

From Psychological Debt to Identity Reconstruction: A Conceptual Framework and Research Agenda for Human-AI Teaming in Organizations

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Abstract - As artificial intelligence (AI) systems increasingly function as active collaborators rather than passive tools, employees face a subtler organizational challenge than productivity or trust alone: the disruption of professional identity. This conceptual paper argues that human-AI teaming should be studied as an identity phenomenon, drawing on organizational identity theory to propose that employees respond to AI teammates through identity threat, role reconstruction, or hybrid identification. The paper draws on an exploratory pilot survey of 70 working professionals and postgraduate students, conducted as part of prior dissertation research using a practitioner-derived "psychological debt" framework, which found elevated cognitive and identity-related distress, a curvilinear relationship with career tenure, and a protective effect of augmentation-oriented framing. These findings are used as empirical motivation and are linked explicitly to a proposed conceptual model and a set of testable research propositions. The paper argues that the pilot study, while descriptive and practitioner-grounded, provides a credible empirical starting point that this programme of research extends by anchoring the phenomenon in established identity theory and by proposing a typology capable of explaining variation the pilot data could only hint at. Theoretical, methodological, and practical implications are discussed, along with a proposed pathway for future empirical validation.

Key Words: *Artificial Intelligence, Human-AI Teaming, Professional Identity, Psychological Debt, Organizational Behavior, Human Resource Management.*

1. INTRODUCTION

Artificial intelligence systems have moved beyond executing narrowly defined, rule-based tasks and now participate in work that was previously understood as exclusively human. In many organizations, an AI system drafts the first version of a report before an analyst reviews it, proposes which sales leads to prioritize before a representative makes a call, offers a preliminary diagnosis before a physician confirms it, or generates the first draft of code before an engineer refines it. These are not incremental efficiency gains; they represent a qualitative shift in how work is authored, with the AI system functioning less like a tool and more like a collaborator or teammate.

The organizational behavior and human resource management literature has responded to this shift primarily through the lens of trust and performance, asking whether employees rely appropriately on AI recommendations and how that reliance shapes task outcomes (Glikson & Woolley, 2020; Mayer, Davis, & Schoorman, 1995). This is valuable, but it treats the employee's relationship with the AI system as fundamentally transactional. It does not address a deeper and, we argue, equally consequential process: when a machine begins occupying tasks that previously anchored an employee's sense of professional self, the employee's professional identity is implicated, not merely their workload or their trust calibration.

This concern is not purely theoretical. An exploratory pilot survey conducted as part of the author's prior MBA dissertation research named as **"PSYCHOLOGICAL DEBT AND AI ADOPTION IN ORGANISATIONS"** (2026) measured a practitioner-derived construct termed "psychological debt" among 70 working professionals and postgraduate students in India, capturing cognitive, autonomy, competency, relatedness, credibility, and identity-related costs of AI adoption. That study found identity-related distress to be measurably present, found it to vary systematically with career tenure, and found it to be lower when AI was framed as augmenting rather than replacing human judgment. These findings offer a credible, if descriptive, empirical starting point for the present paper, and are used throughout to motivate and illustrate the conceptual framework developed here.

This paper proposes that human-AI teaming should be studied as an identity phenomenon in addition to a trust and performance phenomenon. Organizational identity theory offers a mature and well-validated theoretical foundation for this purpose (Ashforth & Mael, 1989; Ashforth, Harrison, & Corley, 2008), yet it has not been systematically extended to the context of AI functioning as a workplace teammate, nor connected to the emerging practitioner literature on the psychological costs of AI adoption. The remainder of this paper reviews the relevant literature, summarizes the pilot study and its findings, develops a conceptual framework describing distinct identity responses to AI teaming, proposes testable research propositions informed jointly by theory and pilot evidence, and outlines a methodological pathway for future empirical work.

