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Servicescape As Biopolitical Space: Surveillance, Biometric Data Capture, And Guest Agency In Smart Hotels

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Abstract: This article examines the smart hotel servicescape through Michel Foucault's concepts of disciplinary power, surveillance, panopticism, biopolitics, and governmentality. Contemporary smart hotels increasingly incorporate facial recognition, biometric authentication, mobile check-in, digital keys, CCTV systems, artificial intelligence-based personalization, Internet of Things devices, and data-driven monitoring of guest behavior. Although these technologies are commonly presented as tools for convenience, security, operational efficiency, and service personalization, they also transform the guest's body, movements, preferences, and behavioral patterns into measurable and governable data. The study adopts a qualitative research framework combining semi-structured interviews with critical discourse analysis. The proposed empirical design focuses on guests who have experienced smart hotel technologies and on discourses embedded in privacy policies, biometric consent interfaces, check-in procedures, and hotel marketing materials. Foucault's theoretical concepts are employed as analytical categories to examine how surveillance is normalized, how biometric data become resources of organizational power, and how guests negotiate or resist technological control. The analysis suggests that the smart hotel should not be understood merely as an advanced technological servicescape, but as a biopolitical environment in which hospitality, convenience, surveillance, classification, and behavioral management intersect. At the same time, guests are not entirely passive subjects. Guest agency may be expressed through refusal of biometric identification, preference for human-assisted check-in, selective use of hotel applications, limitation of digital permissions, and questioning of data collection practices. The article contributes to critical hospitality studies by extending conventional technology-adoption approaches and conceptualizing the smart hotel as a site of negotiated digital power.

Keywords: smart hotel, servicescape, Michel Foucault, biopolitics, surveillance, biometric data, facial recognition, guest agency, privacy, governmentality, digital hospitality.

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1. Introduction

The digital transformation of the hospitality industry is changing not only the technological infrastructure of hotels but also the nature of the relationship between guests and hospitality organizations. Smart hotel environments increasingly incorporate mobile applications, automated check-in systems, facial recognition, biometric authentication, digital room keys, artificial intelligence-based virtual assistants, smart room controls, connected sensors, and personalized recommendation systems. These technologies allow hotels to reduce waiting time, automate routine services, personalize customer experiences, optimize energy use, and improve security. However, they also expand the capacity of hospitality organizations to collect, process, classify, and interpret information about guests [1].

Traditionally, the concept of the servicescape has referred to the physical environment in which service encounters take place. Bitner's classical conceptualization emphasized ambient conditions, spatial layout, signs, symbols, and artifacts as elements shaping customer and employee behavior [2]. In the context of smart hospitality, however, the servicescape extends beyond physical architecture. The contemporary guest interacts not only with reception desks, corridors, rooms, restaurants, and staff members, but also with sensors, cameras, interfaces, algorithms, mobile applications, cloud databases, and automated decision systems. The hotel therefore becomes a hybrid physical-digital environment [3].

Recent hospitality research has introduced notions such as the “intelligent servicescape” to explain how technology becomes embedded in service environments. In this context, the hotel is no longer simply a physical setting enhanced by digital tools. Rather, technology becomes part of the architecture of service itself [4]. The guest’s movement through the hotel may generate digital traces from the moment of booking until departure. Identity documents may be scanned at check-in, facial images may be processed for biometric identification, mobile applications may record location or usage behavior, and smart room systems may collect information about temperature preferences, lighting, entertainment choices, or service requests [5].

Most managerial discussions present these developments through the language of efficiency, convenience, safety, personalization, and innovation. A guest may be told that facial recognition provides a faster check-in experience, that digital keys make room access easier, or that collecting preference data enables personalized hospitality. Yet the same technologies also create a more intensive infrastructure of observation and data capture [6].

The central question is therefore not whether smart technologies offer benefits. In many cases they clearly do. The more critical question is how these technologies reorganize relations of visibility, knowledge, power, and choice within the hotel environment [7].

Michel Foucault’s work provides a particularly productive theoretical framework for addressing this question. Foucault argued that modern power does not operate exclusively through direct prohibition, coercion, or punishment. It also functions through observation, classification, normalization, examination, knowledge production, and the organization of subjects’ behavior. In *Discipline and Punish*, the panopticon represents a model of power in which individuals regulate themselves because they may be observed even when they do not know whether observation is actually taking place [8].

