treated as synonyms; they should be defined and measured separately. Status, certainty, and fairness in SCARF have no direct counterparts in SDT, while competence in SDT has no direct counterpart in SCARF.

SCARF is not used in this study as a neurobiological explanation or relabeling of organizational justice. It is a theoretical framework that organizes social experiences into specific appraisal domains (Rock, 2008). The proposed "Justice–Threat/Reward–Motivation Model" suggests possible conceptual links among organizational justice, social appraisal, and motivation literatures. Its contribution lies in bringing these literatures into a shared discussion and generating testable propositions; it does not claim to have validated a new mechanism.

This framework does not assume that perceived justice directly and automatically produces motivation. The article proposes that employees' justice experiences may be associated with social appraisals of status, predictability, autonomy, relatedness, and fairness, and that the possible relationships of these appraisals with psychological safety and motivation may be investigated. SCARF organizes these appraisal domains. No specific neural mechanism or validated indirect effect has been measured here; the proposed links require testing in future research.

This approach seeks to establish a conceptual connection between organizational justice and neuroleadership literatures. Organizational justice theories explain employees' appraisals of distribution, procedures, interpersonal interactions, and information sharing (Colquitt, 2001; Greenberg, 1990), while SCARF helps organize these social experiences into five appraisal domains (Rock, 2008). The proposed model discusses these theoretical sources alongside psychological and neurobiological accounts of motivation. This synthesis is a theoretical framework for bringing together possible relationships that can be investigated empirically, not a validated causal mechanism.

3. CRITICAL REVIEW OF THE LITERATURE

Three distinct research areas have built substantial bodies of knowledge: organizational justice, motivation, and social neuroscience. Integration across these areas has not yet developed to the same extent. First, the organizational justice literature has a strong empirical foundation. Meta-analyses show that justice is associated with outcomes such as job satisfaction, commitment, performance, organizational citizenship behavior, and withdrawal (Cohen-Charash & Spector, 2001; Colquitt et al., 2001). Second, justice is not solely an individual perception: justice climate at the team level is associated with shared behavior and performance outcomes (Whitman et al., 2012). Third, cultural and contextual differences may alter the effects of justice. Fischer's (2013) meta-analysis covering 36 countries found that relationships between justice and work attitudes may vary according to cultural values, economic inequality, and other factors.

By contrast, neuroscience-based research on organizational justice is more limited. Beugré (2009) considered organizational justice appraisals within a "neuro-organizational justice" model integrating behavioral, cognitive/emotional, and neural levels. Three methodological limitations deserve attention. The first is the problem of causal inference: activation in a particular brain region in neuroimaging studies does not, on its own, prove that a specific psychological process has occurred. For instance, interpreting anterior insula or ACC activity directly as "injustice" would be reductionist, because these regions may also be involved in other cognitive and emotional processes. The second limitation concerns the gap between laboratory and organizational contexts. Simple economic games used in neuroeconomic research, such as the Ultimatum Game, cannot fully represent the complex power relations, organizational culture, prior experiences, and long-term career outcomes of actual working life. The third limitation is neuro-reductionism. Explaining employee motivation solely through "dopamine levels" or a single brain region overlooks its psychological and organizational dimensions. Motivation emerges from interactions among individual needs, goals, organizational design, leadership, culture, and social relationships. Neuroleadership is therefore best used not as a replacement for organizational behavior theories, but as a complementary micro-foundational level of explanation.

3.1. Review Approach and Scope

This study is a conceptual and critical narrative review intended to connect theoretical literatures. It does not report database names, search strings, search dates, predefined inclusion and exclusion criteria, or a record-screening process for a systematic database search. Accordingly, it is positioned not as a systematic review but as a review discussing conceptual links among the four dimensions of organizational justice, the foundations of motivation in self-determination theory, research on social reward and social exclusion, the neurobiology of motivation, and neuroleadership/SCARF literature. The synthesis considers organizational justice (Greenberg, 1987; Colquitt, 2001), self-determination theory (Ryan & Deci, 2000b; Ryan & Deci, 2017), social neuroscience (Cacioppo & Decety, 2011), the neurobiology of motivation (Simpson & Balsam, 2016), and neuroleadership literature. Its purpose is not to combine existing findings under a single claim of neurobiological causality, but to show how the relationship between organizational justice perceptions and employee motivation can be

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue X October 2026

conceptualized through social threat/reward appraisals (Rock, 2008). The proposed model and propositions are theoretical suggestions for future research, not empirically tested findings.