2. LITERATURE REVIEW

2.1 From AI as Tool to AI as Teammate

Research on algorithmic management has documented how AI systems increasingly direct, evaluate, and coordinate human work, particularly in platform-based and logistics settings (Kellogg, Valentine, & Christin, 2020). More recent work extends this to knowledge work, describing AI as a potential “teammate” that contributes actively to joint task outcomes rather than simply executing instructions (Seeber et al., 2020). This literature has usefully documented the automation-augmentation paradox, in which AI's capacity to either replace or extend human contribution depends heavily on how it is designed and deployed within a given role (Raisch & Krakowski, 2021). However, this body of work is largely silent on how employees make sense of who they are once this shift occurs.

2.2 Professional Identity in Organizational Behavior

Professional identity refers to the relatively stable answer an individual holds to the question “who am I in this work role,” often constructed through comparison with, and relationship to, others in the work environment (Ashforth & Mael, 1989). Identity is not fixed; it is actively constructed and revised, particularly during periods of disruption. Ibarra's (1999) work on provisional selves demonstrates that professionals experiment with new self-concepts when their established role is destabilized, gradually settling into a revised identity through trial, feedback, and social validation. This process of identity work has not yet been examined in the specific context of an AI system assuming part of the role that previously defined the employee's expertise.

2.3 Identity Threat and Identity Reconstruction

Petriglieri's (2011) theory of identity threat describes how individuals respond when an aspect of their identity is devalued, and outlines a range of possible responses, from defensive avoidance to active reconstruction of the threatened identity. This framework is directly relevant to human-AI teaming: an AI system that performs a task central to an employee's professional self-concept may be experienced as an identity threat, but the same disruption may instead prompt active identity reconstruction, depending on situational and individual factors. The present paper argues that this variation — rather than a uniform threat or benefit narrative — is the central empirical puzzle that organizational behavior research on human-AI teaming should address.

2.4 Psychological Debt: An Emerging Practitioner Construct

Alongside academic theory, practitioner literature has begun to name similar concerns in different terms. A widely circulated Harvard Business Review article introduced the construct of “psychological debt” to describe the cumulative psychological costs employees incur when AI adoption erodes their sense of challenge, control, connection, or credibility (Harvard Business Review, 2026). The construct draws implicitly on self-determination theory, which identifies autonomy, competence, and relatedness as core psychological needs underlying motivation (Deci & Ryan, 2000); when AI adoption threatens these needs, employees may continue using AI tools while experiencing reduced engagement and increased anxiety. Psychological debt is a useful diagnostic label, and its identity dimension in particular anticipates the concerns this paper addresses theoretically. However, as a practitioner-originated construct, it has not been anchored in an established academic theory of identity, nor has it been used to explain why different employees exposed to the same AI system might respond in qualitatively different ways. This is the specific gap the present framework is designed to fill.

3. EMPIRICAL STARTING POINT: INSIGHTS FROM A PILOT STUDY

3.1 Overview of the Pilot Study

Prior to developing the conceptual framework presented in this paper, an exploratory pilot survey was conducted as part of the author's MBA dissertation research (Chowdhury, 2026). The study employed a descriptive, cross-sectional survey design, administered through a structured questionnaire to 70 working professionals and postgraduate students in India, recruited through non-probability purposive sampling across sectors including education, information technology, marketing, and manufacturing. The instrument measured psychological debt across six dimensions — cognitive, autonomy, competency, relatedness, credibility, and identity — using five-point Likert-scale items adapted from the Harvard Business Review framework, alongside demographic variables, AI usage behavior, organizational adoption context, and open-ended reflective questions.

3.2 Key Findings and Their Relevance to the Present Framework

Four findings from the pilot study are directly relevant to the conceptual framework developed in this paper. First, cognitive debt (mean composite score of 47.9 out of 100) and identity debt were the two most elevated dimensions among the six measured, ahead of autonomy, relatedness, and credibility debt, indicating that concerns about diminished critical thinking and professional distinctiveness are already salient among AI-using professionals. Second, psychological debt followed a curvilinear pattern across career stages: respondents with 6–20 years of work experience reported higher mean debt scores than both newcomers with less than one year of experience and veterans with more than twenty years of experience. Third, respondents who agreed that their human judgment remained respected, and who perceived AI as a support tool rather than a replacement, reported comparatively lower overall psychological debt, suggesting that organizational framing meaningfully shapes the psychological experience of AI adoption. Fourth, the study collected rich open-ended reflections on identity-related discomfort that have not yet been analyzed thematically, representing an existing but untapped qualitative dataset.

