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ROSEN RESEARCH REVIEW

EXPANDING RESEARCH FRONTIERS TO SERVE HUMANITY

SPRING 2026

UCF | Rosen College of Hospitality Management
UNIVERSITY OF CENTRAL FLORIDA

Leadership Insight from Our Dean

Celebrating a successful collaboration

The contributions in this issue resist celebrating technology for its own sake and instead keep people, relationships, and community outcomes at the forefront. As Dean, my vision is one where UCF Rosen College shapes a high-touch, high-tech future in which every robot, algorithm, and smart system is ultimately in service to human dignity, meaningful work, and the enduring standards of service excellence.

Dr. Cynthia Mejia
Dean of UCF Rosen College

Service robotics and advanced technologies are no longer a distant future for hospitality; they are already in our operations and classrooms. For my first Dean's Insight, I read this special issue with one question in mind, How do we keep the human imperative of our industry at the center as the technological tools around us accelerate? Our UCF Rosen College scholars respond with nuance and optimism that technology can help us serve people better.

Rosen College's Arthur Huang, Ahmet Ozturk, and co-authors remind us that AI succeeds only when it feels good to use, showing how enjoyment and emotional resonance drive continued use beyond simple efficiency. Frank Badu-Baiden and colleagues extend that thinking from biometric boarding to drone food delivery, where convenience, trust, and context shape whether people embrace smart systems. Wei Wei, Juhee Kang, David Kwun's team takes us into a variety of conversations around digital spaces, where peer comments after a service failure, green gamification, and even dog influencers all shape how guests feel, act, and choose hotel stays. Jeong-Yeol Park moves us from reviews to behavior, revealing how the language guests use about autonomous vehicles predicts whether they will return.

Other contributors push us deeper into service encounters. Murat Hancer's research team show that carefully designed human-robot collaboration and apology styles can turn technology-led service recovery into an experience that restores guest comfort and strengthens loyalty. My co-authors and I, in Co-Working with Machines, listen closely to frontline workers as they navigate the promises and pressures of robot teammates. Xiaoxiao Fu and her co-author show how guests experience smart hotels and service robots at check-in, insisting that emotional connection and personalization still matter. Murat Kizildag's research team positions generative AI as a disruptive force in tourism and hospitality education, calling us to rethink curriculum and the skills our graduates will need to lead human-and-machine teams.

In a thought leader conversation with the COO of Bear Robotics, Manuel Rivera and I explore what happens when robots enter the dining room as partners, taking on repetitive work so people can focus on connection and care. Taken together, these UCF Rosen College voices do not celebrate technology for its own sake. They invite us to design a future where robotics, AI, and smart systems extend our humanity instead of eroding it.

Dr. Cynthia Mejia
Dean of UCF Rosen College

A Message from Dr. Manuel Rivera

Tech-Forward Hospitality:

Human Connections in a Digital Age

Welcome to the Rosen Research Review's inaugural in-house special issue—a milestone for Rosen College and a testament to our commitment to advancing hospitality and tourism through innovation. This edition is dedicated to the transformative power of technology, a force reshaping operations and redefining the heart of guest experience, employee well-being, and service culture. As you turn these pages, you'll encounter twelve original studies that illuminate the intersection of digital tools and human connection, offering fresh perspectives on the future of our industry.

The hospitality sector stands at a pivotal moment. The pandemic accelerated digital adoption, but the real story is what comes next: how we harness smart technologies not just for efficiency, but for empathy, engagement, and lasting loyalty. This issue brings together voices from academia and industry to answer urgent questions about artificial intelligence, robotics, gamification, and influencer marketing in hospitality. Our contributors explore how technology can enhance—not replace—the human touch, and what it means to design systems that delight, comfort, and empower both guests and employees.

You'll discover research revealing that enjoyment and emotional resonance are the missing links in successful AI adoption. Guests return to technologies that make them smile, not just those that work well. Service robots, once a novelty, are now integral to hotels and restaurants, impacting both guests and frontline workers. Efficiency matters, but so does emotional connection, training, and support. Robots can be teammates, not just tools, and their design must reflect the values of hospitality. Smart hotels are redefining guest expectations, blending convenience and novelty with the need for personalization and empathy. Anthropomorphic features and playful personalities turn robots into memorable parts of the travel experience, while thoughtful design ensures technology supports, rather than replaces, meaningful service. This issue also features an exclusive thought leader interview with Juan Higueros, Co-Founder and COO of Bear Robotics, whose vision for human-centered robotics is helping redefine the future of hospitality. In this engaging conversation, Higueros shares how technology can empower teams, protect dignity, and create space for empathy and genuine guest connection—reminding us that innovation is most powerful when it serves humanity.

This special issue is an invitation to think differently. Technology in hospitality is not just about gadgets and algorithms—it's about people. The research here challenges us to design systems that strip away friction and heavy lifting, giving teams the time and energy for what matters most: empathy, storytelling, and genuine connection. Whether you are a scholar, practitioner, student, or simply curious about the future, I encourage you to dive into these articles. Let them spark new ideas, challenge old assumptions, and inspire you to imagine a hospitality industry where high tech and high touch go hand in hand. This special issue would not have been possible without the amazing collaborative efforts of all the scholars featured here. We gratefully recognize their contributions, dedication, and expertise have enriched every page.

Dr. Manuel Rivera
Editor in Chief
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UCF Rosen College of Hospitality Management

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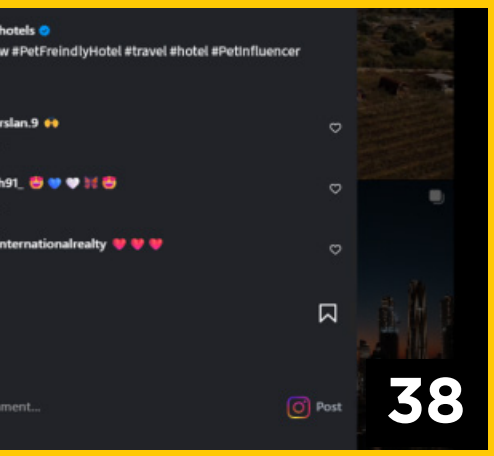

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THE PLEASURE PRINCIPLE:

Why Enjoyment May Be The Missing Link in AI Adoption

ROSEN RESEARCH REVIEW

ARTHUR HUANG, AHMET BULENT OZTURK, TINGTING ZHANG, EFREN DE LA MORA VELASCO & ADAM HANEY

Enjoyment in action: AI services that spark delight drive deeper engagement.

The research by Huang, Ozturk, Zhang, de la Mora Velasco, and Haney reveals a compelling insight: enjoyment—not just efficiency—is a key driver of whether guests will continue using AI in hospitality and tourism. By expanding the expectation-confirmation model, the study shows that perceived enjoyment, alongside performance and satisfaction, plays a pivotal role in shaping future use intentions. This shift toward hedonic value reframes how hoteliers and tourism professionals should design and promote AI services. The findings suggest that delight, fun, and emotional resonance are just as important as functionality when it comes to long-term engagement with AI-powered experiences.

THE RISE OF FEELING MACHINES

Artificial intelligence is no longer confined to back-end operations or robotic concierges. It is becoming a front-facing part of the guest experience—from chatbots and booking engines to autonomous vehicles and virtual reality tours. As AI technologies become more visible and interactive, the hospitality industry faces a new challenge: how to make these tools not just useful, but enjoyable.

The researchers set out to understand what drives guests to continue using AI services after their initial experience. Drawing on the expectation-confirmation theory and expanding it with emotional dimensions, they surveyed 380 U.S. adults who had used AI in hospitality or tourism settings within the past 18 months. Their goal was to uncover the psychological and experiential factors that influence satisfaction and future use.

The stakes are high. As AI becomes more embedded in service delivery, understanding what makes guests return to these technologies is essential. The study's findings suggest that perceived enjoyment is not a secondary benefit—it is central to the success of AI adoption in hospitality.

BEYOND EXPECTATIONS

Before this study, most models of technology adoption focused on utility: how well a system performs, how easy it is to use, and whether it meets expectations. The expectation-confirmation theory (ECT) has long been used to explain satisfaction and continued use. But the researchers saw a gap. What about the emotional experience? What role does enjoyment play?

To answer this, they expanded the ECT framework to include perceived enjoyment as a core variable. They also considered perceived performance and satisfaction, creating a more holistic model of AI adoption. Their approach reflects a growing recognition that technology use is not just rational—it is emotional.

The literature review revealed that AI services often blend utilitarian and hedonic attributes. Guests may appreciate the speed and accuracy of a chatbot, but they also value its friendliness and humor. The researchers hypothesized that enjoyment would influence satisfaction and future use, and that confirmation of expectations would shape both performance and enjoyment.

From function to feeling: AI tools that make travel planning enjoyable.

This reframing of the model offers a richer understanding of how guests engage with AI. It suggests that delight is not a bonus—it is a requirement.

INSIDE THE STUDY

The researchers conducted a self-administered online survey targeting adults who had used AI in hospitality or tourism within the past 18 months. AI technologies included chatbots, virtual assistants, robots, autonomous vehicles, and AI-enabled VR and AR experiences. Participants were recruited through a panel provider and screened to ensure relevance. After data cleaning, 380 valid responses were analyzed using confirmatory factor analysis and structural equation modeling. The study measured variables such as perceived performance, confirmation, enjoyment, satisfaction, and intention to continue using AI.

WHO THEY ASKED

The sample included a diverse group of U.S. adults. About 54% were male, and 46% female. The majority were aged 36 to 45, and nearly half held a bachelor's degree. Most participants were married and had household incomes ranging from $75,000 to $150,000. All had used AI in hospitality or tourism settings, making them ideal respondents for exploring post-adoption behaviors.

THE ENJOYMENT EFFECT

The results were clear: perceived enjoyment significantly influenced satisfaction and future use intentions. Confirmation of expectations also played a strong role, shaping both performance and enjoyment. In turn, performance influenced satisfaction, and satisfaction predicted continued use.

One of the most striking findings was the emotional pathway. Guests who found AI services enjoyable were more likely to be satisfied and to continue using them. This suggests that hedonic value is not just a nice-to-have—it is a strategic asset.

> "WE WANTED TO UNDERSTAND NOT JUST HOW AI PERFORMS IN HOSPITALITY, BUT HOW IT MAKES PEOPLE FEEL—AND WHY THAT EMOTIONAL CONNECTION DRIVES LONG-TERM ENGAGEMENT AND CONTINUED USE."

The study also found age-related differences. For older users, confirmation of expectations was more important. For younger users, enjoyment had a stronger impact. This insight points to the need for tailored AI experiences that resonate with different demographics.

SHIFTING THE PARADIGM

According to Huang and colleagues, the findings challenge traditional models of technology adoption. While performance and confirmation remain important, they are not enough. Emotional engagement—especially enjoyment—must be part of the equation.

Smart and seamless: AI-enabled rooms that respond to guests' preferences.

This shift has implications for how AI services are designed, marketed, and evaluated. It suggests that hospitality providers should focus not only on what AI can do, but on how it makes guests feel. The study's expanded model offers a more nuanced lens for understanding post-adoption behavior and long-term engagement.

drive satisfaction. The study suggests that when guests smile, they stay. Incorporating both utilitarian and hedonic elements into AI service design can lead to stronger engagement, better reviews, and increased loyalty. It is not just about solving problems—it is about creating memorable experiences.

> "ENJOYMENT IS NOT A LUXURY IN AI DESIGN—IT IS ESSENTIAL FOR CRAFTING GUEST EXPERIENCES THAT RESONATE EMOTIONALLY AND ENCOURAGE DEEPER, LASTING ENGAGEMENT WITH SMART HOSPITALITY SERVICES."

DESIGNING FOR DELIGHT

For practitioners, the message is clear: design AI services that are both useful and enjoyable. Hotels and tourism providers should align promotional messaging with actual capabilities to avoid disappointment. They should also emphasize the fun, interactive, and personalized aspects of AI.

Examples include voice-enabled smart rooms, robotic servers with personality, and chatbots that offer playful banter. These features can enhance perceived enjoyment and

THE NEXT FRONTIER

This study opens new avenues for research. Future work could explore additional outcomes such as word-of-mouth, willingness to pay, and emotional loyalty. Researchers might also examine generational differences more deeply, comparing digital natives with older users. Another opportunity lies in analyzing specific AI applications—such as chatbots versus robots—and how their hedonic and utilitarian attributes influence user behavior. As AI continues to evolve, understanding these dynamics will be critical.

Ultimately, the study suggests that the future of AI in hospitality is not just smart—it is joyful. And that may be the key to lasting adoption.

Generational insights: Younger users value enjoyment, older users seek confirmation.

RESEARCHERS IN FOCUS

Dr. Arthur Huang, with a rich interdisciplinary background, bridges engineering and tourism. Affiliated with Rosen College and the College of Engineering, he researches smart cities and tourism. He holds degrees in Mechanics, Urban Planning, Computer Engineering, and a Ph.D. in Civil Engineering focused on transportation systems.

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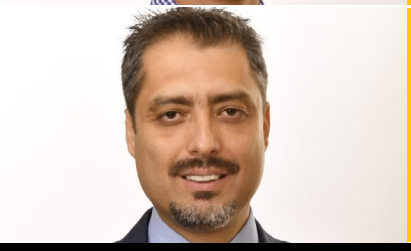

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REFERENCES:

Huang, A., Ozturk, A. B., Zhang, T., de la Mora Velasco, E., & Haney, A. (2024). Unpacking AI for hospitality and tourism services: Exploring the role of perceived enjoyment on future use intentions. *International Journal of Hospitality Management,* 119, 103693.

AUTHORS' RESPONSE

Why did you choose to expand the expectation-confirmation model with perceived enjoyment?

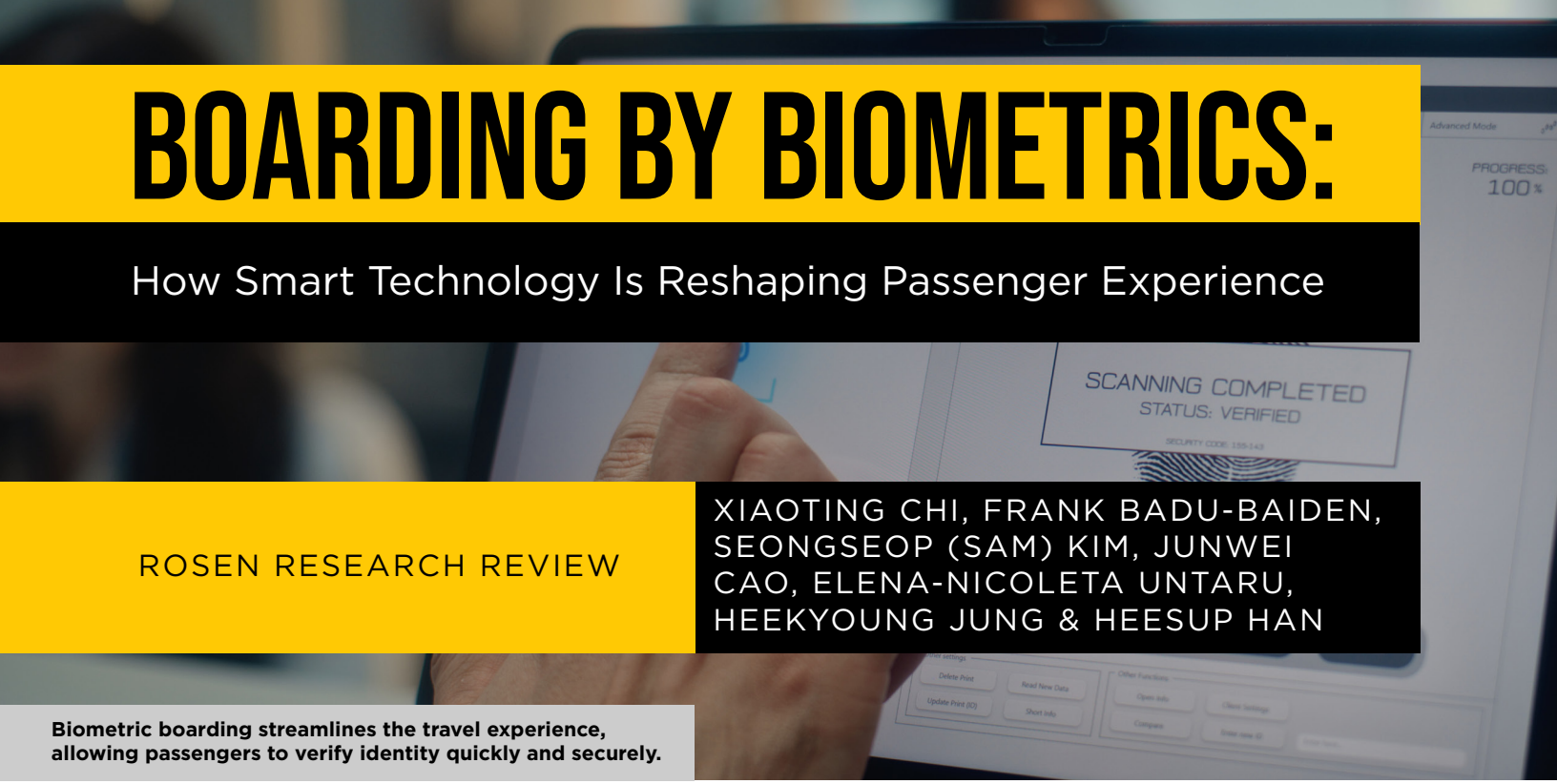
"We felt that traditional models focused too heavily on utility and overlooked the emotional side of technology use. In hospitality and tourism, experiences are inherently emotional. Guests do not just want efficiency—they want delight. By adding perceived enjoyment to the model, we were able to capture a more complete picture of what drives satisfaction and continued use. This addition reflects the reality that people engage with AI not just because it works, but because it feels good to use. It also helps practitioners design services that resonate on a deeper level.

What surprised you most about the demographic findings?

"We were intrigued by how age influenced the importance of different factors. Older users placed more emphasis on confirmation—whether AI met their expectations. Younger users, on the other hand, responded more strongly to enjoyment. This suggests that emotional engagement plays a bigger role for digital natives, while reliability matters more to older guests. It highlights the need for personalized AI experiences that cater to different age groups. Understanding these nuances can help providers tailor their services and improve adoption across diverse markets.

BOARDING BY BIOMETRICS:

How Smart Technology Is Reshaping Passenger Experience



ROSEN RESEARCH REVIEW

XIAOTING CHI, FRANK BADU-BAIDEN, SEONGSEOP (SAM) KIM, JUNWEI CAO, ELENA-NICOLETA UNTARU, HEEKYOUNG JUNG & HEESUP HAN

Biometric boarding streamlines the travel experience, allowing passengers to verify identity quickly and securely.