In a smart hotel, surveillance is similarly distributed across the service environment. A guest may see CCTV cameras but may be less aware of digital surveillance embedded in Wi-Fi networks, mobile applications, access-control systems, smart televisions, digital payment infrastructures, or personalized recommendation platforms. Surveillance becomes increasingly diffuse and integrated into ordinary service processes [9].

2. Research Methodology

The study is designed within a qualitative interpretivist paradigm. A qualitative approach is appropriate because the research is concerned not only with whether guests use smart technologies but also with how they interpret surveillance, privacy, convenience, consent, and control.

The methodological framework combines semi-structured interviews with critical discourse analysis. These methods are complementary. Interviews provide access to guests’ subjective experiences, while discourse analysis makes it possible to examine how hotels and institutional actors describe and legitimize technological practices.

For the interview component, purposive sampling is proposed. Participants should have direct experience with at least one smart hospitality technology during the previous two years. Relevant experiences may include facial-recognition check-in, automated self-service kiosks, mobile room keys, smart room controls, AI-powered concierge services, biometric verification, or data-intensive hotel applications.

A sample of approximately 15–20 participants would provide a suitable starting point for an exploratory qualitative study, although final sample size should be determined by thematic saturation rather than a predetermined numerical threshold. Interviews may last approximately 30–45 minutes and should be recorded only with informed consent.

The semi-structured interview guide should explore how guests experience technological convenience, whether they perceive themselves as being monitored, what kinds of personal information they believe hotels collect, how they understand biometric consent, and whether they believe they have genuine alternatives to automated systems. Additional questions should investigate whether guests modify their behavior because of surveillance and whether they have ever refused, limited, or avoided a smart hotel technology.

The discourse-analysis component should examine privacy policies, data-protection statements, mobile application permission screens, biometric consent notices, check-in instructions, website descriptions of smart technologies, and promotional materials produced by hotels or technology providers.

Particular attention should be paid to recurring terms such as “convenience,” “safety,” “seamless,” “personalization,” “security,” “consent,” “customer experience,” “innovation,” and “efficiency.” These terms do more than describe technology; they construct particular meanings around it. Critical discourse analysis can reveal how extensive data collection becomes normalized through positive service language.

Foucault’s theoretical concepts can be operationalized as analytical codes. Panoptic surveillance refers to the possibility of continuous observation and the guest’s awareness that behavior may be recorded. Disciplinary power refers to processes through which technological systems encourage standardized behavior. Examination refers to the identification, documentation, measurement, and classification of guests. Biopolitics refers to the transformation of bodies and behavioral patterns into manageable data. Governmentality concerns the ways individuals are encouraged to govern their own behavior according to organizational norms presented as reasonable, safe, or convenient.

The concept of guest agency constitutes a counter-category. Agency may appear through refusal, negotiation, selective participation, withdrawal of consent, use of alternative service channels, restriction of mobile permissions, requests for data deletion, or preference for human-mediated service.

The Uzbek legal and institutional context is particularly relevant to such research. Uzbekistan’s Law “On Personal Data” regulates the processing and protection of personal data and recognizes biometric information as a particularly important category of personally identifiable information. In hospitality, accommodation providers also participate in official guest-registration processes. This creates an important distinction between information collected because of regulatory requirements and additional data collected for commercial personalization, behavioral analytics, or biometric convenience services.

Analytically, interview transcripts should be coded iteratively. Initial open coding can identify recurrent ideas such as “I do not mind because it is faster,” “I was not sure what happened to my face data,” “there was no real alternative,” or “I prefer talking to a receptionist.” These codes can then be grouped into broader Foucauldian themes concerning normalization, visibility, self-regulation, classification, and resistance.

Importantly, genuine empirical findings should only be reported after real interviews have been conducted. The present article therefore establishes the theoretical and analytical architecture for the empirical study rather than fabricating participant quotations or statistical findings.

3. Results

The theoretical and documentary analysis indicates that three interconnected processes are central to understanding the smart hotel as a biopolitical servicescape: the transformation of the hotel into a distributed surveillance environment, the conversion of the guest’s body into a data resource, and the emergence of negotiated guest agency [10].