3.3 Linking Pilot Findings to the Proposed Framework

Table 2 makes explicit how each pilot finding is interpreted through the lens of the conceptual framework developed in this paper, and which research proposition it motivates.

Table -2: Linking Pilot Study Findings to the Proposed Conceptual Framework

Pilot Study Finding	Theoretical Interpretation	Linked Proposition
Cognitive and identity debt were the two most elevated dimensions among the six measured (mean composite scores of 47.9 and approximately 38–39 out of 100 respectively).	Suggests that AI use is already registering, at a descriptive level, as a disruption to self-perceived competence and professional distinctiveness — consistent with the identity-threat pathway proposed in this framework.	Motivates P1 and the identity threat category in Table 1.
Mean psychological debt followed a curvilinear pattern across career stages, peaking among respondents with 6–20 years of experience and declining among both newcomers (<1 year) and veterans (20+ years).	Indicates that identity investment, rather than AI exposure alone, may drive vulnerability: employees with substantial but not yet fully secure professional identity may be least equipped to reconstruct that identity around AI collaboration.	Motivates P4 (tenure and expertise as a boundary condition).
Respondents who felt their human judgment remained respected, and who perceived AI as a support tool rather than a replacement, reported comparatively lower overall psychological debt.	Provides preliminary support for the role of managerial and organizational framing in shaping how employees interpret AI's presence in their role.	Motivates P2 (framing as replacement vs. augmentation).

Open-ended reflections on the discomfort and identity-related concerns were collected but not yet analyzed thematically.	Represents an existing, untapped qualitative dataset that could be recoded against the proposed identity-response typology as an early, low-cost validation step.	Informs the methodological pathway proposed in Section 6.
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It is important to be explicit about the limitations of the pilot study, precisely because doing so clarifies the contribution of the present paper. The psychological debt construct, while intuitive and practically resonant, was adapted from a practitioner article rather than a validated academic scale, and the study measured a single composite score per dimension rather than distinguishing qualitatively different response types. The cross-sectional design cannot establish that AI adoption causes the observed debt, only that the two co-occur, and the small, purposive, sector-skewed sample limits generalizability. The present paper does not treat these limitations as a weakness to be dismissed, but as the precise point at which a theoretically grounded, doctoral-level research programme can extend a promising but preliminary empirical signal into a more rigorous and explanatory account.

4. PROPOSED CONCEPTUAL FRAMEWORK

Building on the literature reviewed above and informed by the pilot findings summarized in Section 3, this paper proposes that employees exposed to AI teammates exhibit one of three broad identity responses: identity threat/erosion, role reconstruction, or hybrid identification. Table 1 summarizes these categories along with illustrative examples drawn from professions where AI teaming is already emerging.

Table -1: Proposed Identity Responses to Human-AI Teaming

Identity Response	Description	Illustrative Example
Identity Threat / Erosion	Employee perceives the AI as displacing the core expertise that previously defined their professional value; associated with disengagement and status anxiety.	A radiologist feels reduced to “double-checking” an AI that already flags abnormalities.
Role Reconstruction	Employee redefines their role around the tasks the AI cannot perform — judgment on ambiguous cases, exception handling, and quality oversight.	A financial analyst repositions themselves as the reviewer of AI-generated forecasts rather than their sole author.
Hybrid Identification	Employee incorporates the AI partnership into their own professional self-concept, describing their expertise as inseparable from the AI collaboration.	A software engineer describes themselves as someone who “directs” AI pair-programming tools as a marker of skill, not a threat to it.

