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# The Poetics of Service: Making in the Age of Experience

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Design is the art of making that mediates universal knowledge and a particular material. How, then, can we explain making in which the main focus is on shaping the immaterial, such as service design? This paper examines the making of the immaterial via a discussion of service storytelling. We use Aristotle's Poetics as the conceptual framework, focusing on the four causes of being and the dynamic structure that unfolds over time. We first discuss Poetics as an art of making that concerns the human experience, regardless of the medium. Poetics explores a systematic structure of drama from a human-centered perspective, which positions the four causes (i.e., material cause, efficient cause, formal cause, and end cause) as the key organizing principles for analysis and synthesis. We then use this framework to (1) analyze service from the perspectives of the four causes, (2) study the key factors and patterns of dramatic structure as a unifier that synthesizes the four causes into an organic flow, and (3) present a case study that applies the Poetics framework to compare accommodation services from two different cultural perspectives: an American inn and a Japanese ryokan. In the conclusion, we highlight the need to explore a participatory model of service storytelling.

## 1    Introduction

Design is the art of making. The Greek word *techne*, which is the origin of the term "design," refers to the knowledge of making guided by the particularity of the material(s) used. Mitcham (1994) suggested that techne refers to "a special knowledge of the world that informs human activity accordingly." While Plato distinguished between techne (the knowledge of making) and episteme (universal knowledge), Aristotle argued that techne is knowledge that is interactively mediated by the sensory perceptions of materials and the systematic knowledge of logos (Mitcham, 1994); in other words, making is knowledge in action, which connects materials and ideas. This view resonates with Schön's (1992) discussion of design as a reflective conversation using the materials of the given situation.

If making is particular to material, however, how can we understand making in design projects where immaterial concepts, such as system, interaction, information, or services, are central to making? Ingold (2007) discusses the dichotomy of matter and mind to propose that materials do not exist as fixed attributes, but "occur" in an environment as they are experienced as stories and histories. To study the interactive and integrative nature of making, we draw on the theory of storytelling, which is an archetypical framework for the analysis and construction of immaterial

human experiences. Storytelling is an art of making, capturing the pattern of life that people can understand and reproduce.

This study particularly focuses on the making of service. Although several researchers have proposed the dramatic potential of a service (Evenson, 2005; Moggridge, 2008; Pine & Gilmore, 1998), this approach often interprets service as the performance of the service provider and regards customers as a passive audience. Through storytelling, however, the audience becomes an active participant, thus building new meaning on top of the structure of the service system. There is a need to examine service storytelling as a co-creative process of making rather than one-way communication.

Storytelling has widely been used in the design process as a tool for research (Wilkins, 2004), prototyping (Quesenbery, 2010), and communication (Lichaw, 2016). The present study focuses on storytelling as a theoretical model, drawing on Aristotle's Poetics as a structural framework to understand service and its making. The following sections will (1) examine service through the lens of the four causes of Poetics, (2) study the key patterns of dramatic structure as a unifier that synthesizes the four causes into an organic flow, and (3) present a case study that applies the poetic framework to a comparison of the American motel and the Japanese ryokan.

## 2 Poetics

Aristotle's Poetics was the first historical work to discuss drama and has since become the foundation of storytelling theories. The name "Poetics" originates from the Greek word 'poieîn' (to make). Often misunderstood as a study limited to poetry, tragedy, or theatrical play, Poetics represents a broader discussion about "the art of making" that deals with human experience, regardless of the medium or content. Aristotle viewed drama as mimesis (the imitation) of nature and thus proposed a systematic method of making to conceptualize the human experience as a representation of reality.

Poetics encompasses a theory about a comprehensive and conclusive "structure" of experience. It was written during a time when popular media was transitioning from oral accounts to written text. Dramatic performance was a component of poetry, which was narrated by bards and the techne of making was perceived as a form of inspiration by divine madness. As character was invented, however, poetry eventually evolved into a collaborative theatrical performance, with the poet giving directions mediated by written scripts. It was during this period when Aristotle sought to develop a theory of creation. He studied making in relation to a systematic principle, such as human nature and causality.