The research by Chi, Badu-Baiden, Kim, Cao, Untaru, Jung, and Han explores how biometric boarding transforms airline travel. Using technology acceptance, agenda setting, and behavioral reasoning theories, the study reveals how ease of use, usefulness, media exposure, and attitudes shape adoption. Findings stress convenience, engagement, and targeted communication, with age and gender influencing responses. For airport managers and designers, the research offers practical strategies for secure, efficient, and passenger-centered boarding systems.

WHEN YOUR FACE IS YOUR TICKET: THE RISE OF BIOMETRIC BOARDING

The global aviation industry is undergoing a transformation, with smart technologies revolutionizing the way people travel and connect. The COVID-19 pandemic accelerated the adoption of digital solutions, making travelers more interested in seamless, contactless experiences. Among these innovations, biometric boarding technology stands out as a game changer, promising to streamline airport processes and strengthen security. By using unique physiological traits such as facial recognition, fingerprints, or iris scans, biometric boarding verifies passenger identity quickly and accurately, reducing bottlenecks and minimizing fraud.

Airlines and airports are integrating biometric systems to enhance efficiency and reliability, aiming to create a smoother journey for passengers. The potential benefits extend beyond operational improvements, offering new opportunities for value co-creation among airlines, employees, and travelers. Biometric boarding can reshape expectations, revolutionize interactions with airport systems, and set new standards for convenience and safety.

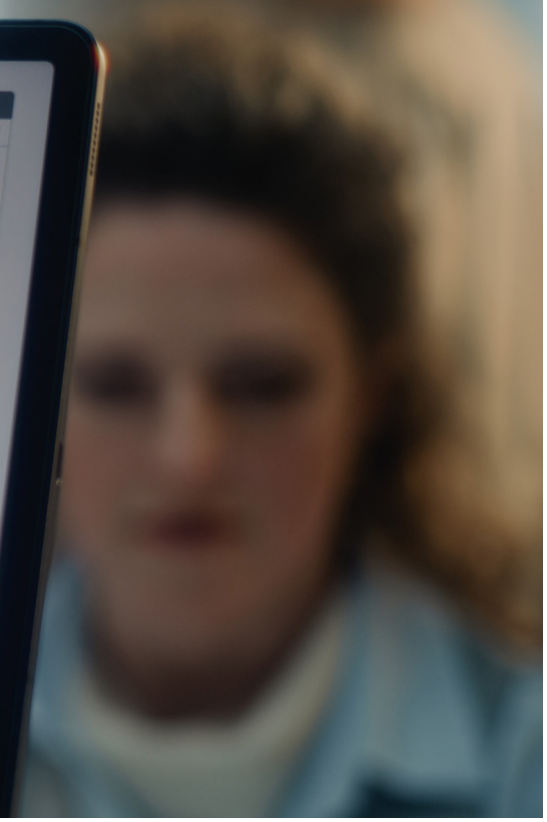
Despite its promise, the adoption of biometric boarding technology faces challenges. Previous research has often relied on single theoretical models, overlooking the complex interplay of psychological, social, and environmental factors that influence acceptance.

The present study addresses this gap by combining the technology acceptance model, agenda setting theory, and behavioral reasoning theory to analyze how passengers perceive and respond to biometric boarding. The research explores the roles of ease of use, usefulness, media exposure, engagement, attitude, and behavioral intentions, while also considering the impact of age and gender. By focusing on the Korean marketplace, the study provides a holistic understanding of the factors that drive or hinder adoption, offering valuable insights for airports and airlines seeking to enhance the smart travel experience.

FROM THEORY TO TAKEOFF: UNDERSTANDING PASSENGER ADOPTION

Biometric boarding technology represents a convergence of innovation and practicality in the aviation industry. Its roots trace back to the nineteenth century, when physical measurements were first used for identification. Today, biometrics rely on both physiological and behavioral traits, offering universality, distinctiveness, permanence, and collectability. Airports and airlines see biometric systems as a way to improve security, expedite boarding, and enhance passenger satisfaction.

To understand how passengers adopt biometric boarding, the study integrates three key theories. The technology acceptance model focuses on perceived ease of use and usefulness, which are known to shape



attitudes and engagement. If passengers find biometric boarding easy and beneficial, they are more likely to develop positive attitudes and engage with the technology. Engagement, in turn, leads to stronger behavioral intentions and sustained use.

Agenda setting theory highlights the role of media exposure in shaping awareness and engagement. Media coverage can inform passengers about the features, security measures, and convenience of biometric boarding, encouraging them to participate in trials and share their experiences. Awareness alone, however, may not be enough to change attitudes; active engagement is often required to overcome concerns about privacy and security.

Behavioral reasoning theory adds another layer, examining how innovativeness, convenience, insecurity, and anxiety influence attitudes and intentions. Passengers weigh the benefits and drawbacks, considering whether biometric boarding simplifies tasks or raises concerns about data protection. Innovativeness and convenience tend to promote adoption, while insecurity and anxiety can create resistance.

The study also explores the moderating effects of age and gender. Younger passengers and males are more influenced by engagement and convenience, while females and older travelers are more sensitive to awareness, insecurity, and anxiety. These insights reveal the complexity of passenger decision-making, emphasizing the need for targeted communication and design strategies. By combining multiple theories, the research offers a comprehensive framework for understanding how passengers embrace or resist biometric boarding technology.

SURVEYING THE SMART TRAVELER: HOW THE STUDY WAS DONE

The research team conducted a web-based survey in South Korea, targeting individuals with domestic or international travel experience who had used biometric boarding technology within the past two years. The survey was distributed by a leading market research company, reaching over twelve thousand potential respondents. After rigorous screening for eligibility and data quality, 331 valid cases were retained for analysis.

The survey measured media exposure, perceived ease of use, perceived usefulness, awareness, attitude, engagement, innovativeness, convenience, insecurity, anxiety, and behavioral intentions. Established scales from previous studies were used to ensure reliability and validity. Data analysis employed partial least squares structural equation modeling, which is well-suited for complex models and non-normal data. The sample included a balanced mix of genders, a wide age range, and diverse travel frequencies, providing a robust foundation for understanding passenger behaviors and attitudes toward biometric boarding.

WHO BOARDED THE STUDY? THE PASSENGER PROFILE

The final sample consisted of 331 airline passengers from South Korea, with nearly equal representation of males and females. Most participants were between thirty and fifty-nine years old, and the majority held university degrees. About sixty percent were married, and income levels varied widely. Most respondents traveled one to two times per year, and nearly half had used biometric boarding technology one or two times, with a significant portion using it three or four times. This diverse group reflects the evolving demographics of air travelers, ensuring that the study's findings are relevant to a broad spectrum of passengers and travel experiences.

WHAT DRIVES ADOPTION? INSIGHTS FROM THE BOARDING GATE

> "THIS RESEARCH SHOWS ENGAGEMENT, CONVENIENCE, AND COMMUNICATION DRIVE BIOMETRIC ADOPTION, WHILE AGE AND GENDER SHAPE PASSENGER REACTIONS TO TECHNOLOGY AND SECURITY CONCERNS."

The study found that perceived ease of use and usefulness significantly influence engagement with biometric boarding technology, but their direct impact on attitude is limited. Engagement emerges as a key mediator, shaping positive attitudes and driving behavioral intentions to use biometric boarding. Media exposure plays a crucial role in increasing awareness and engagement, but awareness alone does not strongly affect attitudes. Innovativeness and convenience are powerful motivators, positively influencing both attitudes and intentions, while anxiety negatively impacts behavioral intentions. Interestingly, insecurity and anxiety do not significantly affect attitudes, suggesting that passengers may trust the technology or accept certain risks. Age and gender moderate these relationships, with younger passengers and males more

Convenience and efficiency make biometric boarding appealing for travelers of all ages and backgrounds.

> "TO BUILD TRUST AND LOYALTY, AIRPORTS MUST DESIGN SECURE, USER-FRIENDLY BIOMETRIC SYSTEMS AND USE INCLUSIVE MESSAGING TO ADDRESS EMOTIONAL NEEDS ACROSS DIVERSE PASSENGER GROUPS."

influenced by engagement and convenience, and females and older travelers more sensitive to awareness and emotional concerns. These findings highlight the importance of designing user-friendly, convenient systems and communicating benefits effectively to diverse passenger groups.

BEYOND THE SCAN: RETHINKING PASSENGER EXPERIENCE AND TRUST

According to Chi and colleagues, the adoption of biometric boarding technology is shaped by a complex interplay of cognitive, emotional, and social factors. While traditional models emphasize ease of use and usefulness, the study reveals that engagement is the real engine driving positive attitudes and intentions. Passengers who actively interact with biometric systems are more likely to develop favorable perceptions and continue using the technology. Media exposure amplifies this effect, raising awareness and encouraging participation, but awareness alone is not enough to overcome concerns or build trust.

Innovativeness and convenience stand out as decisive factors, motivating passengers to embrace biometric boarding for its novelty and practical benefits. However, emotional barriers such as anxiety can still hinder adoption, especially among female and older travelers. The limited impact of insecurity on attitudes suggests a growing acceptance of technology-driven environments, where passengers may prioritize convenience over privacy concerns.

The study's moderation analysis underscores the need for tailored communication and design strategies. Younger passengers respond to engagement and convenience, while older travelers require reassurance about security and privacy. Gender differences highlight the importance of awareness and emotional support for female passengers. These insights challenge airports and airlines to move beyond one-size-fits-all solutions, creating boarding experiences that are not only efficient but also emotionally supportive and inclusive. By integrating multiple theoretical perspectives, the research provides a roadmap for understanding and enhancing passenger adoption of biometric boarding technology.

DESIGNING THE FUTURE GATE: STRATEGIES FOR SMART BOARDING

Airport managers, airlines, and tech developers can boost biometric boarding adoption through strategic media exposure. Social media, TV, and endorsements by celebrities or experts help highlight its convenience and innovation. System design must focus on ease of use and practical benefits. Regular updates and user feedback improve the experience, while clear communication about privacy and security—especially for older and female passengers—builds trust.

Inclusive messaging is key. Featuring older travelers and emphasizing safety and convenience for women can foster acceptance. By addressing both cognitive and emotional factors, airports can encourage positive behavioral intentions. These insights also apply to other industries adopting new tech, underscoring the need to understand user concerns in service design.

NEXT BOARDING CALL: EXPANDING RESEARCH AND PRACTICE

This study offers valuable insights but also opens paths for future research. Testing the framework across countries can reveal cultural differences in tech acceptance. Integrating credibility theory and comparative analysis may deepen understanding of trust and expertise. Future research should examine outcomes like word-of-mouth, willingness to pay, and satisfaction with alternatives. Exploring emotional and psychological adoption processes can refine promotion strategies.

The combined use of technology acceptance, agenda setting, and behavioral reasoning theories creates a flexible model for analyzing user behavior. Applying it to healthcare, smart cities, and finance can reveal what drives engagement and trust, ensuring new technologies meet diverse user needs.

RESEARCHERS IN FOCUS

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REFERENCES:

Chi, X., Badu-Baiden, F., Kim, S., Cao, J., Untaru, E. N., Jung, H., & Han, H. (2025). Investigation on airline passengers' behaviors for biometric boarding technology: a combined application of TAM, AST, and BRT. *Asia Pacific Journal of Tourism Research,* 30(2), 247-264.

AUTHORS' RESPONSE

How did you ensure that the survey captured authentic passenger experiences with biometric boarding technology?

"We focused on recruiting participants who had actual experience using biometric boarding technology within the past two years, ensuring that responses reflected real-world interactions rather than hypothetical scenarios. The survey included clear definitions and examples of biometric systems, helping respondents accurately recall and evaluate their experiences. Rigorous screening and data cleaning processes were used to maintain data quality, and established measurement scales from previous research ensured reliability and validity. By targeting a diverse sample of travelers with varying frequencies of biometric boarding use, we aimed to capture a comprehensive picture of passenger attitudes and behaviors.

What surprised you most about the role of engagement and emotional factors in technology adoption?

"One of the most striking findings was the central role of engagement in shaping attitudes and behavioral intentions. While ease of use and usefulness are important, it is active involvement with biometric boarding that truly drives positive perceptions and continued use. Emotional factors, particularly anxiety, emerged as significant barriers for certain groups, highlighting the need for supportive communication and design. The limited impact of insecurity on attitudes suggests that passengers may be increasingly willing to accept technology-driven environments, prioritizing convenience over privacy concerns. These insights challenge traditional models and underscore the importance of addressing both cognitive and emotional needs in technology adoption.

SKY-HIGH EXPECTATIONS:

How Drones and Emotions are Reshaping Food Delivery in Africa

ROSEN RESEARCH REVIEW

FRANK BADU-BAIDEN, WEISHENG CHIU, EUDORA HAGAN & VICTOR ANDERSON HODIBERT

Drone delivery offers a solution to traffic congestion in Ghana's growing cities.

The research by Badu-Baiden, Chiu, Hagan, and Hodibert unpacks the emotional, social, and psychological puzzle behind consumer acceptance of drone food delivery in Ghana. Using complexity theory and fsQCA, the study shows multiple adoption paths. Motivation, emotion, perceived risk, and social influence shape intention and willingness to pay. Positive emotions and usefulness drive interest, while privacy concerns and negative feelings hinder it. Trust and cultural context matter deeply.

DRONES, DINNERS, AND DECISIONS

Imagine ordering dinner and watching it descend from the sky. In Ghana, this futuristic vision is inching closer to reality. Drone food delivery, once a sci-fi fantasy, is now being tested and adopted across the globe. From KFC in South Africa to Chick-fil-A in the U.S., drones are changing how food reaches customers. But in emerging markets like Ghana, the story is more complex.

Urban congestion, digital payment systems, and a tech-savvy youth population make Ghana a promising ground for drone delivery. Yet, adoption is not just about infrastructure—it is about people. How do consumers feel about drones? Are they excited or anxious? Will they pay more for the convenience, or shy away due to privacy concerns?

This study dives into those questions, using complexity theory to unpack the tangled web of motivations, emotions, and perceptions that shape consumer behavior. Unlike traditional models that look for linear cause-and-effect, complexity theory embraces the messiness of human decision-making. It recognizes that multiple paths can lead to the same outcome—and that the absence of one factor does not always mean failure.

By surveying over 400 food delivery users in Ghana and analyzing their responses with fsQCA, the researchers uncovered surprising patterns. Some consumers are driven by excitement and novelty. Others are held back by fear and skepticism. And many are influenced by what their peers think.

This is not just a story about drones—it is a story about how technology meets culture, emotion, and trust. As Ghana and other African nations explore drone delivery, understanding these human factors will be key to success.

BEYOND THE BUZZ: WHAT REALLY DRIVES DRONE ADOPTION

Before this study, most research on drone food delivery focused on technical feasibility or isolated psychological factors. Scholars explored perceived usefulness, ease of use, and innovativeness. But these studies often missed the bigger picture—the complex interplay of emotions, social norms, and risk perceptions that shape consumer behavior.

Badu-Baiden and colleagues saw a gap. They wanted

Positive emotions like excitement and pride drive adoption of drone food delivery.

to understand not just what drives adoption, but how different factors combine to create distinct consumer profiles. To do this, they turned to complexity theory, which views behavior as the result of multiple interacting forces. It embraces equifinality—the idea that different paths can lead to the same outcome—and causal asymmetry, meaning the same factor can have different effects depending on context.

They also chose fsQCA, a method that identifies combinations of conditions rather than isolated variables. This allowed them to explore how motivation, volition, emotion, and perceived risk interact to influence intention and willingness to pay more.

The researchers proposed three key tenets:

1. There is no single optimal configuration for adoption—multiple combinations can work.
2. The same factor can play different roles depending on its context.
3. At least one of the five categories (motivation, volition, emotion, risk, social influence) must be present in any successful configuration.

This approach moves beyond traditional models like the Technology Acceptance Model (TAM) or Theory of Planned Behavior. It offers a richer, more nuanced understanding of how consumers in emerging markets make decisions about novel technologies.

> **“WE FOUND THAT DRONE DELIVERY ADOPTION IS NOT DRIVEN BY A SINGLE FACTOR, BUT BY EMOTIONAL, SOCIAL, AND PSYCHOLOGICAL CONFIGURATIONS THAT VARY ACROSS CONSUMERS AND CONTEXTS.”**

In Ghana, where drone delivery is still new, this complexity matters. Consumers are navigating unfamiliar territory, balancing excitement with caution. By capturing this dynamic, the study provides a roadmap for understanding—and influencing—consumer behavior in the age of aerial food delivery.

INSIDE THE DRONE DECISION LAB

To explore these dynamics, the researchers conducted an online survey in Ghana between April and July 2023. Participants were screened to ensure they had used food delivery services in the past year. Before answering, they watched a short video explaining drone food delivery.

The survey measured five categories of factors: motivation (e.g., usefulness, ease of use), volition (e.g., control), emotion (positive and negative), perceived risk (e.g., privacy, performance), and social influence. Responses were collected from 411 valid participants.

Using fsQCA, the team transformed the data into fuzzy-set scores, allowing them to identify multiple causal configurations. They analyzed which combinations led to high or low intention to use drone delivery and willingness to pay more. This method allowed them to capture the complexity of consumer behavior, revealing not just what matters—but how it matters in combination with other factors.

MEET THE MODERN GHANAIAN CONSUMER

The study surveyed 411 food delivery users in Ghana, a country with a growing middle-income, tech-savvy

Food service providers must balance innovation with safety and trust.

population. Most respondents were in their thirties, employed full-time, and had at least an undergraduate education. They used platforms like Bolt Food, Uber Eats, and Yango Deli.

This demographic represents the frontline of digital adoption in Ghana. Their responses offer a window into how emerging market consumers perceive drone technology—not just as a tool, but as a symbol of innovation, status, and convenience.

MULTIPLE PATHS TO YES—AND TO NO

The study identified four distinct configurations leading to high intention to use drone food delivery. Common elements included perceived usefulness, positive attitude, and anticipated positive emotion. Some also featured social norms and ease of use, while others tolerated risks like performance or financial concerns.

Two configurations led to high willingness to pay more, emphasizing motivation, emotion, and social influence. Interestingly, some consumers were willing to pay more despite privacy or financial risks—if emotional and social benefits were strong.

Conversely, negative emotions and perceived risks—especially privacy and social—were strong deterrents. These appeared in configurations linked to low intention and low willingness to pay more.

The takeaway? There's no one-size-fits-all consumer. Adoption depends on how factors align—and how they resonate emotionally and socially.

EMOTION, TRUST, AND THE SOCIAL SIGNALS OF TECHNOLOGY

According to Badu-Baiden and colleagues, drone delivery is more than logistics—it's an emotional and social experience. Consumers who feel excited, proud, or happy about drone delivery are more likely to adopt it. These emotions often stem from perceived usefulness and novelty.

