

CITY UNIVERSITY OF HONG KONG
香港城市大學

**Research on the Impact of AI Augmentation
and Intrusiveness on Employee Behavior: The
Mediating Effect of Thriving at Work**
AI 技術增強感與侵入感對員工行為的影響研究
——基於工作繁榮感的中介視角

Submitted to
College of Business
商學院
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Business Administration
工商管理博士學位

by

Miao Qing
繆青

March 2026
二零二六年三月

摘要

隨著人工智慧技術，特別是大模型驅動的智慧輔助系統在客戶服務行業的廣泛應用，員工作為“人機協同”系統中的關鍵主體，其心理體驗與行為模式正經歷深刻變革。現有研究多聚焦於 AI 的技術效能與任務績效，缺乏對員工內在心理機制的系統性探討，尤其忽視了 AI 技術同時具備的“賦能”與“侵擾”雙重屬性對員工心理與行為的綜合影響。為彌補這一研究缺口，本研究以自我決定理論為元理論框架，整合工作繁榮感的社會嵌入模型，構建了一個有調節的仲介模型，旨在系統揭示 AI 技術感知通過心理需求路徑影響員工主動性行為與適應性表現的內在機制與邊界條件。

本研究採用混合研究方法，通過兩個相互關聯的子研究展開，研究一（情境實驗法）（N=269）旨在確立因果關係；研究二（多時點問卷調查法）（N=197），旨在真實情境中檢驗完整模型及邊界條件。兩個研究分別從受控實驗環境和現實組織場域中收集資料對理論假設進行驗證。研究結果表明：

AI 技術增強感顯著正向預測工作繁榮感，而 **AI 技術侵入感**則顯著負向預測工作繁榮感，實驗研究進一步確立了二者之間的因果關係；

工作繁榮感在 AI 技術感知與員工**工作主動性**、**適應性表現**之間起完全仲介作用，揭示了“技術—心理—行為”傳導路徑的核心心理機制；

員工工作年限在 AI 技術侵入感與工作繁榮感之間具有顯著調節效應：資深員工對侵入性監控更為敏感，其心理需求受挫更為嚴重，工作繁榮感下降更為明顯；然而，工作年限在增強感與工作繁榮感之間的調節效應不顯著，表明 AI 賦能作用具有跨經驗群體的普遍積極意義。

本研究構建了整合 AI“雙刃劍”效應的統一心理解釋框架，拓展了工作繁榮感前因從社會情境向技術情境的延伸，推動了人機協同研究從“效率范式”向“人文範式”的轉型，進一步豐富了人機協同相關的理論。在實踐層面，本研究可以為企業優化 AI 系統設計、實施差異化人員管理、引入員工心理繁榮作為技術評估新維度，以及培育“人機共生”的組織文化提供了系統而具體的行動指南。

關鍵字：AI 技術增強感和侵入感；工作繁榮感；自我決定理論；工作主動性；適應性表現；工作年限；人機協同

Abstract

With the widespread adoption of artificial intelligence (AI), particularly large model-driven intelligent assistant systems, in the customer service industry, employees—as key actors in human-AI collaboration systems—are undergoing profound changes in their psychological experiences and behavioral patterns. Existing research has predominantly focused on the technical efficacy and task performance outcomes of AI, lacking a systematic investigation into employees’ internal psychological mechanisms, especially the dual characteristics of AI as both an “empowering” and “intrusive” technology. To address this gap, this study adopts Self-Determination Theory (SDT) as the meta-theoretical framework and integrates the Socially Embedded Model of Thriving at Work to construct a moderated mediation model. This model aims to systematically reveal the internal mechanisms and boundary conditions through which AI technology perceptions influence employees’ proactive and adaptive behaviors via psychological need satisfaction pathways.

This research is comprised of two interrelated sub-studies utilizing a mixed-methods design. Study 1, a scenario-based experiment (N = 269), was conducted in a controlled environment to establish causal inference. Study 2, a multi-wave questionnaire survey (N = 197), was administered in real organizational fields to test the complete theoretical model and its boundary conditions. The results demonstrate:

Perceived AI augmentation significantly and positively predicts thriving at work, whereas **perceived AI intrusiveness** significantly and negatively predicts thriving, with experimental results further establishing a causal relationship between the two;

Thriving at work fully mediates the relationships between AI technology perceptions and employees’ **proactive work behavior** and **adaptive performance**, revealing the core psychological mechanism in the “technology–psychology–behavior” transmission path;

Employee organizational tenure significantly moderates the relationship between perceived AI intrusiveness and thriving: experienced employees are more sensitive to intrusive monitoring, experiencing greater psychological need frustration and a more substantial decline in thriving. However, tenure does not significantly moderate the relationship between perceived AI augmentation and thriving, suggesting that the empowering effects of AI are universally beneficial across experience groups.

This study constructs an integrated psychological framework that accounts for the “double-edged sword” effect of AI, extends the antecedents of thriving at work from social to technological contexts, and advances human-AI collaboration research from an “efficiency paradigm” toward a “humanistic paradigm.” In practice, the findings offer systematic and actionable guidance for organizations to optimize AI system design, implement differentiated personnel management, introduce employee thriving as a new dimension in technology assessment, and cultivate a “human-AI symbiosis” organizational culture.