Poetics represents a study of the human experience. The main reason that Aristotle focused on tragedy is not necessarily due to the subject matter but, rather, to its structured plots, with human subjects at the center of the experience. In ancient Greece, epic poetry was considered the opposite of tragedy, the former of which was

a lengthy historical record that was passed down orally and added to by generations of bards. Therefore, rhythm and rhyme—operating as mnemonic devices—were more important than the holistic structure. In contrast, tragedies were shorter, stand-alone performances with a clear beginning and end. Intense emotion was used to blend each part into an integrative flow. Aristotle devoted a considerable amount of Poetics to explaining the superiority of tragedy over epic poetry, as it was a "human art." Naturally, Poetics evolved into a theory that discusses the essence of the human experience and values.

The human-centered perspective of Poetics renders it relevant to the present-day framework of storytelling, which encompasses different forms of media and technology. For example, Laurel (1991) applied Poetics in her discussion of human-computer interactions. The rationale behind analyzing contemporary technology through the lens of a classic framework is because Aristotle's theoretical model still offers insights into how we create intangible interactions. As such, Aristotle's theory, which discusses all kinds of creation as forms of mimesis, can be applied to any making of the artificial—irrespective of whether it is material or immaterial.

In the field of design, Poetics is understood as a structural theory of making, thus providing a basis for the study of design as a productive science. According to Buchanan (2007), design science refers to the process of making, during which functional elements are analyzed and synthesized in an organic manner. He argued that Aristotle laid the foundations of design as a productive science by discussing integrative actions in relation to production. Moholy-Nagy (1944) also proposed Poetic analysis and synthesis as the core processes of making. He compared the design process to that of nature's trial-and-error process, thus positioning materials, techniques, forms, and artist's role as the key elements of making.

The systematic structure and human-centered perspective of Poetics as a productive science makes it a useful framework for understanding the making of service. In particular, Aristotle proposed four causes to explain the causal relationships between the essential elements of making and the outcome: form, function, material, and manner (see Figure 1). In the following sections, we will analyze the essential elements of a service with these four causes.
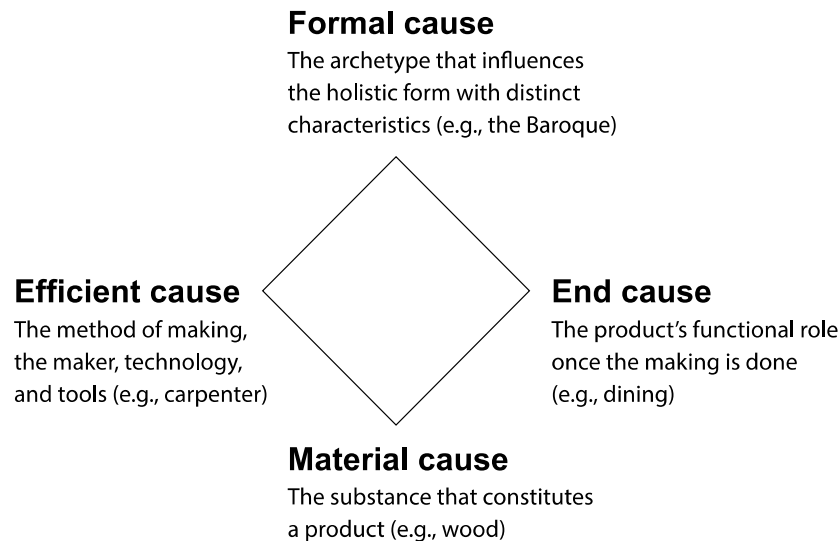
**Formal cause**
The archetype that influences
the holistic form with distinct
characteristics (e.g., the Baroque)

**Efficient cause**
The method of making,
the maker, technology,
and tools (e.g., carpenter)

**End cause**
The product's functional role
once the making is done
(e.g., dining)

**Material cause**
The substance that constitutes
a product (e.g., wood)

*Figure 1. Aristotle's four causes.*

## 3   Analysis: the four causes

### 3.1   Material cause

Material cause refers to the substance that constitutes a product; for example, the matter that comprises a chair could include wood, plastic, or metal. Regarding the study of service, while its immaterial nature (i.e., intangibility, heterogeneity, inseparability, and perishability, or IHIP) has been emphasized in marketing (Vargo & Lusch, 2006), Shostack (1997)—creator of the service blueprint—proposed that material and immaterial elements must be combined into a molecular model. In the present study, we draw on Aristotle's Poetics to understand the organization of the material and the immaterial from the perspective of human experience.