But emotions alone aren't enough. Social norms play a powerful role, especially in Ghana's collectivist culture. If friends and family support drone delivery, consumers are more likely to follow. If they fear judgment or feel the service clashes with their self-image, they may resist.

> "TO WIN CONSUMER TRUST, FOOD SERVICE PROVIDERS MUST DESIGN DRONE DELIVERY EXPERIENCES THAT FEEL EXCITING, SAFE, AND SOCIALLY VALIDATED—NOT JUST FAST."

Risk perceptions matter—but not equally. Performance and financial risks can be tolerated if benefits are clear. Privacy and social risks, however, are more likely to derail adoption. These concerns tap into deeper fears about control, surveillance, and identity.
The study also highlights causal asymmetry. The same factor—like ease of use—can appear in both high and low adoption scenarios, depending on context. This challenges linear models and calls for a more holistic view.

In short, drone delivery adoption is a dance between excitement and caution, innovation and tradition. Understanding this dance is key to designing services that resonate—not just function.

DESIGNING FOR TRUST AND DELIGHT

For food service providers in emerging markets, this study offers a playbook. First, highlight benefits. Speed, convenience, and novelty are powerful motivators. Use marketing to show real-life scenarios—like solving traffic or reaching remote areas.

Second, build emotional appeal. Consumers want to feel excited, proud, and connected. Use storytelling, social media, and influencers to create buzz.

Third, address risks head-on. Be transparent about data policies and emphasize security. Reassure users about safety and control.
Fourth, leverage social influence. In communities where tech signals status, position drone delivery as premium. Elsewhere, focus on practicality.

Finally, offer flexible pricing. Discounts, trials, or tiered options can ease financial concerns. Show drone delivery is not just futuristic—it's accessible.

THE NEXT CHAPTER IN AERIAL INNOVATION

Future research could explore actual users versus hypothetical ones, revealing gaps between expectation and reality. Other avenues include technology readiness, cultural influences, and convergence with innovations like AI ordering or smart kitchens.

Expanding to other African nations could offer comparative insights. As drone delivery evolves, understanding the human side remains essential to its success.

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REFERENCES:

Badu-Baiden, F., Chiu, W., Hagan, E., & Hodibert, V. A. (2025). Unmanned deliveries: A complexity theory approach to understand consumer acceptance and intention in drone food delivery in Africa. *International Journal of Hospitality Management*, 130, 104234.

AUTHOR'S RESPONSE

Why did you choose Ghana as the focus for this study?

Ghana offers a unique blend of traditional and modern consumer behaviors. It has a rapidly growing digital economy, widespread mobile money usage, and urban congestion that makes drone delivery highly relevant. At the same time, drone technology is still emerging in the food sector, which allowed us to explore consumer perceptions in a context where the service is novel but feasible. Ghana's regulatory openness to drones, demonstrated by successful medical deliveries, also made it an ideal setting to study potential adoption in hospitality. We wanted to understand how consumers in such a transitional market navigate innovation, emotion, and risk.

What surprised you most about the findings?

We were surprised by how much emotional anticipation influenced intention and willingness to pay. Positive emotions like excitement and pride were just as important as perceived usefulness. Also, the fact that some consumers were willing to tolerate financial or performance risks if they felt emotionally connected to the service was unexpected. It showed us that adoption is not just rational—it is deeply emotional and social. This insight challenges traditional models and highlights the need for more holistic approaches in studying technology adoption.

Speed, convenience, and novelty are key benefits of using drones for food delivery.

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Bear Robotics aims to ease staffing shortages and reduce physical strain, giving teams more time to connect with guests.

PUTTING HUMANITY FIRST IN SERVICE ROBOTICS:

For me, robotics is about giving hospitality teams the breathing room to care more deeply for people.

INTERVIEW BY MANUEL RIVERA & CYNTHIA MEJIA

WITH JUAN HIGUEROS, CO-FOUNDER & COO OF BEAR ROBOTICS

In an engaging conversation with Juan Higueros, Co-Founder and COO of Bear Robotics, we explore his vision for human-centered robotics and how technology can empower hospitality teams to deliver deeper, more meaningful guest experiences.

WHAT DRIVES ME EVERY DAY

I'm Juan Higueros, Co-Founder and Chief Operating Officer of Bear Robotics. My path has taken me from strategy and M&A at KPMG to corporate development at Polycom, grounded by a B.A. in Economics from UCLA and an M.B.A. from MIT Sloan. At Bear Robotics, we've focused on building AI-driven service robots that can run food and bus tables, not to replace people, but to ease the most repetitive and physically punishing tasks so teams can deliver the kind of care that defines hospitality. For me, technology should quietly empower the human side of service. That's the vision I carry into every decision: keep dignity intact, reduce friction, and protect the moments of connection that matter most.

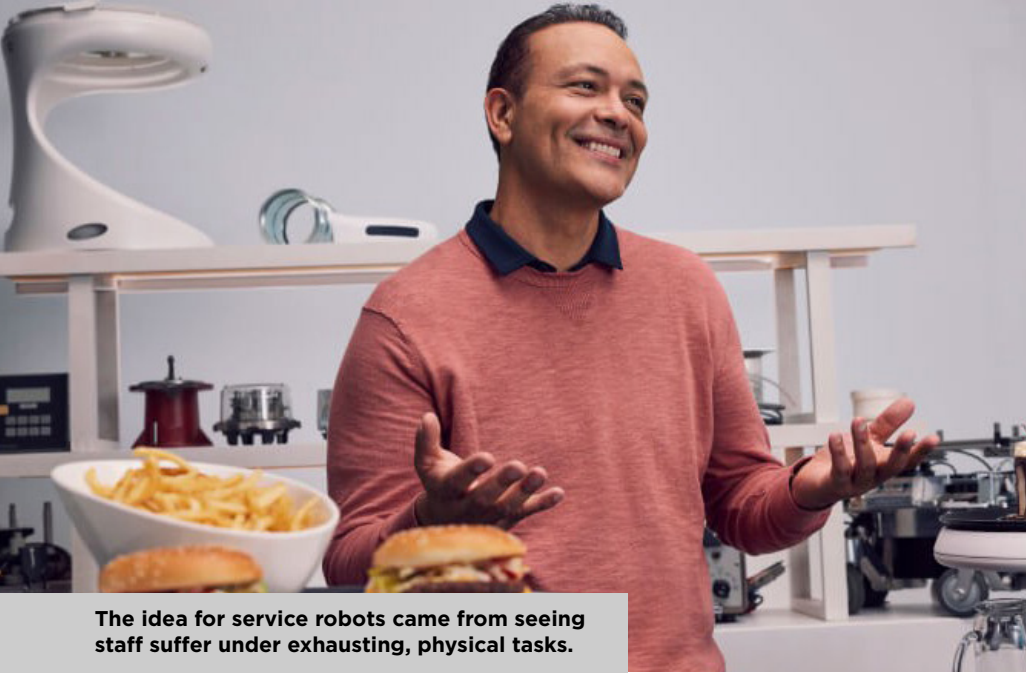
ORIGINS AND VISION: WHY I STARTED, WHAT I SEE

I still carry the memory of one early night with our first prototype in our co-founder's own restaurant. We were short-staffed, and a cook who was also running food broke down before her shift. Her back pain was severe, but she couldn't take time off. She needed to send money home for her father's funeral in Guatemala—a funeral she couldn't afford to attend. For me, that moment crystallized what was broken: the people carrying hospitality on their shoulders were suffering, and the system wasn't built to support them.

> "WE BUILD TOOLS THAT STRIP AWAY FRICTION AND HEAVY LIFTING SO PEOPLE HAVE THE TIME AND ENERGY FOR THE HUMAN WORK: EMPATHY, STORYTELLING, AND CONNECTION. THAT'S WHERE GREAT SERVICE—AND REAL CARE—ACTUALLY LIVE."

From the start, I didn't see Bear Robotics as "building robots for the sake of it." I saw us building tools to remove the most repetitive, physically punishing tasks so people could focus on the part of hospitality that really matters: caring and service for guests. That vision hasn't changed; if anything, it's expanded. Today, I see robots as a natural extension of the service team, helping businesses run smoothly and giving workers back essential breathing room.

I believe hospitality is defined by its human touch. Robots don't ruin hospitality—bad service does. Our job is to strip away friction so humanity has space to breathe. When servers aren't carrying forty-pound trays back and forth all night, they can spend more time connecting with guests. In my view, robots take the labor



The idea for service robots came from seeing staff suffer under exhausting, physical tasks.

Robots take on heavy, repetitive work so people can focus on guests.

out of labor so people can do what they do best: empathy, storytelling, and connection. That's the heart of why we started and the anchor of what we still see ahead.

> "FOR ME, ROBOTS DON'T RUIN HOSPITALITY—BAD SERVICE DOES."

WORKFORCE AND SERVICE CULTURE: HIGH TECH, HIGH TOUCH

I hear the same refrain across the U.S.: "I can't find enough staff to even open my dining room." For me, robots help keep the doors open, but more importantly, they protect workers from burnout. When you pull the most grueling, repetitive tasks out of a shift, you free people to step into higher-value roles—from shaping guest experiences to training teams. I don't see that as job loss; I see that as career growth.

"High tech, high touch" only works when design is intentional. I believe technology should fade into the background and make people more present, not less. If a robot silently clears tables, a server can be fully with a guest who just went through a breakup for five more minutes. To me, that's technology amplifying human touch, not replacing it. The goal is to create space—space for empathy, for listening, for the little gestures that turn service into care.

My experience has taught me that when we design with empathy, we reinforce dignity. Robots aren't coming for people's jobs; they're coming for the strain and the grind that push people to the edge. I see a workforce culture where technology carries the heavy load and people carry the heart of hospitality. That's how "high tech, high touch" becomes a lived reality on the floor.

DESIGN AND GLOBAL PERSPECTIVES: MAKING ROBOTS PART OF THE TEAM

At Bear Robotics, we design robots as if they're teammates. For me, that means they must be intuitive, approachable, and simple to use. When a guest sees a robot gliding by, I want it to feel like part of the restaurant's natural flow—not a disruption. And for employees, my threshold is straightforward: after five minutes, do they feel like the robot is just another teammate helping them get through the rush? If the answer is yes, then I believe we did our job.

Across markets, motivations differ, and we pay attention to those contrasts. In the U.S., the conversation often begins with labor shortages. I remember a hospitality customer telling us, "Anything that helps our servers move things along is a good thing; happier servers make better service." That's the lens here: survival and retention. In Asia, the shortages exist too—especially with efficiency. Robots are welcomed because they deliver precision and consistency.

> "WHEN ROBOTS CARRY THE GRIND AND HUMANS CARRY THE HEART, WE PROTECT DIGNITY, REDUCE BURNOUT, AND CREATE THE SPACE FOR HOSPITALITY'S MOST ESSENTIAL MOMENTS OF CONNECTION."

What matters to me is the outcome, which is remarkably similar across cultures: robots aren't about replacing people; they're about enabling better experiences for everyone. I see thoughtful design as the bridge—making robots feel like part of the team so guests experience ease, employees feel supported, and operators see smoother service. When that happens, culture and technology meet where hospitality lives.

Bear Robotics makes robots intuitive so staff feel they're part of the team.

LEADERSHIP AND CROSS-SECTOR LESSONS: TRUSTING CHANGE

I've learned that transparency and trust are everything when leaders introduce robotics. If people think robots are coming for their jobs, fear sets in quickly. For me, effective leadership frames technology as a partner, not a threat. The organizations I've seen succeed communicate early, train thoroughly, and let staff experience firsthand that robots are there to help, not replace. When people see the daily reality—less strain, more support—trust begins to grow.

I also borrow perspectives from other industries. In healthcare, robots deliver medicine, but no one calls them "nurses." In logistics, robots move pallets, but they're not "workers." Hospitality can adopt the same mindset. I believe robots should do the heavy lifting so people can do the connecting and creating. The industries that thrive are the ones that clearly separate the mechanical from the human—and then integrate them seamlessly.

That separation, followed by thoughtful integration, is how I've seen fear turn into confidence.

> "I DON'T ASK TEAMS TO CHOOSE BETWEEN PEOPLE AND TECHNOLOGY; I ASK THEM TO ORCHESTRATE BOTH."

Leaders who guide change this way create cultures where technology feels like an ally. To me, that's the difference between disruption that erodes morale and innovation that elevates the human experience.

EDUCATION AND THE FUTURE: PREPARING LEADERS FOR "HUMANS + ROBOTS"

I don't believe future leaders have to choose between people and technology; their job will be to integrate both. What matters to me is building a skill set that spans guest psychology and system design. I want leaders with empathy to guide teams and with technical literacy to evaluate tools. Above all, I value the courage to embrace change rather than fear it.

Looking ten years ahead, I see every hospitality team including both humans and robots, and the best leaders orchestrating both. Just as no hotel operates without a reservation system today, I believe no restaurant will operate without robotic support. For higher education, that means training leaders who view technology not as optional but as core infrastructure. For industry, it means starting now: experiment, iterate, and involve employees in shaping how robots are integrated.

I see the future not as man or machine but both, working together. If we teach and lead with that understanding, we'll keep hospitality's human essence intact while giving teams the tools to thrive.

FOR ME, THE FUTURE IS HUMAN + ROBOT

Looking ahead, I see hospitality where humans and robots work in concert. Robots will handle the heavy lifting and repetitive strain; people will create the moments that matter. My commitment is to design with empathy, lead with transparency, and educate with foresight so technology stays in service of humanity. I believe tomorrow's hospitality will feel more personal, not less, because teams will have the breathing room to be present. If we keep integrating thoughtfully—experimenting, iterating, and inviting employees into the process—we'll build operations that are resilient and human-centered. For me, that's the purpose: give people the tools to thrive, and let hospitality be the care we share.

> "I SEE A FUTURE WHERE TECHNOLOGY ELEVATES HOSPITALITY. WITH EMPATHY AND COURAGEOUS DESIGN, ROBOTS BECOME PARTNERS—NOT REPLACEMENTS—HELPING US CREATE EXPERIENCES THAT FEEL MORE HUMAN, MEANINGFUL, AND CONNECTED."

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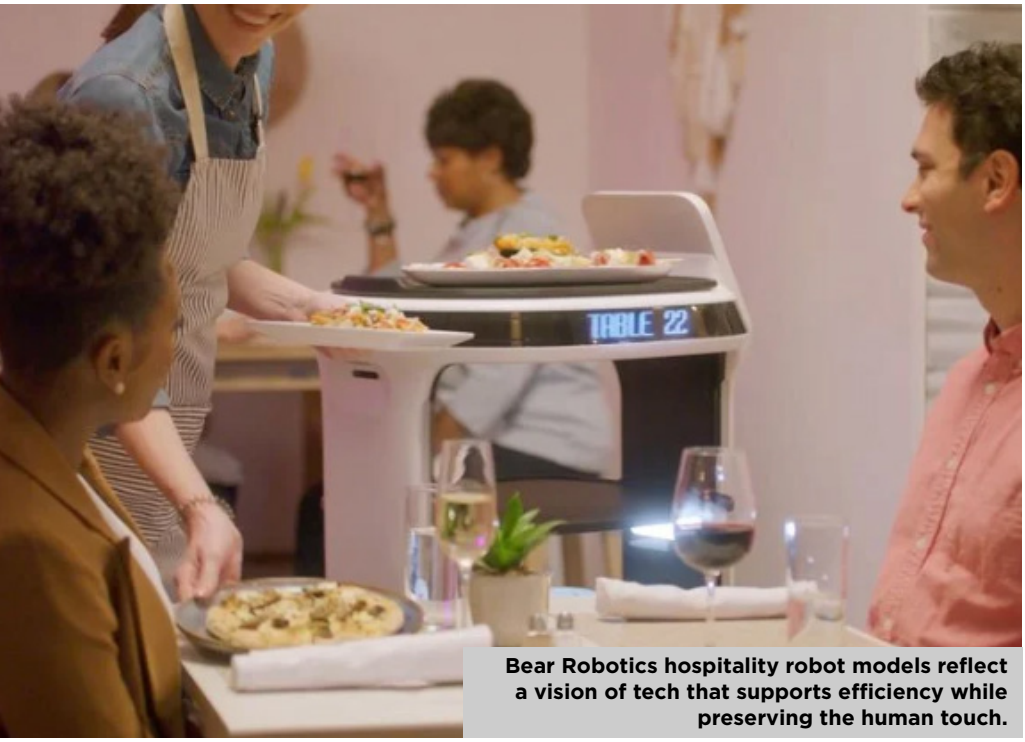

Bear Robotics hospitality robot models reflect a vision of tech that supports efficiency while preserving the human touch.

