Chapter 4*

Value Co-Creation Process and Value Orchestration Platform

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Abstract

New service businesses such as Amazon, iTunes, and Rakuten have a common characteristic: they act as a platform for orchestrating and facilitating value co-creation by customers and providers. In the value co-creation process, customers and providers interact with each other and co-create new values. The value orchestration platform invites customers and providers to "get on board" and facilitates the process of co-creating value while leaving the control of the process entirely in the hands of providers and sometimes of customers as well.

Such a two-layered service-system model is also applicable for the revitalization of a local community. For example, industrial tourism is a common means to create new values in an area by involving various stakeholders including restaurants, hotels, sightseeing spots managers, and factories. Having a value orchestration platform to facilitate these stakeholders' value co-creation is definitely needed. However, in contrast to private businesses, there are often no clear "system owners" responsible for the process. This is mainly due to the power structure in the community or the independence of stakeholders.

This chapter models the value co-creation process and value orchestration platform from service science perspective and discusses value orchestration management strategies for business systems. It also discusses the relevance of the model to local revitalization in Japan.

To achieve these purposes, we first examine several major perspectives from which service has been argued so far and clarify our research position in the field of service science. Then, we propose a process model of value co-creation consisting of four phases: co-experience, co-definition, co-elevation and co-development. Finally, by developing a value orchestration platform model and relating it to the process model, we analyze management strategies for orchestrating value co-creation not only in business but also in community service systems. We also adopt a mathematical approach to the analysis of a network externality problem that inevitably arises when a platform attracts customers and providers.

Key Words: Service System Modeling, Value Co-Creation Process, Value Orchestration Platform, Curation, Local Revitalization

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1 Introduction

With the establishment of sophisticated logistics and the rise of information technology, new service businesses, whether real or virtual, have become increasingly important. One common characteristic of these service businesses is that they have two layers (Figure 1). As shown in Figure 1, in the value co-creation process, customers and providers interact with each other and co-create new values. The other layer invites customers and providers to "get on board." It facilitates and orchestrates new value co-creation by customers and providers, but leaves the control of the process entirely in the hands of providers and sometimes of customers as well. We call this layer the value orchestration platform.
Websites such as Amazon, eBay, iTunes, Rakuten, and YouTube primarily serve as value orchestration platforms because they connect tens of thousands of providers (sellers) to millions of customers (buyers). For example, the strength of the Apple App store lies in its function as a value orchestration platform. The store is interested in inviting as many users and appropriate developers as possible onto it, but it takes no physical or full legal "possession" of the software it distributes.

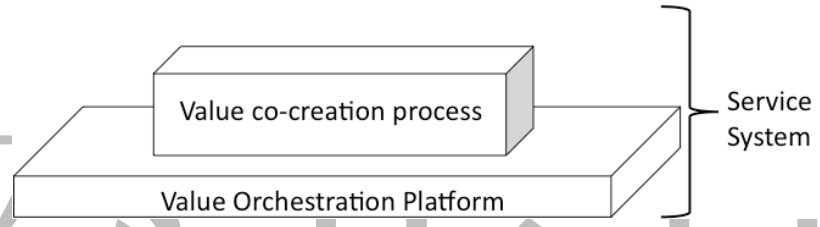

Fig. 1 Value co-creation and Value orchestration

The essential idea of a value orchestration platform dates back several decades, and its traditional and well-known examples include credit cards and shopping malls (Refer to Table 1).

Table 1 Some examples of value orchestration platforms

Service	Value orchestration platform	Customers	Providers
Credit Card	VISA	Customers	Restaurants, Hotels
Newspapers	Newspapers/Magazines	Readers	Advertisers
Television	TV Stations	Viewers	Advertisers
Shopping	Shopping Mall	Buyers	Tenants/ sellers
Electronic Commerce	B2B, B2C exchanges	Buyers	Sellers
Operating System	Microsoft/Windows	Users	Software developers
Games	Nintendo	Gamers	Game publishers
iPhone App	Apple App Store	Users	App developers

By observing these concrete examples, we were able to validate our definition of value orchestration platform: a business model that entirely emphasizes value orchestration and allows customers and providers to interact with each other and co-create new values, often using information and communication technology (ICT).

This paper provides a model of the value co-creation process and value orchestration platform from service science perspective, and then discusses value orchestration management strategies by referring to current typical businesses.

To do so, we first examine several major perspectives from which service has been discussed so far and clarify our research position in terms of service science. Then, we propose a process model of value co-creation consisting of four phases: co-experience, co-definition, co-elevation and co-development. Finally, by developing a value orchestration platform model and relating it to the process model, we analyze three management strategies for orchestrating value co-creation — SIPS (Sympathize, Identify, Participate, and Share and Spread), curation, and empowerment — by referring to actual cases in which such strategies are implemented. We also adopt a mathematical approach to analyze network externality problems that inevitably arise when a platform attracts customers and providers.