According to Aristotle, the most basic matter of drama is *enactment* (i.e., everything perceived with our senses). In service, the most basic element that corresponds to enactment is the touchpoint—the "moment of truth" in which the customer feels and recognizes the service. Many companies place tangible elements at these touchpoints to influence customers' perceptions and assist in their interactions with the service. In this way, the intangible service is mediated and consolidated by products such as uniforms, chairs, and brochures.

A collection of enactments become *patterns*. Dispersed touchpoints are meaningless if they are not integrated; they must be properly connected to guide customers from advertisements to websites, and eventually to the place where the service takes place with clear meanings about each touchpoint in relation to another. As customers are considered outsiders who are unfamiliar with the service, information design is crucial to mediate patterns, which can be visual, textual, or auditory.

Pattern serves as a compositional element of *language*, often represented by a service script. Service employees use standard lines of speech with a specific sequence and flow. If a pattern corresponds to a scripted line, language determines

how the lines should be combined into a script to support a unit of activity; for example, a certain set of questions and answers are required when a customer checks in at a hotel. The service script, as a unit of communication to support customer action, can also include non-verbal forms of communication, such as spatial layout or digital interfaces.

Language is the expression of *thought*, which includes the customer's cognition and emotion while conjecturing the logic behind a service. Thought is often expressed through language; for example, the musical tone and polite script of call center representatives are a deliberate display of a customer-friendly service. Thought can also comprise the philosophy behind a service—often manifested in a manual that guides employee decisions and actions. The manual reveals whether the principles of a service prioritizes the customer's need or the company's profits.

Thought collectively form the *character* of a service. In the service industry, there are clichéd standards of hospitality (e.g., the uniformed staff of high-end hotels). These characters perform their roles to define the situation of the service and, in turn, the characters of the customers (Goffman, 1978). These characters are not just individuals; they are symbols that manifest the argument of the service as a whole. Similar to a dramatic performance, a specific hairstyle or fashion can strengthen this role and its associated functions.

Aristotle stated that action determines destiny, while character determines temperament. As an idealized model of human action, dramatic *plot* consists of causally interrelated and holistically fused incidents within a certain flow. Service is also comprised of a plot—one which logically and emotionally supports an action with a practical purpose. As such, the entire service plot should carefully streamline and coordinate each step and piece of information so that it supports collaborative problem solving between service providers and customers.

### 3.2  Efficient cause
Efficient cause includes the method of making, the maker, technology, and tools. For example, two sculptors with different techniques and tools will achieve different results, even if they work with the same materials. In service, there are many efficient causes other than the creator—who is the traditional efficient cause—because diverse stakeholders are involved in the process of making. The final service is co-produced on the spot as a collaboration between the service participants, including service employees and customers.

A *designer* is an author of the product that they make, but service design authorship is different from traditional art, in which a single author assumes ownership. Service design is usually performed by a multidisciplinary team from various backgrounds, thus infusing diverse skills and knowledge into the design. There is still a trend in art and design culture to highlight a star creator as the author, even in team work, which can be explained as the human tendency to define an efficient cause. In many cases, service authorship is retained by the service organization.

According to the perceptions of those who co-create a service, the character and identity of the *organization* can often serve as the efficient cause of the service. Branding plays a critical role here, as the character of the company is usually symbolized by a company logo that must be managed and reflected through advertisement, thus permeating all service touchpoints in a consistent way.

A considerable amount of decisions about a service are also made by the *manager*, who operates on the frontline. Similar to a director, service managers reinterpret and reproduce the service on a daily basis. Among small-scale service providers, the planner, manager, and provider may be the same person; however, in large service organizations, managers have an independent influence as an efficient cause. Despite its evident importance, the role of service managers is less frequently discussed in design.