Juan Higueros

Co-Founder and COO, Bear Robotics

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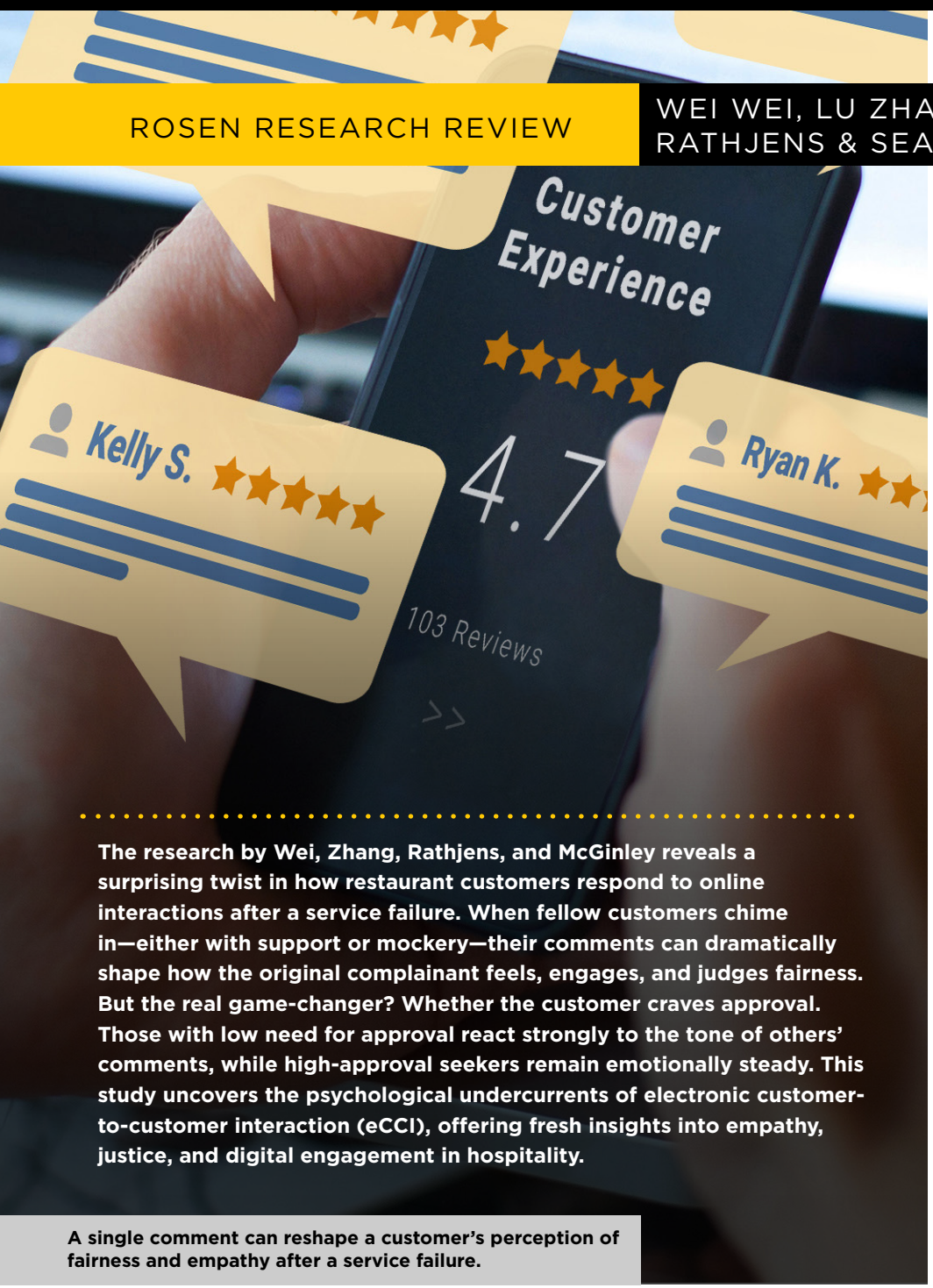
Juan Higueros is the Co-Founder and Chief Operating Officer of Bear Robotics, where he leads the development of AI-driven service robots designed to handle food running and bussing tasks, easing physical strain on hospitality workers and improving operational efficiency. His vision focuses on integrating technology to support—not replace—the human touch in hospitality. Before founding Bear Robotics, Juan served as Director of Strategy and M&A at KPMG and Director of Corporate Development at Polycom, gaining extensive experience in business growth and innovation. He holds a B.A. in Economics from UCLA and an M.B.A. from the MIT Sloan School of Management. Juan's work reflects a commitment to creating solutions that empower teams, protect dignity, and enhance guest experiences through thoughtful, human-centered design.

WHEN CUSTOMERS COLLIDE ONLINE:

The Hidden Power of Approval In Digital Service Failures

ROSEN RESEARCH REVIEW

WEI WEI, LU ZHANG, BOBBIE RATHJENS & SEAN MCGINLEY



The research by Wei, Zhang, Rathjens, and McGinley reveals a surprising twist in how restaurant customers respond to online interactions after a service failure. When fellow customers chime in—either with support or mockery—their comments can dramatically shape how the original complainant feels, engages, and judges fairness. But the real game-changer? Whether the customer craves approval. Those with low need for approval react strongly to the tone of others' comments, while high-approval seekers remain emotionally steady. This study uncovers the psychological undercurrents of electronic customer-to-customer interaction (eCCI), offering fresh insights into empathy, justice, and digital engagement in hospitality.

A single comment can reshape a customer's perception of fairness and empathy after a service failure.

THE DIGITAL DINER'S DILEMMA

In the wake of the pandemic, hospitality businesses have faced not only economic recovery but a new frontier of customer behavior—online interactions between guests. These electronic customer-to-customer interactions, or eCCIs, are reshaping how service failures play out. Picture this: a frustrated diner posts a complaint on Yelp. Before the restaurant can respond, another customer jumps in—either to console or criticize. That moment, once invisible to managers, now ripples through the digital landscape, influencing perceptions, emotions, and future engagement.

The stakes are high. As social media becomes a primary outlet for customer expression, the tone of peer responses can either soothe or inflame dissatisfaction. And while firms scramble to craft the perfect apology, they may be missing a crucial variable: how customers react to each other.

This study dives into that overlooked space, asking not just what customers say, but how their psychological need for approval shapes their reactions. Do they seek validation from others? Or do they rely on their own judgment? The answers reveal a complex interplay between personality and digital discourse, with implications that stretch far beyond the restaurant table.

Hospitality firms must now consider not only their own voice but the chorus of customer voices that surround every complaint. As Wei and colleagues show, understanding the emotional dynamics of eCCI is no longer optional—it is essential to navigating the modern service landscape.

Hospitality firms must track not only reviews but the tone of customer-to-customer interactions.

BEFORE THE COMMENT SECTION BLEW UP

For years, hospitality research focused on the direct relationship between customers and service providers. But as digital platforms grew, a new player entered the scene: other customers. These interactions, once confined to physical spaces like lobbies or lounges, now unfold in comment sections and review threads. And they are not always kind.

Negative eCCI—think sarcasm, mockery, or outright bullying—has surged, especially in post-pandemic environments where tensions run high. Airline unions have reported thousands of cases of unruly passengers, and hospitality staff face increasing incivility not just in person but online. The ripple effect is real: one rude comment can spiral into widespread dissatisfaction.

> **"WE DISCOVERED THAT THE EMOTIONAL IMPACT OF PEER COMMENTS AFTER A SERVICE FAILURE DEPENDS NOT JUST ON WHAT IS SAID, BUT ON HOW MUCH THE CUSTOMER SEEKS APPROVAL FROM OTHERS."**

Yet not all customers react the same way. Some brush off negativity, others internalize it. The missing link? The psychological need for approval. This trait, rooted in social psychology, determines how much individuals seek validation from others. Those with high need for approval tend to conform, suppress negative emotions, and avoid conflict. Those with low need for approval are more independent, more expressive, and more reactive. Wei and colleagues saw an opportunity to connect these dots.

They asked: How does the need for approval shape a customer's response to eCCI after a service failure? Would a supportive comment from another customer boost empathy and engagement? Would a mocking reply deepen dissatisfaction?

To answer these questions, the researchers turned to the stimulus-organism-response (SOR) theory, which explains how external stimuli (like a fellow customer's comment) and internal traits (like need for approval) interact to shape behavior. The result is a nuanced framework that moves beyond simple cause and effect, revealing the emotional choreography behind every online exchange.

This study does not just add a chapter to the CCI literature—it rewrites the script. By blending personality psychology with digital hospitality dynamics, it opens a new lens on how customers experience, interpret, and respond to service failures in the age of social media.

INSIDE THE EXPERIMENTAL DINING ROOM

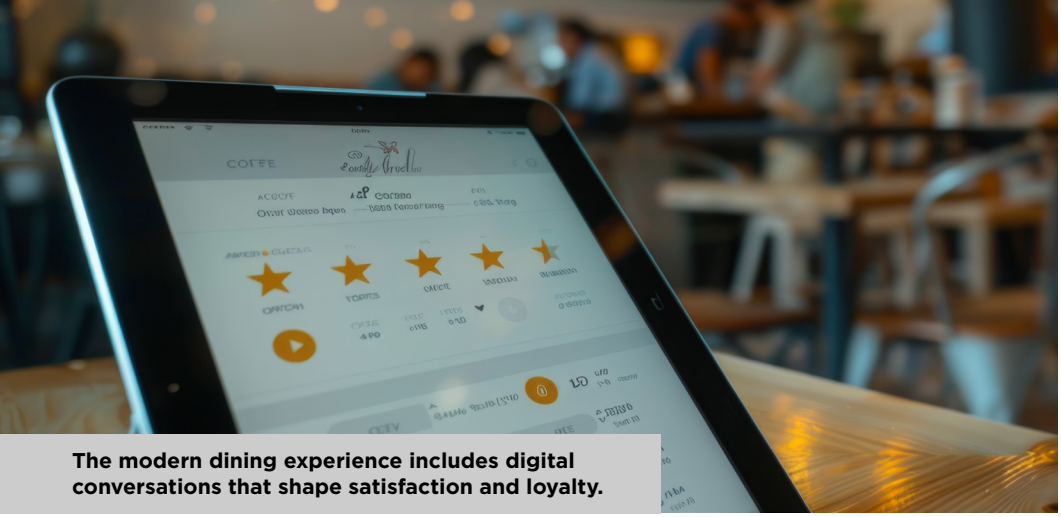
To explore these dynamics, the researchers designed a clever quasi-experiment using a fictional restaurant called ABC. Participants were shown a realistic service failure scenario posted on Yelp, followed by two responses: one from another customer named Alex, and one from the restaurant itself. Alex's comment was either supportive or mocking, depending on the condition.

Participants were randomly assigned to experience either positive or negative eCCI. Their psychological need for approval was measured using validated scales. Then, researchers assessed how participants felt about the interaction—specifically their intention to engage on social media, their sense of fairness (interactional justice), and their perception of empathy.

A second experiment tested whether the restaurant's response style—generic or specific—changed outcomes. Across both studies, the researchers gathered rich data on how personality and peer interaction shape digital service recovery.

REAL PEOPLE, REAL REACTIONS

The study drew on responses from over 400 restaurant consumers recruited through Amazon Mechanical Turk. Participants were screened to ensure they had recent experience with takeout orders and online reviews. The final sample included 201 valid responses in the first experiment and 204 in the second. Most were between 26 and 40 years old, with diverse backgrounds and active social media habits. These were not hypothetical consumers—they were real people navigating real digital spaces, making the findings both credible and relatable.



The modern dining experience includes digital conversations that shape satisfaction and loyalty.

THE APPROVAL SPLIT

The results were striking. Customers with a low need for approval responded much more positively to supportive comments from fellow customers. They showed higher engagement on social media, felt more fairly treated, and perceived greater empathy. But when the comment was mocking, their reactions turned sharply negative. In contrast, customers with a high need for approval remained emotionally steady. Whether the comment was kind or cruel, their responses did not change significantly. They seemed to buffer themselves from the emotional highs and lows of peer feedback.

This split reveals a hidden layer in digital service recovery: personality traits can dramatically shape how customers interpret and respond to eCCI. For managers, this means that not all complaints—or commenters—are created equal.

THE EMOTIONAL ECHO OF ONLINE INTERACTIONS

According to Wei and colleagues, the emotional impact of eCCI is not just about what is said—it is about who is listening. Customers with low need for approval are more emotionally transparent. They react authentically, whether that means anger, gratitude, or withdrawal. When they receive a mocking comment, they feel attacked. When they receive support, they feel understood.

This authenticity makes them more vulnerable to online incivility but also more responsive to empathy. They are the emotional barometers of the digital service landscape.

Meanwhile, high-approval seekers operate differently. They suppress negative emotions, avoid conflict, and even reject positive feedback if it feels too risky. Their reactions are muted, not because they do not care, but because they are managing impressions. They want harmony, not drama.
This dynamic challenges assumptions about digital engagement. It is not just about platforms or algorithms—it is about psychology. The study shows that eCCI is a social experience shaped by deep emotional needs. It is a reminder that behind every comment is a person, and behind every person is a story.

FROM COMMENT TO CONNECTION

For hospitality managers, this research offers a roadmap for navigating the messy world of online customer interactions. First, recognize that eCCI matters. Peer comments shape perceptions as much as official responses. Monitoring these interactions is not just smart—it's essential.

Second, understand that customers differ. Some crave approval, others don't. While diagnosing every guest's personality is impossible, firms can design communication strategies that embrace emotional diversity. Personalized responses, empathy-driven messaging, and proactive outreach help.

Third, don't underestimate peer support. Encouraging positive eCCI—via community guidelines, featured reviews, or loyalty programs—creates a more supportive digital space. When customers feel backed by others, satisfaction rises.

Finally, be ready to re-engage. If a customer receives a mocking comment, follow up privately.

Apologize, offer support, and reaffirm the brand's commitment to respectful dialogue. These gestures rebuild trust and prevent emotional fallout.

> "HOSPITALITY FIRMS MUST MONITOR PEER INTERACTIONS, WHICH POWERFULLY INFLUENCE SATISFACTION, ENGAGEMENT, AND FAIRNESS PERCEPTIONS IN TODAY'S EMOTIONALLY CHARGED, DIGITALLY CONNECTED SERVICE ENVIRONMENT.

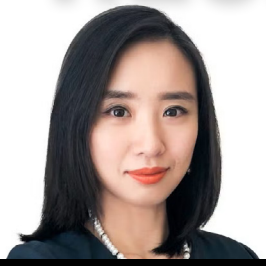
In short, eCCI is not noise—it's a signal. With the right tools, hospitality firms can turn that signal into strategy.

THE NEXT FRONTIER OF DIGITAL EMPATHY

This study opens new questions. How do platforms like Instagram or TripAdvisor shape eCCI? What happens when multiple customers chime in? Can AI detect emotional tone and respond?

Future research might explore eCCI's impact on staff morale or test how environments influence need for approval. The story of eCCI is just beginning.

RESEARCHERS IN FOCUS



Dr. Wei's research agenda is driven by her strong desire to advance the understanding of human psychology and behaviors within the evolving landscapes of hospitality and tourism. Her primary research tackles some of the most urgent issues in the field, such as customer-to-customer incivility and interactions, influencer marketing, and the effects of emerging technological innovations on consumer behaviors and experiences.

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REFERENCES:

Wei, W., Zhang, L., Rathjens, B., & McGinley, S. (2024). Electronic consumer-to-consumer interaction (eCCI) post a service failure: The psychological power of need for approval. *Journal of Hospitality & Tourism Research*, 48(7), 1212-1225.

PERSONAL RESPONSE

How did you decide to focus on the need for approval as a key variable in this study?

"We were intrigued by the emotional variability we observed in online reviews. Some customers seemed deeply affected by peer comments, while others brushed them off. The psychological need for approval offered a compelling lens to explain this difference. It is a trait that influences how people interpret social feedback, and we suspected it might play a role in digital interactions. By integrating this variable, we were able to uncover a nuanced emotional landscape that had not been explored in hospitality research. It helped us move beyond surface-level analysis and into the realm of personality-driven response patterns.

What surprised you most about the findings?

"Honestly, we expected high-approval seekers to be more reactive to peer comments. But the opposite was true. Those with low need for approval showed stronger emotional responses, both positive and negative. It was a reminder that independence does not mean indifference. These customers were more authentic in their reactions, which made them more vulnerable to online incivility but also more appreciative of empathy. That insight shifted how we think about digital engagement—it is not just about visibility, but about emotional resonance.

Positive and negative peer responses create emotional ripple effects in digital hospitality spaces.

LEVEL UP YOUR STAY:

How Energy-Saving Games Are Changing Green Hotel Loyalty

ROSEN RESEARCH REVIEW

AILI WU, JUHEE KANG,
DAVID KWUN & WEI WEI

The research by Wu, Kang, Kwun, and Wei reveals how gamification—specifically achievement-based energy-saving games—can transform hotel guests' attitudes and behaviors toward sustainability. By integrating achievement-goal theory and the theory of planned behavior, the study shows that when guests feel challenged and motivated, they are more likely to engage in green practices and return to the hotel. Interestingly, perceived control over the game sometimes reduces revisit intentions, suggesting that too much ease can lead to boredom. Guests with prior green hotel experiences respond even more positively to gamified sustainability. This research offers a fresh perspective on how hotels can use game design to boost engagement, environmental impact, and loyalty.

Visible green initiatives encourage achievement-driven engagement and repeat stays.

GREEN GOALS AND GAMIFIED GETAWAYS

Hotels are under pressure to reduce their environmental footprint. With the industry responsible for 1% of global greenhouse gas emissions—and projected to reach 25% by 2030—sustainability is no longer optional. Yet, convincing guests to participate in green practices like towel reuse or shorter showers remains a challenge. Many travelers, despite supporting eco-friendly initiatives, hesitate to sacrifice comfort.

Enter gamification.
This study explores how achievement-based energy-saving gamification (ABESG) can motivate guests to engage in green behaviors. Imagine a hotel stay where reusing towels earns you points, badges, and social recognition. Suddenly, sustainability becomes a game—and guests become players.

Drawing on achievement-goal theory and the theory of planned behavior, the researchers examined how perceived task complexity and achievement motives influence attitudes, social norms, and perceived control. They also looked at how these factors affect guests' intentions to revisit the hotel.
The results are compelling.

When guests feel challenged and motivated, they develop positive attitudes and seek social approval for their eco-friendly actions. But if the game feels too easy or too hard, their engagement drops.
Interestingly, guests with prior green hotel experiences respond even more favorably to gamification. They feel more capable, more motivated,

and more eager to share their achievements.

This study offers a roadmap for hotels looking to turn sustainability into a loyalty strategy. By designing games that balance challenge and reward, hotels can inspire guests to save energy—and come back for more.

THE QUEST FOR GREEN BEHAVIOR

Gamification has proven effective in industries from education to retail. Starbucks Rewards and McDonald's Monopoly are just two examples of how game elements like points and badges drive customer engagement. But in hospitality, especially in sustainability, the potential remains underexplored.

Wu and colleagues saw an opportunity to bridge this gap. They focused on achievement-based gamification—games that reward users for completing tasks, overcoming challenges, and demonstrating competence. In the hotel context, this meant reimagining towel reuse programs as quests, with levels, badges, and social recognition.

To understand how guests respond to such games, the researchers turned to two theories. Achievement-goal theory explains how people are motivated by learning and performance goals. The theory of planned behavior outlines how attitudes, social norms, and perceived control shape intentions.

Hotels can use gamification to turn sustainability into a loyalty strategy.

The researchers also explored how these factors affect guests' intentions to revisit the hotel. Would a well-designed game make them more likely to return? And would prior experience with green hotels amplify the effect?

Using a survey of 437 U.S. hotel guests who had used gamified apps, the study tested these relationships through structural equation modeling and multigroup analysis.

The findings reveal a nuanced picture. Task complexity can both motivate and discourage. Achievement motives consistently boost engagement. And prior green hotel experience strengthens all positive effects.

This research reframes gamification not just as a tool for engagement, but as a strategic lever for sustainability and loyalty in hospitality.

> "WE DISCOVERED THAT GAMIFICATION ACHIEVEMENTS—ESPECIALLY THE DESIRE TO PROVE ONE'S ABILITY—CAN SIGNIFICANTLY SHAPE GUESTS' ATTITUDES AND INTENTIONS TOWARD GREEN HOTEL PRACTICES."

By combining these frameworks, the study examined how task complexity (how hard the game feels) and achievement motives (the desire to prove oneself) influence guests' attitudes toward ABESG, their perception of social expectations, and their sense of control.

PLAYING FOR DATA

The study surveyed 437 U.S. hotel guests via Amazon Mechanical Turk. Participants had to be over 18, have stayed in a hotel within the past 18 months, and have used gamified apps like Starbucks Rewards or Air Canada's Earn Your Wing.