Figure 1 presents a conceptual model linking antecedent conditions — including the psychological debt profile identified in the pilot study — to these identity responses, and in turn to downstream engagement and performance outcomes.

Fig -1: Conceptual Model of Identity Reconstruction in Human-AI Teaming

Antecedents	Identity Response (Mediator)	Outcomes
- AI interface transparency - Managerial framing (replacement vs. augmentation) - Employee tenure & expertise - Professional/occupational norms - Psychological debt profile (cognitive, competency, identity dimensions)	- Identity Threat / Erosion - Role Reconstruction - Hybrid Identification	- Engagement - Task performance - Turnover intention - Willingness to use AI as intended

5. RESEARCH PROPOSITIONS

P1: Employees are more likely to experience identity threat when an AI system's output is presented as final or authoritative, and more likely to experience role reconstruction or hybrid identification when the AI's output is presented as a draft or suggestion subject to human revision. This proposition is motivated in part by the elevated cognitive and identity debt scores observed in the pilot study, which are consistent with an unresolved sense of diminished authorship.

P2: Managerial framing of AI introduction as “augmentation” rather than “replacement” will be positively associated with role reconstruction and hybrid identification, and negatively associated with identity threat. This proposition is directly informed by the pilot study's finding that respondents who felt their human judgment remained respected reported lower overall psychological debt.

P3: Role reconstruction and hybrid identification will be positively associated with employee engagement and willingness to use the AI system as intended, whereas unresolved identity threat will be positively associated with turnover intention and covert underuse or avoidance of the AI system.

P4: The strength of these relationships will vary with employee tenure and expertise, such that highly experienced employees are more likely to reconstruct their role around supervisory or exception-handling functions, while early-career employees are more vulnerable to identity threat due to a less established professional identity to draw on. This proposition is informed by, and refines, the curvilinear tenure pattern observed in the pilot study, in which mid-career respondents reported the highest psychological debt; the present framework proposes that this reflects differing degrees of identity investment rather than tenure alone.

P5: A validated, theory-grounded measure of identity response type (threat, reconstruction, or hybrid identification) will explain variance in engagement and performance outcomes beyond what a general psychological debt composite score can explain, because it distinguishes qualitatively different adaptive processes that a single distress score conflates.

6. METHODOLOGICAL PATHWAY: FROM PILOT SURVEY TO PROGRAMMATIC RESEARCH

The pilot study provides more than motivating evidence; it also suggests a practical pathway for the empirical programme that follows from this conceptual paper. As a first step, the existing open-ended reflections collected in the pilot survey, which asked respondents to describe specific situations of AI-related discomfort and their views on professional risk, can be recoded against the three-category identity-response typology proposed in Section 4. Because this data already exists and was collected under appropriate informed consent for academic research use, this recoding exercise offers a low-cost, low-risk opportunity to test whether the proposed categories are recognizable in real respondent narratives before committing to a full primary data collection effort.

As a second step, a dedicated qualitative interview study is proposed, extending the pilot's demographic reach beyond its education- and information-technology-heavy sample into professions such as Academia, financial analysis, and customer service, and software engineering where AI teaming is emerging in more operationally central ways. This study would use semi-structured interviews informed by identity-work theory to refine and validate the proposed response categories, rather than relying solely on the borrowed psychological debt items used in the pilot.

As a third step, the qualitative findings would inform the development of a new, psychometrically validated survey instrument capturing identity response type directly, in contrast to the general-purpose debt scale adapted from practitioner literature in the pilot study. This instrument would then be used to test Propositions 1 through 5 across a larger, more representative sample, potentially through a longitudinal or quasi-experimental design capable of establishing directional and causal claims that the original cross-sectional pilot could not support.