In addition, just as the same play can be performed differently depending on the actors, the same system can offer different services depending on the *service workers*. Service workers represent the character of the service and act as touchpoints in which customers interact with the service. The personality of the service representative significantly influences the customer's overall perception of the service, which is especially true for small, local services.

*Customers* also represent a key efficient cause because they participate in service coproduction, especially when considering that service quality is determined by customer subjectivity. Unlike material objects, which end when consumed, service customers continue to return to the service and use word-of-mouth advertising to inspire new customers; therefore, existing, former, external, and prospective customers are all important efficient causes. Customers' past experiences, as well as those of competitor services, need to be considered to devise better ways to encourage the coproduction of personalized experiences.

### 3.3 Formal cause

Formal cause influences the holistic form of service by characterizing it with distinct features (e.g., genre and pattern). It is difficult to define a service, because everything in the human world can be interpreted as a service—even physical objects (i.e., services mediated by a material interface). For example, a washing machine could be considered the materialized form of a laundry service. What, then, is the formal cause that influences people to perceive a service as a service?

One characteristic of service is that "care" for customers is systematically built into its form, which makes people perceive it as a "service". Therefore, care should be embedded into the form itself as a natural characteristic of a service, rather than relying on the individual decisions of service workers. For example, service designers and providers should not expect individuals' random favor to help wheelchair users; instead, there should be a guideline in place (i.e., a manual for service workers), and the system should have an inclusive design (e.g., an automatic door).

Second, service is a form of practical problem solving. People may not know what their own needs are; thus, the challenge is to uncover the fundamental problem and support resolution. In classic storytelling, the hero is often unaware of the central dilemma and thus seeks the help of a mentor to confront it. By the end, the hero reaches an understanding of what has been lacking and thereafter returns to the origin of the problem to resolve it. Similarly, the role of services is to help the customer gain autonomy in the process of overcoming a problem (Kim & Lee, 2017).

Third, service can have a distinctive genre. In storytelling theory, genre refers to a composition characterized by similarities in pattern, rule, style, or subject matter. Services likewise have distinct patterns. In many hotels, for example, room service staff are often on standby until midnight—despite this being an unprofitable practice—because room service is an essential part of high-end accommodations. Cultural factors also have great influence on genre, as the same service could take on different forms in each culture.

### 3.4   End cause
The end cause is the functional role of a product. For example, a museum building has the functional role of art exhibition. In the case of service design, the end causes can be classified into a functional goal within the service, as well as a broader social purpose to be fulfilled. This duality resonates with other twofold structures of service, such as core activity versus peripheral activities (Gupta & Vajic, 2000), or the technical quality of the outcome versus the functional quality of the process (Grönroos, 1990). The main function of a service (e.g., car repair) is to solve the highest priority issue, but human treatment and emotional experience are also critical to the perception of service.

In this respect, catharsis is another important end cause of a service. According to Aristotle, the goal of drama is to relieve emotions by imitating actions—in other words, catharsis. We argue that service catharsis is also twofold; although it occurs when a core function is performed (e.g., having a meal at a restaurant), there is usually another cathartic touchpoint when identity-related emotional needs are fulfilled (e.g., blowing out birthday candles at the restaurant, despite the main function of dining).