The survey introduced participants to a fictional energy-saving game where reusing towels earned points and badges. Visuals and descriptions helped them imagine the experience. Researchers measured two gamification achievement factors—task complexity and achievement motives—and three theory of planned behavior constructs: attitudes, subjective norms, and perceived behavioral control. Revisit intentions were also assessed. All items used a 7-point Likert scale. Data was analyzed using confirmatory factor analysis and structural equation modeling. Multigroup analysis tested the moderating effect of prior green hotel experience.

WHO PLAYED THE GAME

The sample included 437 U.S. hotel guests, 55% male and 45% female, mostly aged 31–45. Over half had a bachelor's degree, and 78.8% had stayed at a green hotel in the past 18 months.

Participants had experience with gamified apps and were familiar with hotel stays. This made them ideal for evaluating the impact of gamification on sustainability behaviors.

Their responses provided insights into how real-world guests perceive energy-saving games—and how those perceptions influence their loyalty.

THE WINNING COMBINATION

The study found several key dynamics shaping guest behavior.

Shared sustainability goals thrive when hotels balance challenge with rewarding engagement.

Task complexity had a mixed impact—it lowered attitudes and perceived control but increased subjective norms, as guests felt challenged and sought social approval. Achievement motives played a strong role, boosting attitudes, norms, and control, with guests eager to prove their competence. These attitudes and norms, in turn, increased revisit intentions. Interestingly, perceived behavioral control reduced revisit intentions, suggesting that too much ease may lead to boredom.

Guests with prior green hotel experience responded even more positively, amplifying the effects of achievement motives.

In short, guests who feel motivated and socially validated are more likely to engage in green practices and return. But the game must strike the right balance—too easy or too hard, and the magic fades.

game feels too hard, guests get discouraged. But the right challenge builds confidence and a positive self-image.

Surprisingly, perceived behavioral control—typically linked to positive behavior—had a negative effect on revisit intentions. When guests feel overly in control, the game loses appeal. It becomes routine, not rewarding.

Guests with prior green hotel experience responded more positively. They felt more capable, motivated, and eager to share achievements. This underscores the value of targeting early adopters and designing games that evolve. Static games lose charm, but adaptive ones sustain engagement.
Ultimately, gamification isn't just fun—it's about identity, recognition, and meaningful action. When designed thoughtfully, it turns sustainability into pride and loyalty.

> "TO BOOST LOYALTY AND SUSTAINABILITY, HOTELS SHOULD DESIGN ENERGY-SAVING GAMES THAT BALANCE CHALLENGE, REWARD, AND SOCIAL RECOGNITION—TURNING ECO-FRIENDLY BEHAVIOR INTO A SOURCE OF PRIDE."

THE PSYCHOLOGY OF PLAY AND PLANET-SAVING

According to Wu and colleagues, gamification works best when it taps into guests' desire to prove themselves. Achievement motives—like wanting recognition or feeling proud—drive positive attitudes and behaviors. Task complexity is a double-edged sword. If the

DESIGNING THE GAME THAT GUESTS WANT TO PLAY

For hotel managers and game designers, this study offers clear guidance. First, balance complexity—make the game rewarding but not frustrating. Use levels to increase difficulty gradually. Second, highlight achievement. Guests want to feel competent, so use badges, points, and social recognition to celebrate efforts. Third, leverage social influence. Guests care what others think, so create ways to share achievements—like "Planet Saver" badges—with messages such as "You saved 100 gallons of water" or "The dolphins thank you."

Fourth, target green hotel veterans. They're more receptive and make ideal early adopters and brand ambassadors. Fifth, avoid boredom. If the game feels too easy or repetitive, guests lose interest.

Regular updates with new features and rewards maintain engagement. Finally, test before launch. Market testing helps refine the game and identify what motivates guests versus what feels like a chore.

By turning sustainability into a game, hotels can inspire meaningful behavior—and build lasting loyalty.

NEXT LEVELS IN GREEN GAMIFICATION

This study opens the door to exciting future research. What happens when other game elements—like leaderboards, avatars, or team challenges—are added? Could social competition boost engagement even more?

Researchers could also explore gamifying other green behaviors, such as tracking electricity use or shower duration. Field experiments with real hotel apps would offer deeper insights.

Expanding the study beyond the U.S. could reveal cultural differences in gamification response. Do guests in Asia or Europe react differently to achievement-based games?

Finally, comparing guests who've used gamified apps with those who haven't could uncover new strategies for onboarding and education.

As hotels seek innovative ways to promote sustainability, gamification offers a promising path. The next step is to keep playing—and keep learning.

RESEARCHERS IN FOCUS

Aili Wu is a Ph.D. Candidate, Instructor, and Research Assistant at UCF Rosen College of Hospitality Management. Her research explores emerging technology and innovation in hospitality, focusing on gamification and consumer behavior. She is the founding president of REIgKNIGHTS, a student club that promotes entrepreneurship and innovation among UCF students.

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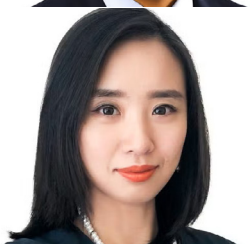

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REFERENCES:

Wu, A., Kang, J., Kwun, D., & Wei, W. (2024). When green meets gamification: A winning combo for hotel revisit intentions. *International Journal of Hospitality Management,* 119, 103734.

AUTHORS' RESPONSE

Why did you focus on towel reuse as the gamified behavior?

"Towel reuse is one of the most common and impactful green practices in hotels. It is simple, measurable, and directly tied to water and energy savings. By gamifying this behavior, we could create a clear and relatable scenario for participants. It also allowed us to design levels of complexity—like reusing towels for multiple days—and link those actions to rewards. This made it ideal for testing how gamification achievements influence attitudes and intentions. Plus, it reflects a real-world challenge: how to encourage guests to participate in sustainability without compromising their comfort.

What surprised you most about the results?

"We were surprised that perceived behavioral control had a negative impact on revisit intentions. Typically, feeling in control leads to positive outcomes. But in this case, it seems that when guests felt the game was too easy or routine, they lost interest. It reminded us that gamification must maintain a sense of challenge and novelty. Another surprise was how strongly prior green hotel experience amplified positive effects. It shows that experience builds confidence—and confidence drives engagement.

INTELLIGENCE UNLEASHED:

How Generative AI is Rewriting The Rules of Tourism Education and Research

ROSEN RESEARCH REVIEW

TARIK DOGRU, NATHANA LINE, LYDIA HANKS, FULYA ACIKGOZ, JE'ANNA ABBOTT, SELIM BAKIR, ADIYUKH BERBEKOVA, ANIL BILGIHAN, ALI ISKENDER, MURAT KIZILDAG & MINWOO LEE

Future hospitality managers must learn to lead teams that include both people and AI platforms.

The research by Dogru, Line, Hanks, Acikgoz, and colleagues explores how generative artificial intelligence (GAI) is transforming higher education and academic research in tourism and hospitality. From personalized learning to automated data analysis, GAI offers unprecedented opportunities—but also raises ethical and legal concerns. The study frames GAI as a disruptive innovation, challenging traditional models of teaching, authorship, and intellectual property. It calls for structural changes in curricula, transparent policies, and collaborative efforts to ensure responsible integration. With tools like ChatGPT already reshaping classrooms and research labs, this paper offers a timely roadmap for educators, researchers, and administrators navigating the AI revolution.

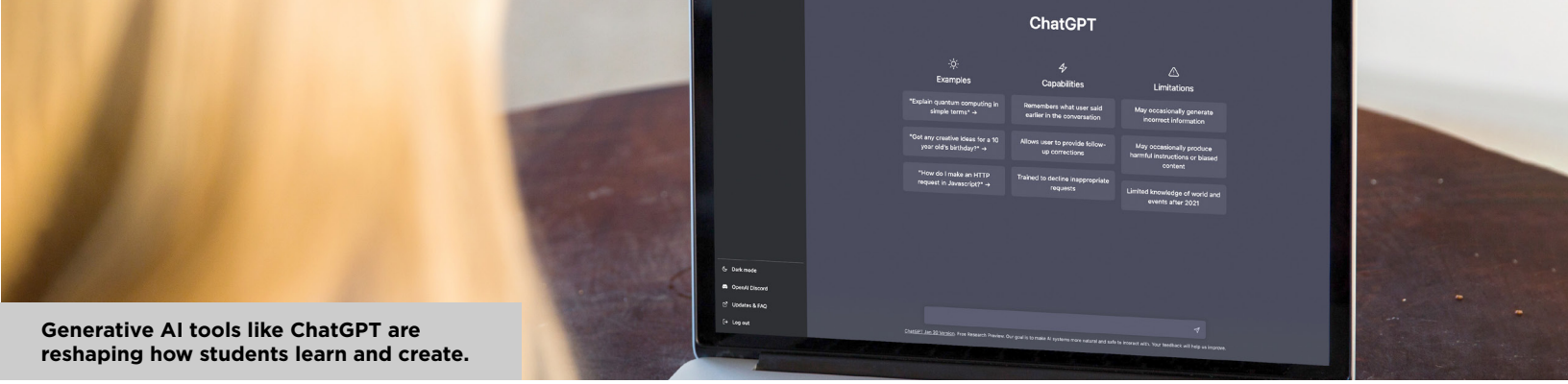
WHEN THE CLASSROOM MEETS THE CODE

In lecture halls and research labs across the globe, a quiet revolution is underway. Generative artificial intelligence—tools like ChatGPT, DALL·E, and Copilot—are no longer futuristic novelties. They are reshaping how students learn, how professors teach, and how researchers explore.

In tourism and hospitality education, this shift is especially profound. The industry thrives on innovation, and now, the academic side must keep pace. GAI can write essays, summarize articles, analyze data, and even simulate guest interactions. But with great power comes great complexity.

Dogru and colleagues argue that GAI is a disruptive innovation—one that redefines performance metrics and rewrites the rules of competition. In education, it challenges traditional notions of authorship, critical thinking, and academic integrity. In research, it accelerates data collection and analysis, but also raises questions about originality and ownership.
This study offers a comprehensive look at how GAI is impacting tourism and hospitality academia. It explores applications in teaching, learning, career preparation, and research. It also dives into the ethical and legal challenges—bias, privacy, plagiarism, and copyright—that must be addressed.

The authors do not just diagnose the disruption. They propose solutions: curriculum redesign, clear usage policies, and collaborative protocols. They even offer ten "Big Questions" to spark dialogue across institutions.
In short, this is not just a paper—it is a call to action.
As GAI reshapes the academic landscape, tourism and hospitality educators must lead the way in crafting a future that is both innovative and ethical.



Generative AI tools like ChatGPT are reshaping how students learn and create.

DISRUPTION IN MOTION: THE THEORY BEHIND THE TECH

To understand the impact of generative AI (GAI), Dogru and colleagues apply disruptive innovation theory—a concept originally designed to explain how new technologies overturn established industries, now extended to academia itself.

Disruptive technologies rewrite the rules. They alter how performance is evaluated and how value is created. In tourism and hospitality, GAI is reshaping the landscape of teaching, learning, and research.

The authors contend that GAI represents more than a mere tool; it signals a paradigm shift. It facilitates personalized learning, automates data analysis, and produces content that rivals human creation. However, it also brings new risks, including misinformation, bias, and ambiguous authorship.

While earlier studies concentrated on GAI's business applications, this paper broadens the scope to include education and research. It investigates the effects of GAI on students, professors, administrators, and publishers, and considers how it can equip students for a tech-driven industry where managing hybrid teams of humans and AI will become standard practice.

To guide curriculum redesign, the authors introduce a framework built on three foundational ideas. First, students should be taught how to apply technology in hospitality services. Second, they should be encouraged to view AI as a supportive tool rather than a threat. Third, the curriculum must prioritize soft skills such as empathy, compassion, and communication—skills that remain vital in a digital world.

In the realm of research, GAI offers support in data collection, cleaning, clustering, and analysis. It can uncover trends, simulate scenarios, and compare findings across studies. Yet, it also complicates issues of originality, citation, and intellectual property.

This study does not avoid difficult questions. Instead, it directly addresses the ethical and legal challenges, presenting a balanced perspective on both the potential and the pitfalls of GAI.

A MULTI-VOICED REFLECTION

Rather than conducting a traditional empirical study, the authors—Dogru, Line, Hanks, and Acikgoz—led a collaborative effort involving 13 additional scholars from institutions in the U.S. and U.K. Together, they synthesized insights from existing literature, examined emerging trends, and interpreted the implications of GAI through the lens of disruptive innovation theory.

This collective approach enabled a comprehensive exploration of GAI's influence on tourism and hospitality education and research, resulting in a multifaceted roadmap for navigating the academic AI revolution.

Educators must guide students in using AI ethically and effectively.

INSIGHTS FROM THE FRONTLINES OF ACADEMIA

Drawing from a rich array of literature, the commentary incorporates studies on AI in education, hospitality management, ethics, and digital transformation. It references scholars such as Ivanov, Dwivedi, Zhai, and Mhlanga, and includes real-world examples like Microsoft Copilot and ChatGPT. Rather than generating new data, the authors compiled and interpreted existing research and expert opinions to present a holistic view of GAI's implications. Their aim is to spark meaningful dialogue and promote responsible adoption within tourism and hospitality academia.

> "WE FOUND THAT GENERATIVE AI IS NOT JUST A TOOL—IT IS A DISRUPTIVE FORCE THAT CHALLENGES TRADITIONAL MODELS OF TEACHING, AUTHORSHIP, AND RESEARCH IN TOURISM AND HOSPITALITY EDUCATION."

PROMISE AND PERIL IN THE AGE OF AI

GAI brings significant advantages. It enables personalized learning through chatbots and adaptive platforms, enhances career readiness by preparing students to manage tech-integrated teams, and accelerates research through automated data handling and analysis.

However, it also presents serious challenges. Biases in training data can result in unfair outcomes. Data collection and personalization raise privacy concerns. The boundaries of authorship and plagiarism detection become increasingly unclear. Legal questions surrounding copyright ownership remain unresolved. To ensure ethical use of GAI, the authors advocate for transparency, well-defined policies, and collaborative oversight. They recommend curriculum updates and institutional protocols to support responsible integration.

THE BALANCING ACT OF INNOVATION

Dogru and colleagues emphasize that generative AI (GAI) is more than a technological upgrade—it signals a philosophical shift. It challenges educators to rethink the foundations of teaching, learning, and creativity.

They advocate for embedding GAI into curricula as a core competency. Students must learn to operate AI tools, interpret AI-generated data, and navigate ethical dilemmas.

> “TO PREPARE STUDENTS FOR A TECH-DRIVEN INDUSTRY, HOSPITALITY PROGRAMS MUST EMBED AI INTO CURRICULA, BALANCE IT WITH SOFT SKILLS, AND CREATE CLEAR POLICIES FOR ETHICAL AND EFFECTIVE USE.”

Professors, in turn, should adapt their teaching methods to include simulations, virtual reality, and AI-assisted feedback.

In research, GAI streamlines workflows and uncovers new insights. However, it also demands updated standards for citation, attribution, and originality. Traditional plagiarism detection tools may fall short, and copyright laws lag behind technological advances.
The authors call for a collaborative response. Institutions need clear policies. Publishers must establish citation guidelines.

Educators should model ethical AI use. Students must be equipped to think critically—even when AI does the heavy lifting.

This is not a rejection of GAI—it is a call to harness its power responsibly. The future of tourism and hospitality education depends on it.

TEACHING TOMORROW’S LEADERS IN A TECH-DRIVEN WORLD

For educators and administrators, the study offers a strategic roadmap for integrating GAI into tourism and hospitality programs. It recommends incorporating GAI into courses like management, marketing, finance, and operations, ensuring students learn to use AI tools ethically and effectively.

Equally important is the emphasis on human-centered skills—empathy, communication, and cultural awareness—that will set graduates apart in a digital workforce. Institutions are urged to create clear guidelines for GAI use in assignments, research, and publications. Faculty should be trained to use GAI in teaching and research, and encouraged to experiment while reflecting on ethical implications.

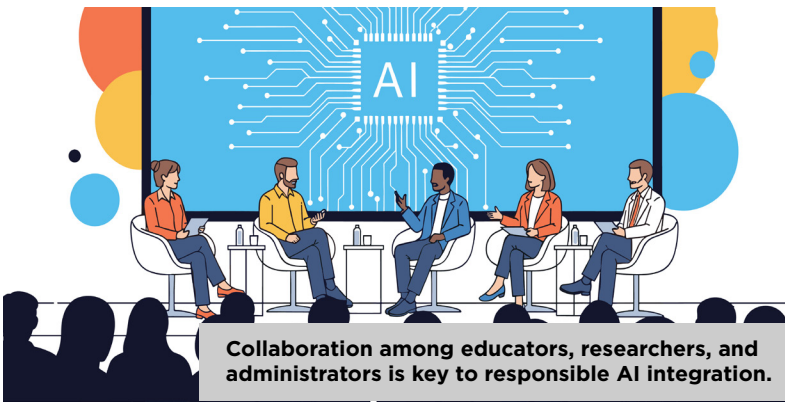
Students must be prepared to manage hybrid teams, interpret AI outputs, and make data-driven decisions. Research protocols should require disclosure of GAI use and promote responsible practices in data collection, analysis, and referencing.

By embracing GAI with intention and integrity, tourism and hospitality programs can prepare students for a future where human and artificial intelligence work side by side.

FUTURE OPPORTUNITIES QUESTIONS THAT SHAPE THE FUTURE

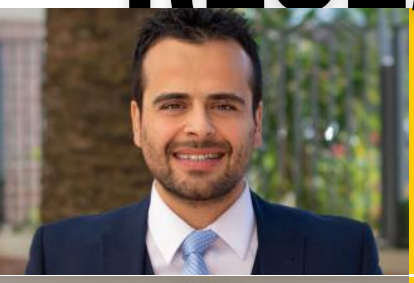
The authors conclude with ten critical questions to guide future research and policy. These address GAI’s impact on creativity, ethics, curriculum design, diversity, citation, content ownership, and plagiarism detection.

These questions are urgent. As GAI becomes ubiquitous, educators must lead its responsible adoption. Future studies should explore student perceptions, faculty readiness, and cross-cultural differences. The AI revolution is here—now it must serve education, not replace it.



Collaboration among educators, researchers, and administrators is key to responsible AI integration.

RESEARCHERS IN FOCUS



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REFERENCES:

Dogru, T., Line, N., Hanks, L., Acikgoz, F., Abbott, J. A., Bakir, S., ... & Suess, C. (2024). The implications of generative artificial intelligence in academic research and higher education in tourism and hospitality. *Tourism Economics*, 30(5), 1083-1094.

AUTHORS' RESPONSE

What inspired you to explore generative AI in tourism and hospitality education?