This conceptual synthesis treats the four dimensions of organizational justice and employee outcomes, the SDT distinction between autonomous and controlled motivation, social pain and reward research, and the neuro-organizational justice approach as separate strands of literature. Findings from social neuroscience research conducted outside organizational settings are not accepted as direct evidence about organizations; the limits of transferring these findings to working life are discussed. It also takes into account the growing importance of changing forms of work, cultural context, team-level justice, and the fairness of AI-supported decisions in contemporary organizational justice research (Adamovic, 2023; Colquitt et al., 2023).

4. PROPOSED CONCEPTUAL MODEL

The model termed the "Justice–Threat/Reward–Motivation Model" in this review begins with the possible relationship between concrete leadership behaviors (transparent communication, making room for employee voice, applying consistent criteria, and respectful treatment) and employees' organizational justice judgments about those behaviors and outcomes. Justice judgments may be theoretically related to the social appraisals organized by SCARF; these appraisals may in turn relate to the satisfaction of basic psychological needs and autonomous motivation described by SDT. SCARF appraisals and SDT need satisfaction are distinct constructs. The main model is at the individual level; team psychological safety is considered at the team level only in P4. This ordering is not a validated causal chain or necessary temporal sequence. Testing SCARF dimensions as mediators is only an exploratory possibility under P6, conditional on measurement validity; if this condition is not met, SCARF remains a classifying framework.

Testable theoretical expectation: concrete leadership behaviors may be associated with employees' organizational justice judgments; these judgments may be related to situational social appraisals within the SCARF framework and, separately, to SDT basic need satisfaction and autonomous motivation. These individual-level constructs may be associated with possible employee outcomes. Psychological safety is not included as an individual mediator in this chain; it is considered only as a team-level construct in P4. These relationships have not been empirically tested.

Table 1

Structural Matrix of the Integrated Organizational Justice–SCARF–Motivation Conceptual Model

Theoretical Component	Primary Theoretical Foundation	Relevant Constructs and Appraisal Domains	Theoretical Position in the Model
Component 1: Leadership Behaviors	Leadership theories (transparent and transformational leadership)	Concrete leadership behaviors reported by the employee: transparent communication, employee voice, consistent application of criteria, respectful treatment (individual level)	Theoretical starting variable distinguishing enactment of behavior from justice judgments; P1 (individual level)
Component 2: Organizational Justice Perceptions	Organizational justice theory (Adams, 1965; Colquitt, 2001)	Distributive, procedural, interpersonal, and informational justice judgments (individual level); team justice climate for P4, following justified aggregation	Not leadership actions themselves, but employees' fairness appraisals of outcomes, procedures, treatment, and information

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue X October 2026

Component 3: Social Appraisals in the SCARF Framework	SCARF model (Rock, 2008; Lynn et al., 2025)	Individual appraisals of the threat/reward meaning of a social situation in terms of status, certainty, autonomy, relatedness, and fairness	Classifies situational social meaning; not identical to SDT need satisfaction and does not directly measure a neural mechanism. A mediating role may be tested exploratorily only if domain measures demonstrate validity and discriminant evidence.
Component 4: Psychological and Motivational Processes	Self-determination theory (Ryan & Deci, 2017); psychological safety (Edmondson, 1999)	Individual level: SDT need satisfaction for autonomy, competence, and relatedness, and autonomous motivation. Team level: shared psychological safety (P4)	SDT need satisfaction and quality of motivation are distinct from SCARF social appraisals. Team psychological safety is limited to P4
Component 5: Possible Organizational Outcomes	Organizational behavior literature (Cohen-Charash & Spector, 2001)	Individual job performance; individual organizational commitment; individual collaborative behavior; individual creativity	Possible employee-level outcomes; not defined as team or organizational performance

Table 1 presents the model's five theoretical components together for analytical purposes. In the main model, employee-reported leadership behaviors, perceived organizational justice, social appraisals organized through SCARF, basic psychological needs, autonomous motivation, and outcome variables are treated at the individual level. In keeping with Edmondson's (1999) approach, psychological safety is a shared team-level belief; therefore, P4 is formulated as a separate multilevel proposition that explicitly moves from individual responses to team-level constructs. This analytical ordering does not represent a validated causal sequence, mediation mechanism, or continuous feedback loop:

- Component 1 (Leadership Behaviors): Concrete actions such as transparent communication, seeking employees' views and making room for employee voice, consistently applying previously stated criteria, and respectful treatment are considered employee-reported leadership behaviors. This variable concerns whether and how the behavior was enacted; it is distinct from the employee's judgment about whether the practice was fair.