In addition to addressing a particular need of customers within its boundary, a service is often offered in the context of a complex ecology. Service systems usually operate together interactively, as the output of one service can directly influence another. Certain services are positioned within a broader service, which are generally less relevant to the core function but may work as a process to define the service organization's or a user's identity. From the customer's perspective, these services are positioned to serve partial functions in the ecosystem where the customer's life is at its center. Some services can help fulfill goals that are outside the service boundary and interrelated to communities where the service organization is operating in. Therefore, social values cannot be ignored by a service when we consider the end cause.
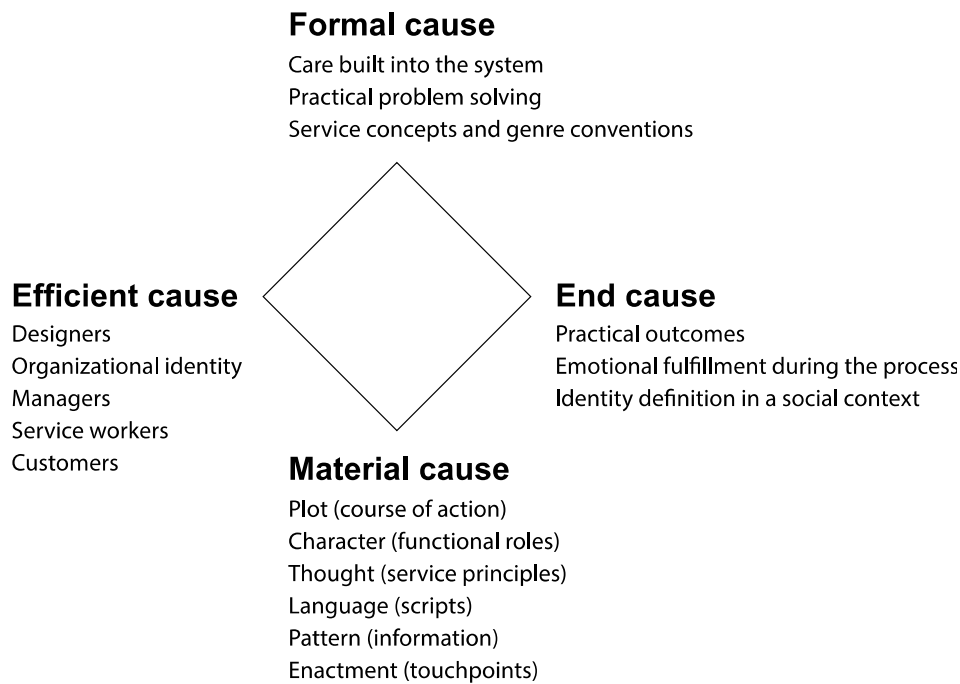
**Formal cause**

Care built into the system
Practical problem solving
Service concepts and genre conventions

**Efficient cause**

Designers
Organizational identity
Managers
Service workers
Customers

**End cause**

Practical outcomes
Emotional fulfillment during the process
Identity definition in a social context

**Material cause**

Plot (course of action)
Character (functional roles)
Thought (service principles)
Language (scripts)
Pattern (information)
Enactment (touchpoints)

*Figure 2. Key elements of service analyzed via Aristotle's four causes.*

## 4    Synthesis: dynamic structure

We examined the key elements of a service via the four causes proposed by Aristotle, as shown in Figure 2. However, making requires much more than analysis. Poetic synthesis refers to a process of dynamic inquiry that integrates the elements into a unified flow with emotional integrity. In this section, we will review the patterns of organic structure that combine the elements and components of a service.

### 4.1    Beginning

While some argue that physical location is the launch point of a service, from the customer's perspective, service begins with a deficiency, need, or desire. Therefore, an advertisement can function as the place where customers and a service first interact. An advertisement makes a promise, which is subsequently fulfilled when a customer arrives to receive the service. For example, a customer may book a room at a luxurious hotel, as per an advertisement's promise, and the hotel offers various types of evidence, delivered at touchpoints, to prove that the initial promise is being fulfilled.

At the entry point to a service, it is important to communicate the whole picture to the customer so that they will form a proper expectation. This holistic image is called the "service concept," which strategically and consistently brings together every moment of a service (Goldstein, 2002). The service concept informs customers about the value of the service, the overall structure, and the intent, thus giving them a better sense of what to expect from the service and how to participate in it.

### 4.2 Turnabout

Once they grasp the whole picture, customers will participate in the process of service coproduction, which is presented as a flow with increasing causality toward a plausible ending. However, the experience will lose its integrity if the story just arranges static steps toward the anticipated ending. Aristotle introduced the concept of the "turnabout" as a sudden change in plot toward an unexpected direction. In a service, turnabouts should not be unpleasant or disappointing; rather, they should be happy surprises, such as a complimentary bottle of wine, that will enhance the perceived service quality. Another case of turnabouts is often observed when a customer makes a mistake during service coproduction. Instead of causing the service to fail, however, the service provider often intervenes to shift the entire plot toward a happy ending.