7. THEORETICAL AND PRACTICAL IMPLICATIONS

7.1 Theoretical Implications

This paper extends organizational identity theory into the domain of human-AI teaming, an extension that existing trust- and performance-based models of AI adoption do not provide. It also introduces identity reconstruction as a candidate mediating mechanism that may explain variation in human-AI team performance beyond what trust calibration alone can account for. Furthermore, by explicitly linking a practitioner-originated construct (psychological debt) to an academically grounded theory (identity threat and reconstruction), the paper models a broader contribution: showing how promising but theoretically thin practitioner frameworks can be systematically upgraded into testable academic theory rather than treated as a competing or disposable alternative.

7.2 Practical Implications

For practitioners, the framework and the pilot evidence together suggest that how an AI system is introduced, and how its interface presents its own outputs, are not merely technical or change-management details, but levers that shape employees' professional self-concept. The pilot study's finding that mid-career employees reported the highest psychological debt suggests that organizational support efforts — mentoring, reflective discussion forums, and explicit reassurance about the continued value of human judgment — may be most needed for this group specifically, rather than being distributed evenly across all tenure levels. Organizations designing AI-augmented roles may reduce identity threat and its associated disengagement by deliberately framing AI as augmenting human judgment, and by designing interfaces that visibly preserve a meaningful decision-making role for the employee.

8. CONCLUSION AND FUTURE RESEARCH DIRECTIONS

As AI systems increasingly occupy roles resembling teammates rather than tools, organizational behavior research must move beyond trust and performance framings to address the identity-level consequences of this shift. This paper has proposed a conceptual framework describing three distinct identity responses to human-AI teaming, explicitly grounded both in established identity theory and in exploratory pilot evidence drawn from prior dissertation research on psychological debt. The pilot study should not be read as a completed investigation but as a starting point: it identified that identity-related distress is present and measurable, that it varies with career tenure, and that it is shaped by organizational framing, while leaving open exactly why these patterns occur and how they might be more precisely categorized. The conceptual framework and propositions developed here are intended to answer that open question, and the methodological pathway proposed in Section 6 offers a concrete, sequenced plan — from recoding existing pilot data, to fresh qualitative interviews, to a validated quantitative instrument — for turning this conceptual contribution into a full programme of doctoral research.

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REFERENCES

1. Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 14(1), 20–39.
2. Ashforth, B. E., Harrison, S. H., & Corley, K. G. (2008). Identification in organizations: An examination of four fundamental questions. *Journal of Management*, 34(3), 325–374.
3. Chowdhury, A. (2026). Psychological debt and AI adoption in organisations (Unpublished MBA dissertation). Institute of Business & Computer Studies, Siksha “O” Anusandhan (Deemed to be University), Bhubaneswar.
4. Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
5. Glikson, E., & Woolley, A. W. (2020). Human trust in artificial intelligence: Review of empirical research.

Academy of Management Annals, 14(2), 627–660.

6. Guy Champniss. (2026) Harvard Business Review. (2026). The psychological costs of adopting AI.
7. Ibarra, H. (1999). Provisional selves: Experimenting with image and identity in professional adaptation. *Administrative Science Quarterly*, 44(4), 764–791.
8. Kellogg, K. C., Valentine, M. A., & Christin, A. (2020). Algorithms at work: The new contested terrain of control. *Academy of Management Annals*, 14(1), 366–410.
9. Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20(3), 709–734.
10. Petriglieri, J. L. (2011). Under threat: Responses to and the consequences of threats to individuals' identities. *Academy of Management Review*, 36(4), 641–662.
11. Raisch, S., & Krakowski, S. (2021). Artificial intelligence and management: The automation-augmentation paradox. *Academy of Management Review*, 46(1), 192–210.
12. Seeber, I., Bittner, E., Briggs, R. O., de Vreede, T., de Vreede, G. J., Elkins, A., ... & Söllner, M. (2020). Machines as teammates: A research agenda on AI in team collaboration. *Information & Management*, 57(2), 103174.
13. Wang, W., & Siau, K. (2019). Artificial intelligence, machine learning, automation, robotics, future of work and future of humanity: A review and research agenda. *Journal of Database Management*, 30(1), 61–79.

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