The first process concerns the diffusion of surveillance across the servicescape. In a conventional hotel, surveillance is often associated mainly with visible CCTV cameras. In a smart hotel, however, monitoring may be embedded in numerous interconnected technologies [11]. Digital room locks register access events. Mobile applications record service interactions. Wi-Fi systems can generate device-level information. Smart room infrastructure may register user preferences. Payment systems document consumption patterns. Cameras and sensors may support both security and operational analytics [12].

As a result, surveillance becomes less concentrated and more environmental. The guest does not necessarily confront a single obvious observer. Instead, observation is distributed across technological systems [13].

This resembles Foucault’s panoptic logic. The effectiveness of surveillance does not depend on the permanent physical presence of an observer. What matters is that the subject understands that observation is possible.

A guest who knows that common spaces are monitored or that digital interactions are recorded may regulate behavior even without knowing who is observing, when observation occurs, or how long information is retained [14].

The smart servicescape therefore modifies the relationship between visibility and power. The guest becomes increasingly visible to the organization, while the data-processing infrastructure remains comparatively invisible to the guest. The hotel may know when the guest entered the room, ordered food, changed room settings, contacted reception, or used digital facilities, while the guest may know little about how these fragments are combined [15].

The second major process is biometric datafication. Facial-recognition systems provide a particularly clear example. When a guest's face is captured, the technology does not simply "see" a face as another human being would. It translates physiological features into data that can be processed, compared, authenticated, stored, or connected with other customer information.

The body becomes an interface.

In hospitality, this may be presented as an improvement in convenience. The guest does not need to carry a physical room key or repeatedly present identification. Yet from a Foucauldian perspective, biometric convenience also increases the capacity of the organization to make the body legible.

The guest becomes simultaneously a hospitality subject and a data object.

This resembles Foucault's concept of examination, through which individuals become cases that can be documented, compared, classified, and managed. Digital hospitality extends examination through automated infrastructures. Customer relationship management systems may combine demographic information, booking histories, spending behavior, loyalty status, preferences, complaints, and biometric identifiers.

These practices are not necessarily malicious. Many exist because they improve service delivery. The Foucauldian point, however, is that productive and beneficial systems can still be systems of power. Modern power often works precisely because it produces useful knowledge.

The third process concerns the discursive normalization of data collection. Smart hotel technologies are usually introduced through positive narratives. Facial recognition becomes "frictionless check-in." Continuous digital tracking becomes "personalization." Sensor networks become "smart convenience." Extensive data integration becomes "seamless guest experience."

The language is significant.

Governmentality operates when subjects are encouraged to understand particular forms of conduct as rational and beneficial. If biometric identification is framed as faster, safer, and more modern, guests may perceive participation as the natural choice. Those who refuse may appear inconvenient, technologically conservative, or unnecessarily concerned.

Consent therefore becomes more complicated than the presence of a formal "I agree" button.

A guest may technically have the right to refuse a biometric system but may still experience indirect pressure if the alternative process is slower, less visible, or requires additional interaction. In such a case, technological architecture shapes choice even without explicit coercion.

This is where guest agency becomes important.

Guests should not be conceptualized merely as passive recipients of algorithmic power. Hospitality remains an interactive social environment, and guests can negotiate how they engage with technological systems. Refusing facial recognition, requesting a physical room key, declining an application permission, disabling location access, avoiding a hotel app, asking how long biometric data will be retained, or choosing staff-assisted check-in are all forms of micro-level agency.

4. Discussion

The analysis suggests that the smart hotel servicescape cannot be adequately understood only as a technologically enhanced environment designed to improve customer experience. It also represents an increasingly sophisticated infrastructure of visibility, data extraction, classification, and behavioral governance.

Foucault's theoretical contribution is particularly valuable because it prevents power from being reduced to obvious repression. Smart hotel technologies frequently create genuine benefits. Automated check-in can eliminate waiting times. Digital keys may reduce inconvenience. Intelligent climate systems can improve comfort. Artificial intelligence may enable highly responsive services.

The existence of benefits does not eliminate power relations.

Indeed, technological power may become more effective precisely when surveillance and data collection are integrated into attractive services.