### 4.3 Climax

According to Dewey (1934), emotion is the unifying quality of an experience that moves and changes as the experience develops. Climax is the most intense moment in this dynamic flow, often accompanying emotional catharsis. The structure of progression, turnabout, and climax builds up the customers' expectations toward the moment of realization, thereby leading to the pleasure of discovering the answer to their inquiry. The climactic moment of a service would be when the functional problems are resolved and the needs of the customer are fulfilled; however, the experiential aspects of this process, such as treatment and care, are just as important as the function. Emotional catharsis stems from the customer's perception of a positive identity through carefully orchestrated treatment. In high-end services, the climax is usually created through the experience of becoming who the customer desires to be, with the support of the service.

### 4.4 Ending

Most services have a ritual to signify the moment of closure, such as when a service worker hints that the service has ended, often with the payment bill, followed by the customer's action of leaving the service location. However, the evaluation of service quality is often done after the customer has left (i.e., when they reflect on the overall experience). Therefore, every customer perceives the ending of a service differently. Like the ending of a play, customers can expand the service story to contextualize its function and meaning within their lives, as well as deciding whether they should return to the service again. Hence, services should be designed with the recognition that every ending represents the beginning of the customer's next experience.

## 5   Case study

In the following sections, we present a case study that applies the Poetics framework in the comparison of American motels and Japanese ryokans. A typical motel offers economical accommodations for quick stays, whereas ryokans are a traditional healing space to enjoy hot spring baths. Both are accommodation services, but their storytelling models differ in terms of their four causes and their dramatic structures.

## 5.1 Material cause

In American motels, touchpoints are minimized because the formal and end causes aim for simplicity and effectiveness. Interactions with staff are typically confined to check-in and check-out procedures. This indicates that the standardized patterns of the motel, such as typical floor plans, are given more importance over customer experience, thereby revealing the utilitarian principle behind the service. Customer and the service provider interact via quick, functional transactions, which represents the plot of the service.

In contrast, Japanese ryokans comprise rich, diverse touchpoints that make each experience unique, including the customer's entrance into the ryokan, the serving of a kaiseki dinner, and the customer's wearing of a yukata and entrance to the hot spring baths. Staff are well trained in voice, appearance, and posture as they escort the customers through the premises and introduce them to the baths and meal customs via a pre-determined script. Ryokans have an invisible manual through which they tailor their services, based on the principle that the customer's rest should be the top priority. While playing their roles, ryokan staffs exhibit unique characters, often reflecting the cultural image of that particular ryokan. The harmony of these elements altogether creates the integrated plot of the healing experience.

## 5.2 Efficient cause

When it comes to efficient cause, most motels are designed by large hotel franchises, which create services that fulfill their functions regardless of location. Planning and production are separated in this mass production of service; therefore, if localization is needed at the production level, the manager of each branch will take charge in the redesign of the service at the micro level. While the brand image of the hotel chain has major influence on this service system, the roles of its employees and customers are minimized. Receptionists are typically part-time workers, and customers are often treated as the material resource of an efficient service factory, rather than co-authors of a service experience. Behaviors outside the standard framework are discouraged.

Ryokans, however, are often run by a family for generations. The owners typically inhabit the character of traditional kimono-wearing women and play multiple roles of a manager and a worker. It is also notable that Japanese culture is a key efficient cause in this case. Ryokans sometimes belong to a village that collectively designs and manages brand identity, therefore acting as the bearer of Japanese tradition and culture. Ryokans as a service have been largely shaped by history and media, which creates a shared image that allows both service workers and customers to subconsciously play their expected roles and participate in the service performance.

## 5.3 Formal cause

The utilitarian form of the American motel can be considered an outcome of the nomadic culture represented by automobiles and airplanes. Because the main customers of American motels are travelers, the form is designed to meet their needs. Indeed, economic value is the most important character of this genre, and

their basic functions are compensated for by their low prices. For customers weary from travel, speedy check-in and check-out procedures are the best care. These motels also have vending machines for those who have to leave early in the morning, and a parking lot design that allows customers to park right in front of their rooms so they can leave quickly.