"We were seeing GAI tools like ChatGPT being used by students and researchers in ways that were both exciting and concerning. The technology was clearly transformative, but there was little guidance on how to use it responsibly. As educators, we felt a duty to explore its implications—not just for teaching and learning, but for the integrity of academic research. Tourism and hospitality is a dynamic field, and we wanted to ensure it stayed ahead of the curve. This paper was our way of starting that conversation.

What do you see as the biggest challenge in integrating GAI into higher education?

"The biggest challenge is balancing innovation with integrity. GAI can personalize learning, accelerate research, and enhance creativity. But it also raises serious questions about authorship, plagiarism, and bias. Institutions need clear policies, educators need training, and students need guidance. We must ensure that GAI supports—not undermines—the core values of education. That requires collaboration across departments, disciplines, and institutions.

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The Dick Pope Institute also contributes to UCF's Cluster Initiative by actively collaborating with multidisciplinary research teams across the university. Current collaborations include partnerships with the UCF Coastal Cluster, the Disability, Aging, and Technology Cluster, and the Infectious Disease and Travel Health Research Initiative. These alliances strengthen DPI's commitment to advancing research that intersects with public health, coastal resilience, and inclusive tourism, while providing graduate students with expanded opportunities for scholarly engagement across disciplines.

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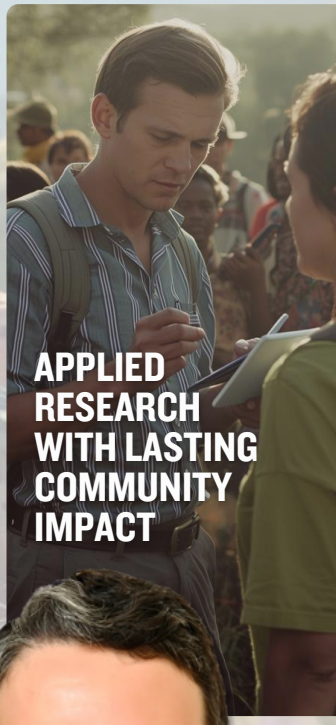

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PAWS AND PERSUASION:

How Dog Influencers Shape Hotel Booking Decisions

ROSEN RESEARCH REVIEW

WEI WEI, LU ZHANG, TIANYU YING & YANYAN ZHENG

When visual appeal is low, content quality becomes the key driver of booking intention.

The research by Wei, Zhang, Ying, and Zheng explores how pet influencers—specifically dog influencers on Instagram—impact hotel booking intentions. Through two experiments, the study reveals that message appeal (rational vs. emotional) interacts with audience characteristics like prior experience and perceived attractiveness of the pet influencer. Rational messages are more persuasive for less experienced travelers and when the pet influencer is perceived as less attractive. Emotional messages, while engaging, are less effective in these contexts. This research uncovers the nuanced power of pet influencer marketing and offers practical strategies for hospitality marketers seeking to tap into the booming "cute economy" of social media.

WHEN DOGS BECOME DIGITAL BRAND AMBASSADORS

In today's social media landscape, influencers come in all shapes and species. From fashionistas to foodies, and now—furry friends. Pet influencers, especially dogs with massive Instagram followings, are emerging as powerful voices in marketing. With millions of followers, accounts like "Jiff Pom" and "Nala Cat" are not just adorable—they're influential.

This study dives into the world of pet influencer marketing, asking a simple but powerful question: Can a dog's Instagram post influence your decision to book a hotel?

The answer, as it turns out, depends on how the message is crafted and who is reading it. Wei and colleagues conducted two experiments to explore how message appeal (rational vs. emotional) interacts with two key factors: the audience's prior experience traveling with pets and their perception of the pet influencer's attractiveness.

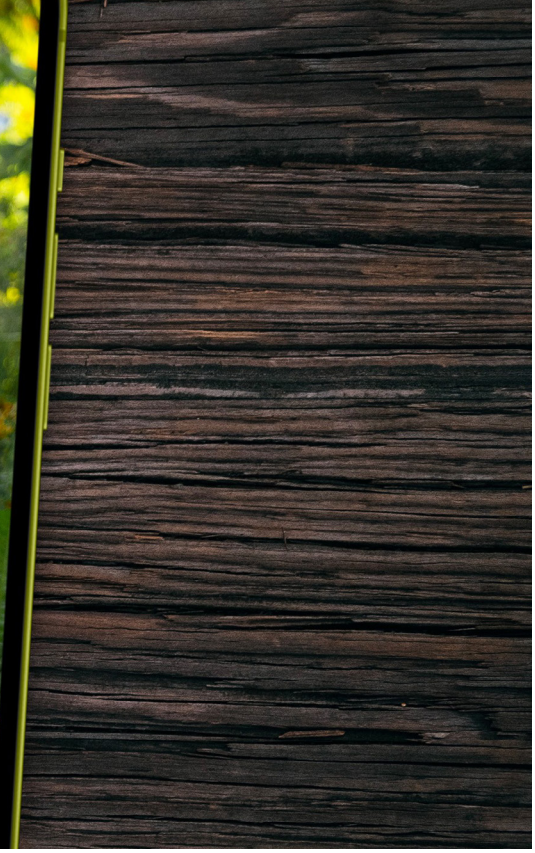
The findings reveal a fascinating dynamic. Rational messages—those that focus on facts and features—are more effective for audiences with less experience traveling with pets. Emotional messages—those that evoke feelings—do not significantly outperform rational ones for experienced travelers. Similarly, when a pet influencer is perceived as less attractive, rational messages drive stronger booking intentions. But when the influencer is seen as highly attractive, message appeal matters less.

This research sheds light on the psychology behind pet influencer marketing and offers actionable insights for hospitality brands looking to connect with pet-loving travelers. In the age of the "cute economy," where animal images dominate social media, understanding how to craft the right message is more important than ever.

THE SCIENCE OF CUTE: WHY PET POSTS PERSUADE

Pet influencers are more than just adorable distractions—they're strategic marketing tools. Brands have long used animals in advertising, from Taco Bell's chihuahua to Target's bull terrier. But the rise of social media has given pets their own platforms, turning them into micro-celebrities with loyal followings.

This study builds on existing research in influencer marketing, persuasive communication, and hospitality behavior. It focuses on two types of message appeal: rational appeal, which presents objective, fact-based



content such as hotel amenities and pet-friendly features; and emotional appeal, which conveys subjective, feeling-based content like joy, gratitude, and excitement.

The researchers also examine two moderating factors. One is prior experience, referring to how frequently the audience has traveled with pets. The other is perceived attractiveness, which considers how visually appealing the pet influencer appears to viewers.

Drawing on theories like the Elaboration Likelihood Model and Source Credibility Theory, the study hypothesizes that rational messages will be more effective for less experienced travelers and when the pet influencer is less attractive. Emotional messages, on the other hand, may resonate more with experienced travelers or when the influencer is highly attractive.

Two experiments test these hypotheses. The first explores the interaction between message appeal and prior experience, while the second investigates the role of perceived attractiveness.

The results confirm that message effectiveness is context-dependent. Audience characteristics and influencer traits shape how messages are received and whether they lead to booking intentions.

This research fills a gap in the literature by focusing on consumer reactions to pet influencer content—an area previously dominated by studies of influencer account managers. It also expands the concept of attractiveness beyond human influencers, applying it to pets in a novel way.

TWO EXPERIMENTS, ONE FRENCH BULLDOG

The researchers conducted two quasi-experiments using mocked Instagram posts featuring a cheerful French bulldog in a hotel setting. In the first study, 129 dog owners were shown posts with either rational or emotional appeal. Their prior experience traveling with pets was measured, and booking intention was assessed using a validated scale. In the second study, 225 participants evaluated the attractiveness of a pet influencer and were randomly assigned to view either a rational or emotional message. Booking intention was again measured.

Manipulation checks confirmed that participants correctly identified the message appeal type. Realism checks ensured the scenarios felt authentic, and attention checks filtered out inattentive responses. Statistical analysis using Hayes' PROCESS model revealed significant interaction effects in both studies, supporting the hypotheses.

WHO FOLLOWS DOG INFLUENCERS?

Participants were recruited from Qualtrics and MTurk panels. All were current dog owners and active social media users. In the first study, 62.8 percent of participants were male, and 54.3 percent were aged between 26 and 40. In the second study, 61.7 percent were male, and the same percentage fell within the 26–40 age range. Most held bachelor's or master's degrees, and over 90 percent followed dog influencers on social media.

This demographic represents a prime target for pet-friendly hospitality marketing—tech-savvy, pet-loving, and socially engaged.

WHEN RATIONAL WINS OVER CUTE

In the first study, participants with low prior experience traveling with pets responded more positively to rational messages, which led to significantly higher booking intentions. For those with high experience, the type of message appeal made no notable difference. In the second study, when the pet influencer was perceived as less attractive, rational messages proved more persuasive. However, when the influencer was seen as highly attractive, the message appeal had no significant impact.

> "WE DISCOVERED THAT RATIONAL MESSAGES FROM PET INFLUENCERS ARE ESPECIALLY PERSUASIVE FOR NEW PET TRAVELERS AND WHEN THE INFLUENCER'S ATTRACTIVENESS IS PERCEIVED AS LOW."

These findings suggest that rational content—highlighting amenities, services, and logistics—is more effective when uncertainty is high, such as in cases of low experience or low perceived attractiveness. Emotional content may be less impactful under these conditions. The study confirms that message appeal interacts with audience and influencer characteristics, shaping consumer behavior in nuanced ways.

THE CUTE ECONOMY MEETS CONSUMER PSYCHOLOGY

According to Wei and colleagues, pet influencer marketing is not just about cuteness—it's about context. The effectiveness of a message depends on who is reading it and how they perceive the influencer.

Rational messages highlighting pet-friendly amenities drive stronger booking intentions for new pet travelers.

> "TO BOOST BOOKINGS, HOTELS SHOULD TAILOR PET INFLUENCER CONTENT BASED ON AUDIENCE EXPERIENCE AND INFLUENCER APPEAL—RATIONAL MESSAGES WORK BEST WHEN UNCERTAINTY IS HIGH."

For new pet travelers, rational messages help reduce uncertainty and build trust. These individuals seek facts over fluff. For seasoned travelers, emotional messages may evoke nostalgia or joy, but they don't significantly outperform rational ones.

Similarly, when a pet influencer is less visually appealing, audiences tend to focus more on the content itself, making rational messages more effective. In contrast, when the influencer is highly attractive, the visual appeal may overshadow the message, rendering both types equally persuasive.

This dynamic aligns with the Elaboration Likelihood Model, which suggests that people process messages either through deep thinking (central route) or surface cues (peripheral route). Attractiveness and experience influence which route they take. The study also broadens the concept of attractiveness to include non-human influencers, offering a fresh perspective on how pets can shape consumer decisions.
In short, pet influencer marketing is not just about posting cute pictures—it's about crafting the right message for the right audience.

HOW TO MAKE PET INFLUENCERS WORK FOR YOUR HOTEL

For hospitality marketers, this study offers a strategic playbook for effective pet influencer campaigns. Understanding the audience is key. When targeting first-time pet travelers, marketers should use rational messages that emphasize amenities, services, and logistics. If the pet influencer is less conventionally attractive, factual content tends to be more persuasive. In cases where the influencer is highly attractive, either message type may be effective.

Choosing the right influencer is also crucial. Not all cute animals are equally persuasive, so selecting influencers whose aesthetic and persona align with the brand is essential.

Narratives should be tailored to the audience. Emotional appeals may resonate with experienced travelers, while rational appeals work better for those seeking reassurance. Providing useful content—such as information about nearby dog parks, pet-friendly restaurants, and emergency services—builds trust and adds value.

To boost account appeal, pet influencers should be encouraged to develop engaging personas and consistent content styles, whether fact-based or emotion-driven.

Strategic collaboration between hotels and pet influencers can showcase pet-friendly amenities in authentic and engaging ways. By understanding the psychology behind pet influencer marketing, hotels can transform adorable posts into real bookings.

FUTURE OPPORTUNITIES BEYOND DOGS AND INSTAGRAM

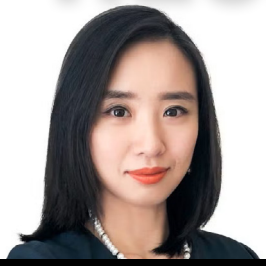
This study opens the door to a wider exploration of pet influencer marketing. Future research could expand beyond dogs to include other animals such as cats and birds, testing whether the findings apply across species. It could also examine platforms like TikTok, where content formats and audience behaviors differ significantly from Instagram.

Researchers may explore additional message appeals beyond the rational and emotional—such as humor or fear—to understand their effectiveness. The role of sponsorship disclosure deserves attention too, particularly in how it influences consumer trust.

Another promising direction involves analyzing the impact of prior experiences, both positive and negative, to refine audience segmentation strategies. Additionally, future studies could assess how pet influencers perform when promoting utilitarian products, where functional benefits may outweigh emotional appeal.

As pet influencer marketing continues to evolve, understanding these nuances will be essential for designing campaigns that resonate across diverse platforms and industries.

RESEARCHERS IN FOCUS



Dr. Wei's research agenda is driven by her strong desire to advance the understanding of human psychology and behaviors within the evolving landscapes of hospitality and tourism. Her primary research tackles some of the most urgent issues in the field, such as customer-to-customer incivility and interactions, influencer marketing, and the effects of emerging technological innovations on consumer behaviors and experiences.

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REFERENCES:

Wei, W., Zhang, L., Ying, T., & Zheng, Y. (2025). Pet influencer marketing appeal in hotel booking: Exploring the power of message appeal and boundary conditions. *International Journal of Hospitality Management*, 126, 104094.

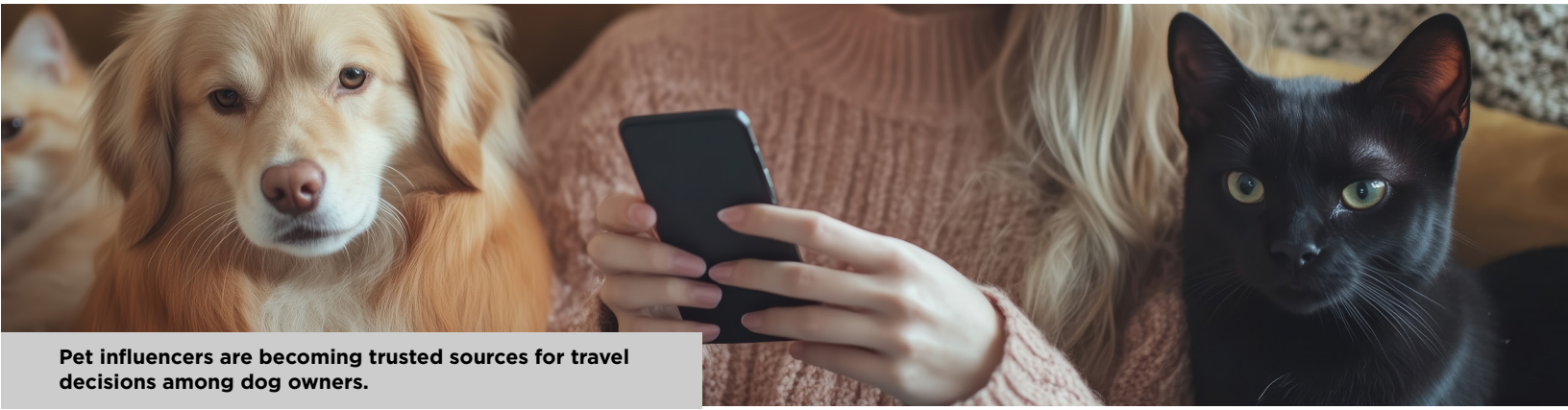
AUTHORS' RESPONSE

Why did you choose pet influencers as the focus of this study?

We were fascinated by the rise of pet influencers and their growing impact on consumer behavior. With so many people traveling with pets, we saw an opportunity to explore how these furry influencers could shape decisions in hospitality. The emotional bond between pet owners and their animals is powerful, and we wanted to understand how that bond translates into marketing effectiveness. Pet influencers are a unique blend of entertainment and persuasion, and we felt they deserved closer academic attention.

What surprised you most about the findings?

We were surprised by how consistently rational messages outperformed emotional ones in certain contexts. It challenged the assumption that emotional appeals are always more effective in tourism marketing. The role of perceived attractiveness was also intriguing—when the pet influencer was less attractive, people paid more attention to the content itself. It reminded us that even in the "cute economy," substance matters.



Pet influencers are becoming trusted sources for travel decisions among dog owners.

REVIEWS THAT REVEAL RETURN:

How Autonomous Vehicles are Changing the Way We Arrive

ROSEN RESEARCH REVIEW

JEONG-YEOL PARK, WOOKJAE HEO, JONGWON LEE & SHINYONG JUNG

Keywords like "delighted," "recommended," and "easy" reveal the psychological drivers behind guest loyalty.

The research by Park, Heo, Lee, and Jung reveals how online hotel reviews do more than express opinions—they predict whether guests will return. By blending the Theory of Planned Behavior with machine learning, the study uncovers how attitudes, social influence, and perceived control embedded in review language shape actual revisit behavior. This innovative approach transforms unstructured text into actionable insights, offering hospitality professionals a powerful new lens on customer loyalty.

WHEN WORDS BECOME WINDOWS INTO BEHAVIOR

In today's hospitality landscape, data is everywhere. From TripAdvisor to Yelp, guests leave behind digital footprints that reveal their experiences, emotions, and expectations. But while most research has focused on what people say about their stays, few have asked a deeper question: Can these words predict what guests will do next?

Park and his colleagues saw an opportunity to bridge this gap. They recognized that while surveys and self-reported intentions have long been used to understand customer behavior, they often fall short of capturing what people actually do. Guests may say they intend to return, but do they? Online reviews, they realized, offer something more tangible—evidence of action. A second review from the same guest is not just feedback; it is proof of a revisit.

This study dives into the heart of that idea. By analyzing over 33,000 reviews from top-rated U.S. hotels, the researchers applied the Theory of Planned Behavior (TPB) to real-world data. TPB suggests that attitudes, social norms, and perceived control shape intentions, which in turn drive behavior. But instead of relying on surveys, the team used machine learning to extract these psychological constructs from the language of reviews. Their goal? To see if the words guests write can reveal whether they will come back.

BEYOND STARS AND SENTIMENT: THE QUEST TO UNDERSTAND WHY WE RETURN

For years, hospitality researchers have mined online reviews for sentiment—positive or negative—and topics like cleanliness or service. These insights helped hotels understand what guests liked or disliked. But they rarely explained why guests returned. The missing link was theory.

The Theory of Planned Behavior has long been a trusted framework in consumer psychology. It posits that behavior is shaped by three forces: attitude (how we feel), subjective norms (what others think), and perceived control (how easy it is to act). In hospitality, TPB has been used to study eco-friendly choices, booking decisions, and travel intentions. But most studies relied on surveys and hypothetical scenarios, not actual behavior.