2 Characteristics of Service

Service is increasingly important to many fields. However, each specialization sees service somewhat differently [2][15].

Studies in economics and the social sciences have distinguished service (intangibles) from agriculture and manufacturing (tangibles). In these scientific fields, service is the residual of agriculture and manufacturing actions. Measurements of the growth of the service sector are made in terms of the numbers and types of jobs (employment) and firms (sector growth and competitiveness), contributions to the GDP, and the balance of trade. Gronroos compares certain aspects of the difference between products and services in economics [6].

Studies in Industrial Engineering, Management Science and Operations Research emphasize mathematical modeling of service systems. For example, networks of stochastic service systems are vigorously modeled on the basis of their capacity and demand characteristics, while queuing theory is often adapted as the model used to assess service capacity and performance.

Computer scientists and information systems specialists talk about web services and service-oriented architectures (SOA) as modularizing capabilities, making them discoverable and providing standard protocols for using capabilities as part of complex networks of entities that own and operate service capabilities.

In the psychological and behavioral sciences, service is seen in the context of customer-provider interactions as something to be experienced, remembered, and evaluated. Experience of customer-provider interactions is being increasingly designed on the basis of the attitudes of psychologists and behavioral scientists. In this method, individuals remember how pleasant and unpleasant the interaction was and evaluate them when comparing alternatives and making choices.

In service marketing and operations management, the well-known conceptual framework of the Gap Model of Service Quality is often used to understand the service quality of an organization[19]. The model identifies a customer gap and four provider gaps and proposes that these five gaps must be closed in order to increase the service quality. According to the model, closing the customer gap, which is defined as the difference between the customer' s expectation and the actual experience of the service, is the most critical to delivering quality service.
As briefly reviewed so far, the concepts of, interests in, and approaches to service are quite diversified among disciplines.

Service science is an emerging area of study that draws on decades of pioneering work in the research area of service marketing, service operations, service management, service engineering, service economics, and service computing [14][9][3][2]. Service science defines service as a phenomenon observable in the world in terms of a service system with value co-creation interactions among entities [9] by taking a bird' s eye view of various perspectives in which service system entities can be people, businesses, non-profits, government agencies, and even cities.

A service system is a dynamic interaction among providers, customers, ICT, and shared information that creates value between the provider and customer [16]. Value and value creation are at the heart of service and are critical to understanding the dynamics of service systems and furthering service science [17].

Service science is the study of service value co-creation phenomena among service system entities [10]. As a specialization of systems sciences, it tries to shed light on a scientific approach to understanding social value and identifying propositions that can be formulated and theories that can be empirically tested [2][15].

The goal of service science is to promote innovation in service and increase service productivity. Innovation is a key to productive service and is born from the intersection of different types of knowledge. To this end, promoting an interdisciplinary approach is crucial to the field. Measuring value co-creation is complex and involves many rational and experiential dimensions.

Service itself has been characterized with several perspectives in service science. In the realist research tradition and according to the goods-dominant logic [17][18], service is characterized as an outcome that can be measured by attributes and variables in a functional domain.

According to service-dominant (S-D) logic, interpretative consumer research, and consumer cultural theory (CCT), service is defined as an experience and a phenomenon. It claims, "Value is always uniquely and phenomenologically determined by the beneficiary" [17][18]. The roles of producers and consumers are not distinct, because value is always co-created -jointly and reciprocally -in interactions among providers and beneficiaries through the integration of resources and application of competences. Individual service experiences are embedded in specific individual and social contexts. Indeed, service experiences are not stable but are rather dynamic, and they are reconstructed on the basis of previous experiences. Service experiences are both intra-and inter-subjective because individuals do not live in isolation but rather as part of different groups and networks, and because goods render service that results in value.

The Nordic School Approach and New Service Development (NSD) approach service as a process. Value co-creation is an active, creative, and social process based on collaboration between the provider and customer that is initiated by the provider to generate value for customers. However, it is a form of collaborative creativity of customers and providers aimed at enhancing the organization's knowledge acquisition processes by involving the customer in the creation of meaning and value, although it is initiated by providers. Such collaborative value co-creation often requires greater effort on the part of both the customer and provider than does a traditional market interaction. The people on both sides must

think about what they want to get out of a cooperative relationship.

Table 2 Some Perspectives to Service

Perspective/ Paradigm/ Logic	Goods Dominant Logic	Service Dominant Logic Interpretative Consumer Research Consumer Cultural Theory	Nordic School Approach New Service Development (NSD)
What is service?	Service as an outcome (New kinds of service products or attributes)	Service as an experience (Valuable, subjective experiences in different events)	Service as a process (A new, well-functioning process)
Emphasis	Service is measured by attributes and variables in a functional domain.	Value is always co-created, jointly and reciprocally, in interactions among providers and beneficiaries	Value co-creation is an active, creative and social process based on collaboration between provider and customer
What value is created?	Value-in-exchange	Value-in-context Value-in Value-in-context	Value-in-use

These perspectives about service are not exhaustive and are used to provide different, rich, and complementary angles to understanding service (Refer to Table [2]).