The ryokan service, on the other hand, has a much more sophisticated form—one that is almost like a ritual. It provides customers with various types of care while satisfying their practical needs for food and bath, thereby helping them enjoy mental and physical pleasure and escape from their daily lives. The multi-course kaiseki meal, which is served in the guest's rooms, represents the climax of this genre, which is offered in a similar fashion at any ryokan. Both ryokans and motels are hospitality services, but even within the same category of service, their variations in genre render the forms of each experience as dramatically different.

### 5.4   End cause
Motels have a practical end cause, as customers are simply looking for a place to stay the night while travelling and usually leave early the next morning to continue their travel. Because this service is positioned as a supporting role in the customer's higher-level action goal of travel, it is crucial to that motels offer connections with other services (e.g., airport shuttles). Aside from their basic function to fulfill the safety and sanitary needs of customers, many key functions are outsourced (e.g., pizza delivery brochures). Motels are often located in big shopping malls to enable speedier connections to other services.

In contrast, a ryokan is often a travel destination in itself. For example, Takahan Ryokan, where Yasunari Kawabata famously wrote the Japanese classic, *Snow Country*, has deliberately preserved the room he stayed in and recreated a selection of scenes from the novel. Anything old only positively reinforces the identity of ryokans as originating from Japanese tradition, because the end cause has been altered from offering lodging to experiencing history and culture.

### 5.5   Beginning and end
In American motels, the beginning and end are rather simple: Customers glance at the motel's road sign to check vacancy, then momentarily pause their journey to stay overnight. At the end of the service, customers check out of their rooms to resume their journey. Customers are not likely to return; however, those who are dissatisfied may leave a negative review, thus affecting the ability to attract other potential customers. Taking all this into consideration, the concept of the service and all its elements are designed to be lean and efficient; the service process has a fast rhythm, and the beginning and end are hassle-free.

The beginning of the ryokan service is completely different. As the main reason to visit a ryokan is to enjoy a relaxing retreat, customers often collect information and compare options before making a reservation. The service concept typically includes a beautiful scene of a traditional kaiseki meal as a marketing tool. The actual

beginning of the service is quite ritualistic: a pick-up service from a nearby transportation hub to the ryokan, with a personal greeting from the owner. Once the customers are introduced to the premises, they interact with a cascade of memorable touchpoints. The service is finally concluded by a clear closure, marked by same shuttle service—this time back to the transportation hub. A special souvenir is sometimes gifted to the customer at the end, which is intended to serve as a new beginning for returning customers.

### 5.6　Turnabout and catharsis

In American motels, one of the key moments in the entire service is when the customer takes a shower and goes to bed. The feeling that they are in a safe room—not on the road at night—is almost cathartic. The next morning, however, when the customer departs, the feelings of relief they experience from, for example, having left on time to catch their airplane are even closer to the moment of catharsis. In this sense, lodging was not the purpose of the stay; the moment when the customer begins their journey again is the true climax.

In ryokans, the service experience is designed in a way that the climax may be experienced at multiple touchpoints, thus leading to an anticipation of the next cathartic moment when, for example, the customers are served a Kaiseki dinner, experience the hot spring baths, enjoy a local village festival while wearing traditional clothing, and anticipate returning to the ryokan as a regular patron.


## 6　Conclusion

This study drew on Aristotle's Poetics to study an "art of making" that centers the human experience as a framework for understanding the requisite elements and structures of service design. We analyzed the four causes of service and the dynamic structure of storytelling, which synthesizes these elements into an integrated whole, before finally applying them to a case study of American motels and Japanese ryokans.

The making of services is a co-creative process in which multiple causes and agents are involved. One unique aspect of service storytelling is that customers are not just a passive audience but active participants. Service workers who play functional roles, as well as other customers at the service location, also collaborate in this coproduction. Although the overall structure of a service is informed and orchestrated by design, the participatory nature of service calls for further exploration beyond the static and pre-set notions of storytelling with a fixed plot.

There is a need for research on a participatory framework of service storytelling that enables participants' autonomous action in diverse and personalized ways. The dynamic structure of Poetics offers a foundation for the collective inquiry into problem solving and learning through service storytelling, in which people who have never met before participate in the coproduction of a service. Future research will approach service as a customer-centric inquiry, thereby investigating how services with diverse efficient causes can help stakeholders collaborate.

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