Keywords: Perceived AI Augmentation and Intrusiveness; Thriving at Work; Self-Determination Theory; Proactive Work Behavior; Adaptive Performance; Organizational Tenure; Human-AI Collaboration

CITY UNIVERSITY OF HONG KONG
Qualifying Panel and Examination Panel

Surname: MIAO
First Name: Qing
Degree: Doctor of Business Administration
College/Department: College of Business

The Qualifying Panel of the above student is composed of:

Supervisor(s)

Prof. XU Jingjun David Department of Information Systems
City University of Hong Kong

Prof. LU Xianghua Department of Information Management and
Information Systems
Fudan University

Qualifying Panel Member(s)

Prof. LEE Wai Yu Zach Department of Information Systems
City University of Hong Kong

Dr. LIU Shengming School of Management
Fudan University

This thesis has been examined and approved by the following examiners:

Prof. KWOK Chi Wai Department of Information Systems
Ron City University of Hong Kong

Prof. XU Jingjun David Department of Information Systems
City University of Hong Kong

Prof. LING Hong Department of Information Management and
Information Systems
Fudan University

Prof. LU Xianghua Department of Information Management and
Information Systems
Fudan University

Prof. FENG Yue Department of Management and Marketing
Katherine The Hong Kong Polytechnic University

致謝

由衷感謝盧向華教授的專業、細心的指導和在研究關鍵時刻的鼎力支持，衷心感謝許景俊教授的持之以恆的耐心、專業的指導！

感謝在本研究過程中給予指導的李旭紅教授、劉聖明教授，還有在工作坊及授課期間給出寶貴建議和意見的黃麗華教授、凌鴻教授等老師。在此也感謝助研陳紫熒同學。

有了各位的指導和支持，才會有這個研究的可能和持續，才會有這篇論文的呈現！謝謝！

目錄

摘要.....	i
Abstract.....	iii
Qualifying Panel and Examination Panel.....	v
致謝	vi
目錄	vii
1. 緒論	1
1.1 研究背景與研究問題	1
1.1.1 人工智慧應用背景	1
1.1.2 智慧客服中的 AI 應用	2
1.1.3 研究問題	5
1.2 研究目的與研究意義	9
1.2.1 研究目的	9
1.2.2 研究意義	10
1.3 研究內容	12
1.4 研究方法與技術路線	14
2. 概念界定和文獻綜述	15
2.1 人機協同及其雙刃性效應	15
2.1.1 從工具到夥伴	16
2.1.2 自動化與增強路徑	18
2.1.3 人機協同的雙刃劍效應	19
2.1.4 客服場景中的人機協同	21

2.2	AI 技術增強感與技術侵入感	23
2.2.1	AI 技術增強感	24
2.2.2	AI 技術侵入感	27
2.2.3	本研究中的 AI 技術感知	32
2.3	人機協同與員工積極心理狀態	33
2.3.1	工作繁榮感概念內涵與核心維度	35
2.3.2	工作繁榮感的理論演進與基礎模型	36
2.3.3	測量工具的演進與驗證	38
2.3.4	前因變數：從組織情境到技術環境	39
2.3.5	結果變數：從個體健康到組織效能	40
2.3.6	本研究中的工作繁榮感	41
2.4	員工工作主動性與適應性表現	43
2.4.1	工作主動性	43
2.4.2	適應性表現	47
2.5	員工工作年限	55
2.5.1	概念內涵與多維解讀	55
2.5.2	工作年限作為調節變數	56
3.	理論基礎與研究假設推導	59
3.1	理論基礎：社會嵌入模型與自我決定理論	59
3.1.1	社會嵌入模型	60
3.1.2	自我決定理論	65
3.1.3	社會嵌入模型與自我決定理論的整合	70

3.2	假設推導	73
3.2.1	AI 技術感知與工作繁榮感	73
3.2.2	工作繁榮感的仲介作用	76
3.2.3	員工工作年限的調節作用	80
3.3	理論模型圖	82
3.3	本章小結	83
4.	研究一：AI 技術感知對工作繁榮感的線上情景實驗研究	84
4.1	實驗設計	84
4.1.1	被試	85
4.1.2	實驗流程	85
4.1.3	操縱條件	86
4.1.4	變數測量	89
4.2	資料分析方法	90
4.3	實驗結果	90
4.3.1	樣本特徵	90
4.3.2	操縱檢驗結果	92
4.3.3	假設檢驗結果	93
4.4	本章小結	95
5.	研究二：基於問卷調研的實證分析	96
5.1	研究設計	96
5.1.1	樣本與資料收集過程	97
5.1.2	變數測量	98

5.1.3	資料分析策略	100
5.2	樣本分析結果	102
5.2.1	問卷調研樣本特徵	102
5.2.2	共同方法偏差檢驗	105
5.2.3	測量模型的信度分析	106
5.2.4	測量模型的效度分析	107
5.2.5	描述性統計與相關分析	108
5.3	假設檢驗分析	110
5.3.1	分層回歸分析	110
5.3.2	仲介效應檢驗	113
5.4	本章小結	117
6.	研究結論及展望	120
6.1	基本結論	120
6.2	理論與實踐意義	123
6.2.1	理論意義	123
6.2.2	實踐意義	125
6.3	研究局限性與未來展望	126
	參考文獻	129
	附錄	135
	附錄 A 研究一情景實驗資訊.....	135
	附錄 B.....	141
	附錄 B1 研究二時點一問卷.....	141

附錄 B2 研究二時點二問卷.....	146
附錄 B3 研究三時點三問卷.....	147