- Component 2 (Organizational Justice Perceptions): Distributive, procedural, interpersonal, and informational justice refer to an employee's appraisal of the fairness of outcomes, decision-making procedures, interpersonal treatment, and information provided. These are not leadership behaviors themselves, but employees' individual justice judgments about those behaviors and outcomes. A team justice climate for P4 can be formed only by aggregating responses with adequate justification.

- Component 3 (Social Appraisals in the SCARF Framework): Employees may individually assess what a social event means in terms of status, certainty, autonomy, relatedness, and fairness. These appraisals concern the event's social threat/reward meaning; they are not the same as SDT basic need satisfaction. SCARF does not directly measure brain activity or a specific neural threat.

- Component 4 (Psychological and Motivational Processes): Satisfaction of the SDT needs for autonomy, competence, and relatedness, together with autonomous motivation, are individual-level constructs conceptually distinct from SCARF appraisals. Psychological safety is retained only as a shared team-level construct within P4.

- Component 5 (Possible Employee-Level Outcomes): Job performance, organizational commitment, collaborative behavior, and creativity are defined in this model as individual employee outcomes; no team- or organization-level performance claim is made.

Figure 1 summarizes the five theoretical components and the testable relationship expectations numbered P1–P7 in separate sections. The possible mediation in P6 is conditional on measurement validity and is presented as exploratory. The arrangement of components does not imply stages or temporal order. Arrows indicate only the theoretical direction of relationships stated in the propositions; they do not represent a validated causal sequence or mediation mechanism. P4 is shown separately as a team-level relationship.

Figure 1. Testable Theoretical Relationships in the Justice–Threat/Reward–Motivation Model.



Note. P1–P3 and P5–P7 are testable at the individual level; P4 is at the team level. Arrows indicate theoretical direction, not temporal order or tested causality. Mediation in P6 is exploratory only if SCARF social appraisal measures demonstrate validity and discriminant evidence; otherwise, SCARF remains a classifying framework.

- The model distinguishes leadership behaviors, justice perceptions, social appraisals organized within the SCARF framework, psychological and motivational processes, and outcome variables according to their

levels of analysis. P1–P3, P5, and P7 are testable expectations at the individual level. P6 may be tested exploratorily only if separate measures of SCARF domains demonstrate validity and discriminant evidence; otherwise, SCARF should not be modeled as a mediator. P4 is a theoretical expectation that may be tested between aggregated constructs at the team level. The following propositions are expectations about relationships that may be tested in future research, not empirical findings:

- Proposition 1 (P1; individual level): Positive relationships may be tested between employees' reports of observing concrete leadership behaviors—such as transparent communication, seeking employee input and making room for employee voice, consistently applying previously stated criteria, and respectful treatment—and their justice judgments about organizational outcomes, procedures, interpersonal treatment, and information. P1 treats reported leader behavior and the appraisal of that behavior as fair as separate constructs.

- Proposition 2 (P2): A positive relationship is expected between employees' perceptions of organizational justice and their autonomous motivation at work.

- Proposition 3 (P3): Positive relationships may be tested between employees' procedural and informational justice judgments and their SCARF certainty appraisals concerning the predictability of decision-making processes. Justice judgments and predictability appraisals should be kept conceptually and empirically distinct.

- Proposition 4 (P4; team level): A positive relationship may be tested between team interpersonal justice climate, constructed from members' interpersonal justice perceptions with theoretical and statistical justification, and shared team psychological safety. Individual responses cannot automatically be generalized to the team level; aggregation requires within-team agreement and appropriate multilevel analysis.

- Proposition 5 (P5): Positive relationships may be tested between perceived autonomy support, satisfaction of the SDT need for autonomy, and employees' autonomous motivation. Need satisfaction is not synonymous with SCARF autonomy appraisal, which concerns the availability of choice or control in a social situation.