Park and his team wanted to change that. They saw online reviews as a rich, untapped source of behavioral data. Unlike surveys, reviews are unsolicited and reflect real experiences. A guest who writes multiple reviews for the same hotel is likely a repeat visitor. This insight

allowed the researchers to move beyond intentions and study actual behavior.

They also recognized that traditional sentiment analysis was not enough. To truly understand behavior, they needed to identify the psychological drivers within the text. Using topic modeling and sentiment scoring, they mapped review language to TPB constructs. Words like "wonderful," "friendly," and "easy" became indicators of attitude, social influence, and control. This approach transformed reviews from opinion pieces into behavioral predictors.

INSIDE THE MACHINE: HOW REVIEWS BECAME DATA

The researchers collected over 47,000 reviews from TripAdvisor's top 25 U.S. hotels, narrowing the sample to 33,667 after cleaning. They focused on English-language reviews from 2010 to 2023 to ensure consistency. Using topic modeling (LDA) and sentiment analysis (VADER), they quantified TPB constructs based on keyword dictionaries validated by experts. Revisit behavior was defined as guests who left more than one review for the same hotel, aligning with TripAdvisor's guidelines. Generalized Structural Equation Modeling (GSEM) tested theoretical relationships, while neural networks assessed predictive accuracy.

THE VOICES OF RETURNING GUESTS

The data came from real people—travelers who stayed at top-rated hotels across the U.S. and shared their experiences online. With over 33,000 reviews spanning more than a decade, the sample included diverse perspectives from New York to Hawaii. About 30 percent of reviews were from repeat guests, offering a robust foundation to study revisit behavior. These voices, once scattered across the internet, became the heartbeat of the research.

> "WE MOVED BEYOND INTENTIONS TO UNCOVER WHAT GUESTS ACTUALLY DO—HOW THEIR WORDS REVEAL THE PSYCHOLOGY BEHIND REPEAT VISITS."

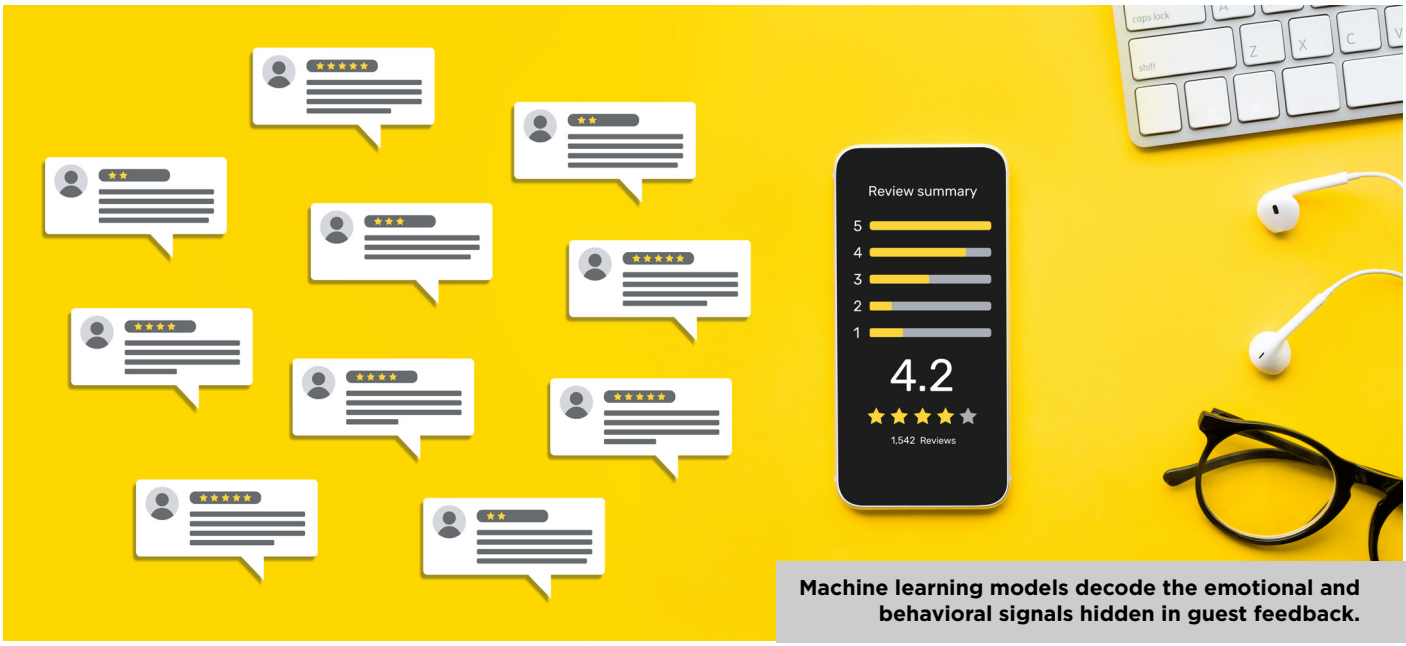
THE WORDS THAT SIGNAL A RETURN

The study found that TPB constructs—attitude, subjective norms, and perceived control—were all significant predictors of revisit intention. Guests who expressed positive emotions, referenced social influence, or described ease of booking were more likely to return. Revisit intention fully mediated the relationship between these constructs and actual behavior. Neural networks confirmed the predictive power of these insights, achieving up to 75.9 percent accuracy in training data and 65.6 percent with resampling.

FROM FEELINGS TO FORECASTS: WHAT THE REVIEWS REALLY SAY

According to Park and his colleagues, the language of reviews is more than emotional expression—it is a window into decision-making. When guests describe their stay as "worthwhile," "easy," or "recommended by friends," they are revealing the psychological forces behind their choices. Attitude reflects satisfaction and emotional connection. Subjective norms show the influence of peers and family. Perceived control highlights convenience and flexibility.

These constructs do not just shape intentions—they predict behavior.



Machine learning models decode the emotional and behavioral signals hidden in guest feedback.

Positive attitudes and perceived control often translate into repeat visits, as this study confirms.

The study's mediation analysis confirmed that revisit intention is the key link between psychological drivers and actual returns. This finding strengthens TPB's relevance in hospitality and shows that online reviews can validate behavioral theory. It also challenges the assumption that sentiment alone drives loyalty. Instead, it is the interplay of emotion, influence, and control that matters.

TURNING REVIEWS INTO ROADMAPS FOR RETURN

For hotel managers, this research offers a new lens to understand guests. By analyzing review language, they can identify what drives loyalty and tailor experiences accordingly. If guests value autonomy, emphasize flexible policies. If social influence matters, highlight peer recommendations. Sentiment tracking tools can be refined to detect TPB constructs, offering deeper insights than simple positivity.

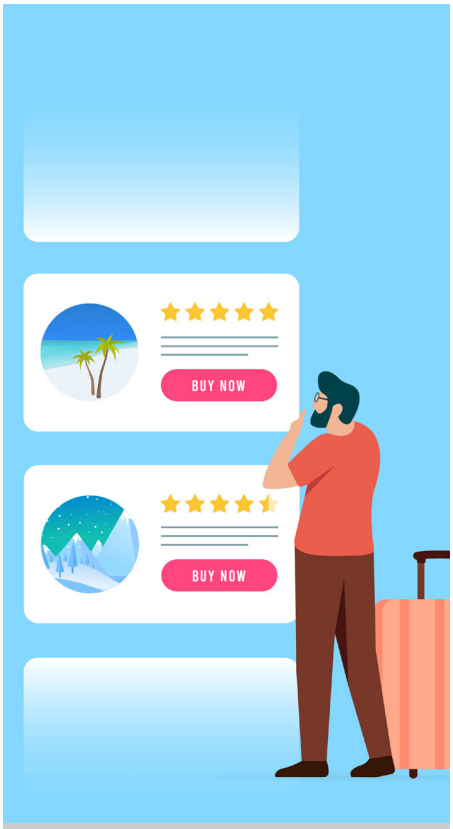
Marketing strategies can also benefit. Knowing that certain words signal revisit intention, hotels can craft messages that resonate with guests' psychological drivers. Loyalty programs, personalized offers, and targeted campaigns can reinforce the desire to return. Operational teams can use review analysis to prioritize improvements that enhance perceived control and satisfaction. Most importantly, this approach is scalable. With machine learning, hotels can analyze thousands of reviews in real time, turning feedback into actionable intelligence. The result is a smarter, more responsive hospitality experience—one that listens, learns, and leads guests back.

> "BY DECODING REVIEW LANGUAGE, HOTELS CAN PREDICT LOYALTY AND PERSONALIZE EXPERIENCES THAT TRULY RESONATE WITH RETURNING GUESTS."

THE NEXT FRONTIER: GLOBAL VOICES AND NEW CONTEXTS

While this study focused on English-language reviews from U.S. hotels, the methodology can be expanded. Future research could explore multilingual data to capture cultural nuances in behavior. Applying TPB to other sectors—restaurants, airlines, attractions—could reveal new patterns. Researchers might also examine how trip purpose, demographics, or crisis events like COVID-19 shape revisit behavior.

As digital data grows, so does the potential to refine behavioral theories and enhance customer understanding.



From words to actions—how one review can forecast a guest's return.

RESEARCHERS IN FOCUS

Dr. Park is an Associate Professor and Ph.D. Program Coordinator at Rosen College, UCF. Earned Ph.D. from Purdue University, focusing on context effects in tourism decision-making. Research centers on consumer behavior and decision-making in hospitality and tourism. Dedicated to advancing academic insight into how travelers make choices in dynamic environments.

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REFERENCES:

Park, J. Y., Heo, W., Lee, J., & Jung, S. (2025). A novel approach to online review analysis: integrating theory of planned behavior and machine learning techniques. *International Journal of Contemporary Hospitality Management,* 37(7), 2448-2468.

PERSONAL RESPONSE

How did you ensure that online reviews accurately reflected TPB constructs?

"We began by developing a comprehensive keyword dictionary for each TPB construct—attitude, subjective norms, perceived control, and revisit intention. These keywords were drawn from existing literature and validated by experts in consumer behavior and text analysis. Using topic modeling, we mapped these terms to review content, allowing us to quantify psychological constructs from natural language. While no method is perfect, our approach demonstrated strong alignment between theory and real-world data, confirmed through statistical modeling and qualitative examples.

What surprised you most about the predictive power of machine learning in this context?

"One of the most surprising findings was how effectively neural networks could forecast revisit behavior based solely on text. We tested multiple models, and neural networks consistently outperformed others. The precision rates were impressive, especially considering the complexity of human behavior. It showed us that even subtle linguistic cues—like expressing control or referencing social influence—carry predictive weight. This opens exciting possibilities for real-time decision-making in hospitality, where understanding guests' intentions can lead to smarter, more personalized service.

Reviews from top-rated hotels across the U.S. provided a rich, diverse data set for analysis.

WHEN ROBOTS SAY SORRY:

Emotions, Apologies, and the Future of Service Recovery

ROSEN RESEARCH REVIEW

RUBY (HONG NGOC) NGUYEN, NGOC TRAN NGUYEN & MURAT HANCER

Human-robot collaboration enhances emotional sincerity in service recovery.

The research by Nguyen, Tran Nguyen, and Hancer reveals how human–robot collaboration and apology styles shape customer retention after service failures. Using experimental scenarios, the study shows that robots can effectively lead recovery efforts—especially when paired with economic apologies—while human involvement enhances the impact of social apologies. Comfort emotions and continued robot usage mediate the path to loyalty, offering hospitality leaders a blueprint for designing emotionally intelligent service recovery strategies.

THE NEW FRONTLINE: HUMANS, ROBOTS, AND THE ART OF MAKING THINGS RIGHT

Picture this: a robot named Pepbot delivers your dinner at a trendy restaurant—but it is the wrong order. What happens next? Does a human step in to apologize? Does the robot offer a discount? Or do both work together to make things right? As service robots become more common in hospitality, these questions are no longer hypothetical. They are central to how brands manage customer relationships in a tech-driven world.

This study explores the emotional and behavioral dynamics of service recovery when robots are part of the frontline team. Drawing on theories of technology infusion and social exchange, Nguyen and colleagues examine how different combinations of human–robot collaboration and apology styles affect customer comfort, continued robot usage, and loyalty to the service firm. Their findings challenge long-held assumptions about empathy, compensation, and the role of emotion in hospitality recovery strategies.

In a world where robots are increasingly responsible for guest interactions, understanding how to recover from their mistakes is essential. The study reveals that the way an apology is delivered—and by whom—can make or break the customer experience. Whether it is a robot offering a refund or a human expressing empathy, the emotional tone of the recovery matters just as much as the solution itself.

TECH MEETS TOUCH: REDEFINING SERVICE RECOVERY

Service recovery has traditionally relied on human empathy, verbal apologies, and emotional connection. But as robots take on more frontline roles, hospitality leaders must rethink how recovery works. Can a robot say sorry? Should it offer compensation? Does a human need to be involved to make the apology feel sincere? To answer these questions, the researchers build on two key frameworks: the Frontline Service Technology (FST) model and the Customer–Automated–Worker (CAW) model. They test three collaboration configurations—high human–low robot, low human–high robot, and high human–high robot—and two apology styles: social (empathy and explanation) and economic (compensation).

Previous studies have shown mixed results. Some suggest that humans are better at recovery because they can express genuine emotion. Others argue that

Economic apologies from robots boost perceived fairness and customer retention.

socially intelligent robots can deliver apologies that feel warm and competent. This study bridges those perspectives, asking not just who should apologize, but how—and what emotional and behavioral outcomes follow.

The researchers propose that the effectiveness of an apology depends on the alignment between the agent delivering it and the style used. Robots may be better suited to economic apologies, while humans excel at social ones. This insight has profound implications for how hospitality brands design recovery protocols in environments where technology and human service intersect.

SCENARIOS, SORRIES, AND STATISTICS

To test their hypotheses, the researchers conducted a scenario-based experiment with 311 participants recruited via Amazon Mechanical Turk. Each participant was randomly assigned to one of six conditions, combining different levels of human–robot collaboration and apology styles.

The scenario involved a robot named Pepbot delivering the wrong meal at a restaurant. Depending on the condition, the recovery effort included either a human or robot apology—or both—with either a social or economic tone. Participants then rated their emotional responses, willingness to continue using robots, and loyalty to the service firm.

The researchers measured comfort emotions (such as warmth, safety, and ease), robot continuance usage, and behavioral intentions. They controlled for factors like failure severity, blame attribution, and coping strategies. Data was analyzed using MANCOVA and PROCESS Macro Model 6, allowing for a nuanced understanding of how different recovery strategies influence customer behavior.

This experimental design allowed the team to isolate the effects of apology style and agent type, offering clear insights into what works—and what does not—when recovering from robot-led service failures.

DIVERSE DINERS, REAL EMOTIONS

Participants were adults who had interacted with service robots in public settings within the past six months. While the sample skewed male (74%) and White/Caucasian (87%), with most aged 25–34 and holding a bachelor's degree, the data still provided valuable insights into how real customers respond to robot-led service failures.

Despite demographic limitations, the study captured authentic emotional reactions to service recovery scenarios. Participants were asked to imagine themselves in the situation and respond as they would in real life. This approach ensured that the findings reflected genuine customer sentiments, not abstract opinions.

> "WE FOUND THAT COMFORT EMOTIONS—NOT JUST ROBOT USAGE—ARE THE MISSING LINK BETWEEN RECOVERY STRATEGY AND CUSTOMER LOYALTY."

The diversity of robot experiences among participants—from hotel check-ins to airport kiosks—added depth to the analysis. It showed that customers are increasingly familiar with robotic service and have formed expectations about how these machines should behave when things go wrong.

Comfort emotions—warmth, ease, and safety—drive loyalty after service failures.

THE RIGHT APOLOGY DEPENDS ON WHO'S TALKING

The study's findings reveal a clear pattern: robot-led recoveries paired with economic apologies yielded the highest behavioral intentions. Customers responded positively when robots took the lead and offered tangible compensation, such as discounts or vouchers. These apologies felt fair and appropriate, especially when the robot was perceived as responsible for the error.

In contrast, human-involved recoveries benefited more from social apologies. When a human expressed empathy and explained the mistake, customers felt emotionally reassured. This type of apology was most effective when the human was seen as a caring agent, capable of understanding and addressing the customer's feelings.

Comfort emotions played a pivotal role in shaping loyalty. When customers felt safe, understood, and emotionally supported, they were more likely to forgive the failure and remain loyal to the brand. Interestingly, robot continuance usage alone did not predict loyalty. It was the emotional experience—how the apology felt—that made the difference.

The most effective recovery strategies involved either strong robot leadership with economic apologies or balanced human–robot teamwork. These configurations challenged the assumption that humans are always better at saying sorry, showing that robots can be powerful agents of recovery when designed and deployed thoughtfully.

EMPATHY BY DESIGN: WHY ROBOTS CAN WIN HEARTS

According to Nguyen and colleagues, robots are not just tools—they are social agents capable of influencing emotions and loyalty. When robots lead recovery and offer compensation, customers feel treated fairly. When humans are involved, emotional sincerity matters more.

> "ECONOMIC APOLOGIES WORK BEST WHEN ROBOTS LEAD, BUT HUMAN EMPATHY MAKES SOCIAL APOLOGIES SHINE."

Comfort emotions—feelings of warmth, safety, and ease—are the missing link between recovery strategy and customer retention. These emotions mediate the relationship between apology style and loyalty, showing that technical fixes alone are not enough. Customers need to feel emotionally reassured to forgive and return.

The study suggests that hospitality brands must design recovery strategies that balance functional efficiency with emotional intelligence. Robots should be programmed to recognize emotional cues and respond appropriately. Humans should be trained to deliver empathetic messages that align with the robot's actions.

This approach requires collaboration between developers, designers, and hospitality managers. It is not just about building smarter robots—it is about creating emotionally intelligent service ecosystems where technology and humanity work together to make things right.

BEYOND THE FIRST IMPRESSION: LONG-TERM TRUST IN ROBOTIC SERVICE

This study opens the door to deeper exploration of human–robot collaboration in service recovery. Future research should examine how cultural and gender differences influence emotional responses to robot apologies. Do customers in collectivist cultures prefer human involvement? Are women more sensitive to emotional sincerity?

Researchers should also test other types of service failures—beyond restaurant scenarios—to see how recovery strategies perform in hotels, airports, and healthcare settings. Longitudinal studies could track how comfort emotions and robot usage evolve over time, revealing patterns in customer trust and loyalty.

As robots become more autonomous and socially intelligent, understanding the emotional nuances of their interactions will be key to sustaining customer relationships. Hospitality brands must move beyond novelty and efficiency, focusing instead on emotional design, trust-building, and long-term engagement.

The future of service recovery is not just about fixing mistakes—it is about making customers feel heard, valued, and cared for. Whether the apology comes from a robot or a human, it must resonate emotionally to truly restore the relationship.