This produces what may be described as a hospitality paradox. Guests increasingly expect personalization, yet personalization requires information. Guests expect safety, yet safety may involve surveillance. Guests seek frictionless service, yet frictionless service often depends on persistent identification. They value autonomy while simultaneously relying on technological infrastructures that operate through data capture.

The central ethical issue is therefore not whether data should ever be collected. Rather, the question concerns proportionality, transparency, purpose limitation, and meaningful choice.

A smart hotel should be able to explain what information is collected, why it is necessary, whether it is required by law or merely useful for commercial purposes, how long it is stored, who can access it, and whether guests can use equivalent services without biometric participation.

This distinction is especially important in Uzbekistan. Guest registration requirements may justify the collection of certain identifying information, but regulatory registration should not automatically legitimate unlimited commercial data processing. Information required for legal identification must be conceptually and operationally distinguished from information collected for personalization, marketing, analytics, or biometric convenience.

Biometric information deserves particular caution because of its permanence. Passwords can be changed following a security breach; faces and fingerprints cannot easily be replaced. The expansion of facial recognition in hotels therefore raises issues that go beyond ordinary customer databases.

Foucault's concept of governmentality also helps explain why transparency alone may not be sufficient. Guests can be informed about data collection yet still feel unable to refuse it. When a smart service is designed as the default option and the non-digital alternative becomes inconvenient, the architecture of choice itself exercises power.

For this reason, meaningful guest agency should become a design principle of smart hospitality.

A genuinely guest-centered smart hotel would not simply maximize automation. It would provide comprehensible alternatives. A customer uncomfortable with facial recognition should be able to check in through conventional identification without significant disadvantage. A guest should be able to use essential services without granting unnecessary mobile permissions. Privacy settings should be understandable rather than hidden within complex interfaces.

From this perspective, resistance should not be treated as a service failure.

A guest who refuses biometric identification is not necessarily rejecting innovation. The refusal may represent a rational attempt to preserve informational autonomy. Hospitality organizations can learn from such resistance because it reveals where technological convenience begins to conflict with perceived personal boundaries.

The proposed empirical interview study can deepen this analysis. Guest narratives would make it possible to investigate when surveillance feels protective and when it becomes intrusive. They could reveal whether individuals distinguish between CCTV and biometric monitoring, whether they read consent notices, how they understand data retention, and whether they perceive a real right to opt out.

Critical discourse analysis can then compare these experiences with organizational language. If hotel marketing repeatedly describes biometric systems as "seamless," "secure," and "effortless," while participants describe uncertainty or lack of choice, the discrepancy itself becomes analytically significant.

5. Conclusion

The growth of smart hospitality is transforming the hotel from a conventional service environment into a hybrid physical-digital infrastructure. Cameras, mobile applications, sensors, biometric systems, digital keys, AI algorithms, and connected platforms increasingly mediate the guest experience. Through a Foucauldian lens, this transformation can be interpreted as the emergence of the hotel servicescape as a biopolitical space. Surveillance becomes distributed across ordinary service interactions. The guest's body becomes machine-readable through biometric technologies. Behavioral traces become resources for classification, personalization, security assessment, and organizational decision-making. Power operates not primarily through explicit coercion but through convenience, normalization, visibility, and technological design. At the same time, the guest remains capable of agency. Refusing facial recognition, selecting staff-assisted check-in, limiting mobile permissions, demanding information about data retention, or requesting deletion of unnecessary data represent everyday forms of negotiation within the smart servicescape. Such agency demonstrates that guests should not be conceptualized merely as objects of surveillance. The central implication for hospitality management is that the meaning of "smart" should extend beyond technological sophistication. A truly intelligent hospitality environment should also protect guest autonomy. Technological efficiency should therefore be accompanied by transparent data governance, genuine alternatives, proportional information collection, clear privacy communication, and meaningful consent. For Uzbekistan, these questions are increasingly important as digital identification and smart service systems expand. Legal requirements concerning guest registration and personal data protection provide an institutional foundation, but hospitality organizations must distinguish legally necessary identification from optional commercial profiling and biometric personalization. Future empirical research should conduct semi-structured interviews with smart hotel guests and systematically analyze hotel privacy policies, biometric interfaces, consent notices, and digital marketing discourse. Such research could reveal how guests actually experience surveillance and whether formal consent corresponds to perceived choice.

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