- Proposition 6 (P6; conditional on measurement and exploratory): The possible indirect role of SCARF domains in the relationship between organizational justice perceptions and motivation may be tested only if separate social appraisal measures for each domain demonstrate construct validity and discriminant validity. The 16-item measure adapted by Aplin-Houtz (2025) from Rock's (2008) framework is a possible starting point; this review does not assume that the measure is valid in Turkish contexts. If Turkish adaptation and validation in an independent sample are unsuccessful, SCARF should not be modeled as a mediator and should remain a theoretical framework for classifying social appraisal domains. This proposition is not a claim of validated mediation or a neural mechanism.

- Proposition 7 (P7; individual level): Future research may examine relationships between employees' autonomous motivation and their own job performance, organizational commitment, collaborative behavior, and creativity. This proposition does not posit team- or organization-level outcome variables.

4.1. Implications for Human Resource Management and Leadership Practice

The proposed theoretical framework may help managers discuss practices associated with perceptions of uncertainty and injustice. The following practical suggestions are theoretical implications organized using SCARF domains; they are not validated effects of the model or tested interventions:

- Status and Distributive Justice: Managers should deliver performance feedback in one-to-one meetings rather than in front of a group. Public or disrespectful negative feedback may be perceived as threatening to an employee's status and relatedness. Adams's (1965) Equity Theory should inform reward and bonus

allocation, and contribution–outcome ratios should be transparent to help prevent damage to employees' sense of status.

- Certainty and Procedural Justice: During organizational change or crisis, managers should apply Leventhal's (1980) principles of consistency and reliance on accurate information. Uncertainty about the future may heighten employees' perceptions of threat and lack of control. Clear goals, consistent processes, and open communication may reduce uncertainty and help sustain motivation.
- Autonomy and Participation in Processes: Micromanagement should be avoided, and employees should be given opportunities for representation and participation in decision-making. Supporting the need for autonomy by providing meaningful control and choice over one's work may be associated with higher-quality motivation, as self-determination theory suggests.
- Relatedness and Interpersonal Justice: Managers should prioritize courtesy, respect, and honesty in their everyday communication with employees. Social exclusion and rude treatment may affect neural processes associated with social pain and threat appraisal. However, these findings should not be interpreted to mean that a specific brain region is invariably and unidirectionally activated in organizational settings.
- Fairness and Informational Transparency: Managers should explain promptly the reasons for and process behind decisions, even when the outcome is unfavorable to an employee. Informational justice may help employees understand and assess decisions as more predictable. This may reduce the likelihood that perceptions of uncertainty and injustice lead to negative behavioral outcomes.

4.2. Methodological Suggestions for Future Research

Future studies may use a quantitative correlational design to test the proposed model empirically. Data collection may draw on the following scales, which have established validity and reliability in international literature and have Turkish adaptations:

Leadership Behaviors (P1): Behavior-focused items should ask about the occurrence or frequency of concrete actions such as transparent communication, seeking employee views/making room for employee voice, consistently applying stated criteria, and respectful treatment. Items should ask respondents to report managerial behavior; general evaluative terms such as "fair" or "equitable" should not be included in behavior items. Because respect and explanation are conceptually close to interpersonal and informational justice, item duplication should be avoided, and discriminant validity between leadership behavior and justice perception measures should be demonstrated in the measurement model.

- Organizational Justice Perceptions: An appropriate Turkish adaptation of Colquitt's (2001) four-dimensional organizational justice scale may be used. The scale measures employees' fairness judgments about outcomes, procedures, interpersonal treatment, and information; it does not substitute for the behavior frequency/enactment items in P1. A future study should report evidence for the Turkish form's validity and reliability and its discriminant validity from the leadership behavior measure.
- Social Threat and Reward Appraisal (P6): In this review, SCARF is a theoretical classification framework that organizes five social appraisal domains; it is not treated as a validated, single mediator scale. Aplin-Houtz (2025) used a 16-item SCARF measure adapted from Rock (2008) and reported factor and reliability evidence for its dimensions in the study sample. The measure may be considered only as a candidate for future research in Turkish: each SCARF domain should be measured separately after translation and cultural adaptation, expert review, and cognitive interviews; confirmatory factor analysis, reliability, convergent validity, and especially discriminant validity relative to organizational justice and SDT need satisfaction should be demonstrated. If the measurement structure is validated in an independent sample, the indirect relationship in P6 may be tested exploratorily using time-separated data. If these conditions are not met, the P6 mediation pathway should not be tested, and SCARF should remain a framework for classifying social appraisals. SCARF measures do not measure brain activity.
- Autonomy Need and Autonomous Motivation: The Multidimensional Work Motivation Scale, developed by Gagné et al. (2015) on the basis of Ryan and Deci's self-determination theory, may be used to measure motivational regulations. If need satisfaction is also measured, appropriate SDT-based scales should be selected for autonomy, competence, and relatedness. These measures should not be combined with similarly named social appraisal domains in SCARF; their conceptual distinctness should be reported.