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REFERENCES:

Nguyen, H. N., Nguyen, N. T., & Hancer, M. (2025). Human-robot collaboration in service recovery: Examining apology styles, comfort emotions, and customer retention. *International Journal of Hospitality Management*, 126, 104028.

AUTHORS' RESPONSE

Why did robot-led recoveries outperform human-led ones in some cases?

"Our findings suggest that when robots are socially intelligent and capable of expressing regret, customers perceive their apologies as sincere—especially when paired with tangible compensation. This challenges the idea that only humans can deliver effective apologies. In robot-led recoveries, customers may attribute the failure directly to the robot, making its apology feel more appropriate and expected. The key is designing robots that can communicate warmth and competence.

What role do comfort emotions play in customer retention?

"Comfort emotions are crucial. They represent feelings of safety, warmth, and ease—especially important after a service failure. Our study shows that when customers feel comforted, they are more likely to continue using the robot and remain loyal to the service firm. Without these emotions, even a technically successful recovery may fall short. Emotional reassurance bridges the gap between fixing the problem and rebuilding trust.

CO-WORKING WITH MACHINES:

How Service Robots Shape Frontline Employee Experiences and Well-Being

ROSEN RESEARCH REVIEW

CYNTHIA MEJIA, HANNAH A. CRANDELL, EMILY BROKER & MINDY SHOSS

The research by Mejia, Crandell, Broker, and Shoss reveals the complex realities faced by restaurant workers navigating the rise of service robots. Through in-depth interviews with 42 frontline employees, the study uncovers how robot adoption affects collaboration, productivity, emotional well-being, and perceptions of job security. While robots reduce physical strain and offer entertainment value, they also spark frustration, resentment, and fears of displacement. This research offers hospitality leaders a human-centered roadmap for integrating service robots in ways that support—not replace—the workforce.

Reduced physical exertion is a major benefit of robot-assisted service.

THE HUMAN SIDE OF AUTOMATION: WHY THIS RESEARCH MATTERS

In the wake of the pandemic, restaurants across the United States faced a labor crisis. With fewer workers and rising demand, many turned to service robots to fill the gap. But what happens when technology enters the dining room—not just as a tool, but as a teammate? This study dives into the lived experiences of restaurant employees who work alongside service robots. Conducted by researchers at the University of Central Florida, the project explores how robot adoption affects worker well-being, job performance, and emotional responses. Drawing on frameworks from the National Institute for Occupational Safety and Health, SERVQUAL, and technology acceptance models, the study offers a rare glimpse into the frontline realities of tech-driven hospitality.

The findings are both hopeful and cautionary. While robots can reduce physical strain and enhance customer engagement, they also introduce new challenges. These include technical glitches, lack of training, and emotional discomfort. For hospitality leaders, the message is clear: successful robot integration requires empathy, transparency, and support.

FROM THEORY TO TABLE: FRAMING THE RESEARCH

The study builds on three key frameworks to understand the impact of service robots on restaurant workers. The Future

of Work Framework from NIOSH emphasizes the intersection of work, workplace, and workforce, highlighting how emerging technologies affect vulnerable populations. SERVQUAL provides a lens for evaluating service quality, adapted here to assess how workers perceive robot reliability, responsiveness, and empathy. Technology Acceptance Models explore how perceived usefulness and ease of use shape attitudes toward new technologies.

Previous research has focused primarily on customer reactions to robots. This study shifts the spotlight to employees, asking how workers feel about robot adoption, what support they need, and how robot use affects their physical and emotional well-being. By combining qualitative interviews with thematic analysis, the researchers uncover six core themes: collaboration, optimization, integration, engagement, workforce effects, and resentment. These themes reveal a nuanced picture of how robots are reshaping the dining room—not just operationally, but emotionally.

INSIDE THE INTERVIEWS: HOW THE STUDY WAS DONE

The researchers conducted semi-structured interviews with 42 restaurant workers from two organizations: a regional restaurant chain and a senior living community with full-service dining. Participants included servers, bartenders, cooks, managers, and delivery staff, offering a diverse range of perspectives. Interviews were conducted in English and Spanish, professionally transcribed, and analyzed using qualitative software. The coding process drew on constructs from NIOSH, SERVQUAL, TAM, and UTAUT, with additional grounded codes added to capture emergent themes.

Participants had an average of ten years in the hospitality industry and nearly one year of experience working with service robots. Their responses generated over 1,300 coded segments, clustered into six overarching themes that reflect the multifaceted impact of robot adoption on the dining room floor.

VOICES FROM THE FLOOR: WHAT WORKERS REALLY THINK

The most prominent theme was service robot collaboration, highlighting how employees and customers interact with robots. Workers appreciated the robot's ability to carry heavy trays, reduce physical strain, and entertain guests. Some described the robot as a helpful tool, while others saw it as a competitor. Service robot optimization focused on process improvements. Workers suggested better mapping, faster movement, and more intuitive interfaces. Frustrations included slow speeds, technical glitches, and limited functionality, especially during busy shifts.

Service robot integration revealed mixed feelings about productivity and training. While some workers found the robot intuitive, others felt blindsided by its arrival and unsupported by management. Lack of training led to confusion and inefficiencies, underscoring the need for structured onboarding. Service robot engagement captured moments of joy and novelty. Guests took selfies, children were delighted, and some workers felt proud to be early adopters. These positive experiences boosted morale and customer satisfaction.

> "WORKERS APPRECIATED THE PHYSICAL RELIEF ROBOTS PROVIDED, BUT VOICED FRUSTRATION WHEN TRAINING AND SUPPORT WERE MISSING.

Collaboration between staff and service robots is transforming restaurant operations.

Service robot workforce effects explored how robots influenced job roles and well-being. Younger workers embraced the technology, while older employees feared job loss. Despite mixed feelings, most agreed that robots reduced physical exertion and stress. Finally, service robot resentment exposed deeper emotional responses. Some workers felt dread, anger, and frustration, especially when robots malfunctioned or disrupted workflows. Others observed changes in coworkers' behavior, from increased happiness to growing discontent.

EMOTIONS IN MOTION: INTERPRETING THE FINDINGS

According to Mejia and her team, service robots are more than machines. They are catalysts for emotional and organizational change. The study reveals that workers' reactions are shaped not just by the robot's performance, but by how it is introduced, supported, and integrated into daily routines. Comfort and control matter. When workers feel physically supported and emotionally respected, they are more likely to accept robot adoption. But when robots are imposed without training or explanation, resentment builds.

The study also highlights generational differences, with younger workers more open to change and older workers more skeptical. Importantly, the research shows that robot adoption is not a one-size-fits-all solution. Success depends on context, communication, and collaboration. Hospitality

Physical space optimization is key to successful robot integration.

leaders must listen to their teams, adapt workflows, and ensure that technology enhances—not replaces—the human touch.

FROM INSIGHT TO ACTION: PRACTICAL IMPLICATIONS

For hospitality managers, this study offers clear guidance. Communicating early and often is essential. Workers want to know why robots are being introduced and how they will affect their roles. Investing in training is critical. Structured onboarding and ongoing support are essential for successful integration. Inviting feedback is equally important. Employees have valuable insights into how robots can be optimized for real-world conditions.

Respecting emotional responses is key. Not all workers will embrace robots immediately. Allowing time for adjustment and offering alternatives when possible can ease the transition. Celebrating the wins helps build momentum. Highlighting how robots reduce physical strain, improve safety, and enhance customer engagement can foster a sense of pride and ownership. Ultimately, robot adoption should be a partnership, not a mandate. By involving workers in the process, hospitality leaders can build trust, improve service quality, and support employee well-being.

> “SUCCESSFUL ROBOT ADOPTION DEPENDS ON EMPATHY, TRANSPARENCY, AND COLLABORATION—NOT JUST TECHNICAL PERFORMANCE.

LOOKING AHEAD: FUTURE OPPORTUNITIES

This study lays the groundwork for future research on service robot adoption in hospitality. Key areas for exploration include cultural and generational differences in attitudes toward robots. Longitudinal studies could track how worker perceptions evolve over time as robots become more common. Quantitative validation of the themes identified here could provide broader insights across larger samples. Cross-industry comparisons may reveal how robot adoption experiences differ in hotels, airports, and healthcare settings.

As robots become a fixture in service environments, understanding their impact on workers will be critical. This study reminds us that technology is not neutral. It shapes emotions, relationships, and organizational culture. The future of hospitality depends not just on innovation, but on inclusion.

This study was supported by grant number T42OH008438, funded by the National Institute for Occupational Safety and Health (NIOSH) under the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the NIOSH or CDC or the Department of Health and Human Services.

Collaboration between humans and robots reshapes the dining room dynamic.

RESEARCHERS IN FOCUS

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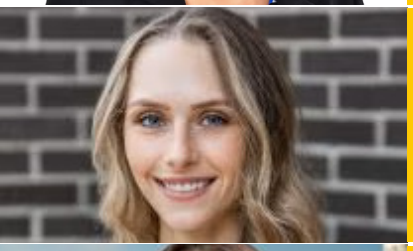

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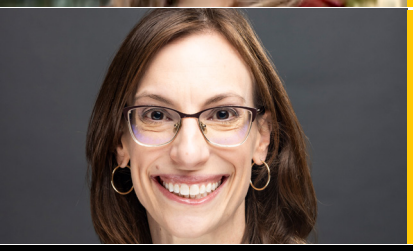

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The researchers thanks Bear Robotics for their support in this study.

REFERENCES:

Mejia, C., Crandell, H. A., Broker, E., & Shoss, M. (2024). Working with service robots in the dining room: employees' perspectives and realities. *Journal of Hospitality and Tourism Technology,* 15(5), 878-896.

AUTHORS' RESPONSE

What surprised you most about how workers responded to service robots?

One of the most surprising findings was the emotional complexity. Workers did not simply love or hate the robots. They experienced a mix of relief, pride, frustration, and fear. Even those who appreciated the physical support voiced concerns about job security and lack of training. This shows that robot adoption is not just a technical issue. It is a human one.

How can managers better support employees during robot integration?

Managers should start by involving employees early in the process. Explaining the purpose of the robot, offering hands-on training, and creating space for feedback are essential. Recognizing that some workers may need more time to adjust and offering reassurance about job roles can ease the transition. Most importantly, treating robot adoption as a team effort—one that values both innovation and empathy—can foster trust and long-term success.

CHECK-IN WITH A CHATBOT:

How Robots are Redefining the Smart Hotel Experience

ROSEN RESEARCH REVIEW

JIAXIN (SYLVIA) WANG & XIAOXIAO FU

The research by Wang and Fu explores how guests perceive and experience smart hotels, with a particular focus on human–robot interaction. Analyzing 546 online reviews from Chinese travelers, the study identifies five key dimensions of guest gratification: utilitarian, sensual, social, experiential, and overall satisfaction. Guests praised smart servicescapes, robot efficiency, and novelty, while also expressing emotional connections and expectations for personalized interaction. The findings offer hospitality leaders a roadmap for designing smart hotel experiences that are not only functional but emotionally engaging.

Guests praised robots for efficient, contactless service—especially during check-in and room deliveries.

THE RISE OF THE SMART HOTEL: WHY THIS RESEARCH MATTERS

Smart technologies have transformed the hospitality industry, offering new ways to personalize service, streamline operations, and meet evolving guest expectations. During the COVID-19 pandemic, service robots became essential tools for contactless service, helping hotels maintain safety and continuity. As these technologies become more common, the question shifts from whether guests will accept them to how they actually experience them.

This study investigates the real-world perceptions of guests staying in smart hotels, focusing on their encounters with service robots. Drawing on online reviews from China's leading travel platform, the research captures authentic, unfiltered reactions to smart hospitality environments. The goal is to understand not just the technical performance of robots, but the emotional and experiential dimensions of human–robot interaction.

The findings reveal that guests respond to smart hotels in complex ways. They appreciate efficiency and novelty, but also seek emotional engagement and social presence. For hospitality leaders, this study underscores the importance of designing smart hotel experiences that go beyond automation to deliver meaningful, memorable service.

FRAMING THE EXPERIENCE: FROM GRATIFICATION TO SATISFACTION

The study is grounded in the uses and gratifications theory, which explains how individuals seek out media and technology to fulfill specific psychological needs. In the context of smart hotels, this theory helps unpack why guests are drawn to service robots and how these interactions satisfy different types of gratification.

Childlike voices and playful behavior enhance social presence, making interactions with robots more memorable.

Five dimensions emerged from the analysis. Utilitarian gratification reflects the practical benefits of smart servicescapes and service quality. Sensual gratification captures the novelty and coolness of the experience. Social gratification includes feelings of social presence and interaction with robots. Experiential gratification encompasses both functional and emotional value. Finally, satisfaction represents the overall emotional response to the smart hotel stay.

These dimensions offer a comprehensive framework for understanding guest experience in smart hospitality settings. They highlight the interplay between technology, emotion, and perception, revealing that successful service robot integration depends not only on functionality but also on how guests feel during and after the encounter.

INSIDE THE REVIEWS: HOW THE STUDY WAS DONE

The researchers conducted a thematic analysis of 546 verified guest reviews from Ctrip, China's largest online travel platform. Reviews were selected using keywords related to smart hotels and technology, ensuring relevance to the study's focus on human–robot interaction.

Using a hybrid inductive–deductive approach, the researchers coded and categorized the reviews to identify recurring themes and subthemes. This method allowed for both data-driven insights and theoretical alignment with existing literature. The analysis revealed five overarching categories, each with distinct subthemes that reflect different aspects of the smart hotel experience.

By focusing on user-generated content, the study captures genuine guest sentiments, offering a rich and nuanced understanding of how people perceive and respond to smart hospitality environments.

WHAT GUESTS REALLY THINK: FINDINGS FROM THE FIELD

Guests expressed strong utilitarian gratification when smart servicescapes made their stay more efficient and convenient. Features like facial recognition for check-in, voice-controlled room functions, and robot deliveries were praised for saving time and reducing stress. Some guests described the experience as futuristic, while others noted that smart technology helped them feel more in control.

Sensual gratification was evident in reactions to novelty and coolness. Guests were excited by their first encounters with service robots and impressed by the high-tech ambiance. These feelings often influenced their decision to choose a smart hotel, with some travelers booking specifically to experience the technology.

Social gratification emerged through interactions with robots that felt personal and engaging. Guests described robots as cute, friendly, and even humorous. Children formed emotional connections,

Social presence and interaction turn robots into memorable parts of the travel experience.

treating robots as companions. Anthropomorphic features like childlike voices and playful behavior enhanced the sense of social presence and made the experience more memorable.

Experiential gratification combined functional and emotional value. Guests appreciated the practical benefits of smart technology, but also found joy in sharing their experiences with others. Some felt empowered by the technology, while others found comfort in the reduced need for human interaction, especially those with social anxiety.

Satisfaction was expressed through enthusiastic praise, emojis, and repeat bookings. Guests who felt their expectations were met or exceeded were more likely to recommend the hotel and return in

> "GUESTS PRAISED THE EFFICIENCY OF SERVICE ROBOTS BUT EMPHASIZED THE IMPORTANCE OF EMOTIONAL CONNECTION AND PERSONALIZED INTERACTION.

the future. However, when technology failed or lacked personalization, dissatisfaction emerged, highlighting the importance of thoughtful design and responsive service.

INTERPRETING THE EMOTIONAL LANDSCAPE OF SMART STAYS

According to Wang and Fu, the smart hotel experience is shaped by more than just technology. It is a blend of sensory stimulation, emotional engagement, and social interaction. Guests do not simply evaluate robots based on performance. They respond to how the technology makes them feel, how it fits into their routines, and how it enhances or detracts from their overall stay.

The study reveals that anthropomorphism plays a key role in guest engagement. Robots that mimic human traits—through voice, behavior, or appearance—create emotional connections that deepen the experience. These connections are especially powerful for children and guests seeking novelty.

At the same time, the research highlights the risks of over-reliance on automation. When robots fail to respond or lack personalization, guests feel disappointed. This suggests that smart hotel design must balance efficiency with empathy, ensuring that technology supports rather than replaces meaningful service.

> “SMART HOTEL DESIGN MUST BALANCE AUTOMATION WITH EMPATHY TO CREATE MEANINGFUL AND MEMORABLE GUEST EXPERIENCES.

DESIGNING SMARTER STAYS: PRACTICAL IMPLICATIONS

For hotel managers and designers, this study offers clear guidance. Smart technology should not be used merely as a gimmick. It must deliver real value—functional, emotional, and social. Guests expect more than novelty. They want technology that works seamlessly, responds to their needs, and enhances their sense of comfort and control.

Investing in smart servicescapes means creating environments where technology is intuitive, integrated, and emotionally engaging. Robots should be designed with friendly features, gentle voices, and playful personalities that align with guest expectations.

Personalization is key. Guests want to feel seen and heard, even when interacting with machines. Hotels should also consider the diversity of guest preferences. Some travelers seek high-tech experiences, while others value simplicity and human connection. Offering flexible service options and clear communication can help bridge these differences and ensure a positive experience for all.

Ultimately, smart hospitality is not just about innovation. It is about creating environments where technology enhances the human experience, supports emotional well-being, and fosters lasting memories.

LOOKING AHEAD: FUTURE OPPORTUNITIES

This study opens the door to deeper exploration of human–robot interaction in hospitality. Future research could include in-depth interviews to complement online reviews, offering richer insights into guest emotions and expectations. Expanding the cultural scope beyond Chinese travelers would also enhance generalizability and reveal cross-cultural differences in smart hotel experiences.

Longitudinal studies could track how guest perceptions evolve over time as smart technologies become more common. Quantitative research could validate the constructs identified here, providing a foundation for predictive models of guest satisfaction and loyalty. As service robots become a fixture in hotels, understanding their impact on guest experience will be critical. This study reminds us that technology is not just a tool. It is a partner in shaping how guests feel, connect, and remember their stay. The future of hospitality lies in designing smart experiences that are not only efficient but emotionally intelligent.

Smart servicescapes offer convenience and novelty, contributing to utilitarian and sensual gratification.

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REFERENCES:

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AUTHORS' RESPONSE

What surprised you most about how guests responded to service robots?

"One of the most surprising findings was how emotionally engaged guests became with robots. They did not just see them as tools. They described them as cute, friendly, and even humorous. Children treated robots like companions, and adults expressed joy and comfort. This emotional connection shows that robot design matters—not just in function, but in personality.

How can hotels improve the smart hospitality experience?

"Hotels should focus on personalization and emotional engagement. Robots should be designed to respond to guest needs in intuitive and empathetic ways. Training staff to support technology use and offering flexible service options can help guests feel more comfortable. Most importantly, smart technology should enhance—not replace—the human touch that defines great hospitality.

Robot towel delivery shows smart hotels redefine efficiency and guest expectations.

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