- Psychological Safety (P4; team level): Edmondson's (1999) scale may be used to measure shared team psychological safety. Responses should be collected from team members. If a team score is created, the theoretical rationale, within-team agreement (e.g., rWG), and intraclass correlation coefficients (ICC[1] and ICC[2]) should be reported before aggregation. If team psychological safety is interpreted as an individual perception, the construct and level of analysis must be defined separately; this should not be substituted for the team-level claim in P4.

If data are collected, individual-level relationships may be examined using appropriate regression or structural equation models. For P4, the clustering of employees within teams should be considered; team interpersonal justice climate and team psychological safety should be defined at the team level and tested using multilevel analysis. Aggregation decisions, team counts and sizes, within-team agreement, and ICC findings should be reported. The analytic method should be selected in light of sample size, measurement model, variable levels, and research design.

5. DISCUSSION

The proposed model discusses the possible relationship between organizational justice and employee motivation through social appraisal and motivational processes. For example, a negative performance evaluation based on previously stated criteria, applied consistently, with the employee's views heard and the reasons shared, may relate to the employee's justice and predictability appraisals. This is a theoretical explanation; it is not empirical evidence that a particular neural response has been eliminated or that a specific mechanism has occurred.

Conversely, unclear criteria or different evaluations of similar performance may be associated with employees' perceptions of uncertainty and injustice. The SCARF framework may help discuss such experiences in terms of certainty and status appraisals, but it does not prove that a specific threat response has occurred. This approach suggests that employee motivation should be studied not only in relation to pay and bonuses, but also in relation to social and organizational conditions. The motivational value of social fairness beyond economic rewards has been discussed in social neuroscience literature (Tabibnia&Lieberman, 2007). However, the linear claim that "fair treatment increases dopamine and therefore motivates employees" is scientifically oversimplified. One of dopamine's key functions is associated with reward prediction error and learning. Possible links between organizational justice and motivation may vary with factors such as culture, power distance, economic inequality, individual values, and forms of work (Fischer, 2013). Accordingly, managerial practices intended to reduce threats are theoretical implications for future testing, not validated effects of the model.

5.1. Theoretical and Methodological Limitations

The main limitation of this study is that it is not based on a new empirical dataset directly measuring relationships between organizational justice and neural processes. Further limitations in transferring social neuroscience findings to organizational contexts include reverse inference, differences between laboratory tasks and real working life, and the risk of neuro-reductionism. Activity in a brain region cannot be treated as a unique indicator of a particular psychological process. The proposed model therefore does not replace organizational behavior theories with neurobiological explanations; it positions them as a complementary micro-foundational level of explanation.

6. CONCLUSION

Classical research on organizational justice has established relationships between distributive, procedural, interpersonal, and informational justice and employee attitudes and behaviors. Findings from social neuroscience may offer an additional conceptual level for discussing these relationships. Some studies report

that fair social exchanges are associated with reward processing, while experiences of social threat are associated with activity in regions such as the anterior cingulate cortex and anterior insula. However, these findings do not show that the same neural processes have been directly measured in organizational settings or that they alone explain the outcomes of organizational justice.

This review distinguishes concrete leadership behaviors from employees' justice judgments and discusses possible links among justice judgments, the situational social appraisals organized by SCARF, and the basic need satisfaction/autonomous motivation constructs described by SDT in a testable theoretical model. Although SCARF and SDT use similar terms for autonomy and relatedness, the former concerns appraisal of the meaning of a social situation, whereas the latter concerns the experience of basic psychological need satisfaction. The main model and outcomes—job performance, organizational commitment, collaborative behavior, and creativity—are defined at the individual level. Psychological safety is considered only as a team-level construct in P4; its relationship with team interpersonal justice climate depends on justified aggregation of responses from team members and multilevel analysis. The proposed relationships have not been empirically tested.

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