Focusing on service as an outcome is certainly a dominant method, especially for service design, in situations in which an organization is interested in implementing value creation mechanisms for products, software, or procedures.

Regarding service experience, we can discuss motivations for customers to buy and other beneficiaries to support value co-creation. Service experiences are a valuable data source for innovation. In the psychological and behavioral sciences, service has been seen in the context of customer-provider interactions as something to be experienced, remembered, and evaluated. The experience of customer-provider interactions is being increasingly designed on the basis of the attitudes of psychologists and behavioral scientists.

In the perspective of service as a process, we help managers advance the service co-creation process and allocate resources, as well as decode and record architectural elements and phases of innovation. We also discuss the actions of customers and providers in terms of the service process.

3 Four-Co-Phase Model of Value Co-Creation Process

To open up the concept of value co-creation, we identify value co-creation interaction as an active, creative, and social process based on collaboration between the provider and customer that is initiated by the provider to generate value for customers. It is a form of collaborative creativity of customers and providers that is used to enhance the organization's knowledge-acquisition processes by involving the customer in the creation of meaning and value, although it is initiated by the provider.

Such collaborative value co-creation often requires greater efforts on the part of both customer and provider than does a traditional market interaction. People on both sides must think about what they want to get out of a cooperative relationship. Customers need to trust the provider to not misuse the information they provide or unfairly exploit the relationship. Providers need to actively manage customer expectations about how the relationship will evolve. Providers must provide capabilities for co-creation and also receive the tools and training necessary to co-create efficiently.

However, it may be too simple to assume that both sides know about the other's preference, expectations, or capabilities when participating in the collaborative process. Rather, they may or may not need to learn about each other to share internal models (mental models).

This consideration leads us to the idea of service as a dynamic interaction process in which customers and providers are mutually learning and collaborating by co-experience.

Now, we propose a new model called the "Four-Co-Phase Model of the Value Co-Creation Process" (Refer to Figure 2)[11].

The model explicitly defines service as a value co-creation interaction between customers and providers and identifies four phases that occur in the process. The first two phases, co-experience and co-definition, are relatively short-range concepts for describing service appreciation, while the final two phases, co-elevation and co-development, refer to the long-range activities necessary for service innovation.

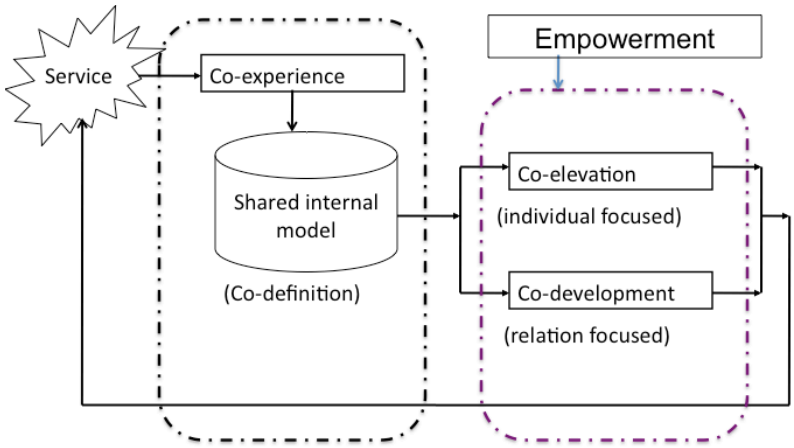

Fig. 2 Four-Co-phase Model of Value Co-Creation

A. Co-Experience of Service

When participating in the collaborative value co-creation process, customers and providers may have little or no idea about the other' s capabilities and expectations. Hence, rather than reducing the gap between the needs (or expectations) and seeds (or capabilities), by co-experience, the provider and customer share an internal model to co-define a mutual understanding about the service.

B. Co-Definition of the Shared Internal Model

By interacting with each other, the customer and provider may learn about the other' s preference, capabilities, and expectations so that they may co-define and share a common internal model [4][18].

Satisfaction for both sides is generated by the co-experience of the service and the co-definition of a shared internal model. For example, at a sushi bar, through conversation, the chef recognizes a customer's preferences, mental and physical condition, and appetite and the customer learns about the day's specialties and seasonal fish. If they are able to share a common internal model (i.e., understand the other's preference, capabilities, and expectations), then both are happy. This is a typical process of co-experience and co-definition.

C. Co-Elevation of Each Other

In general, a system is defined as a pair of entities and sets of relationships among entities [8]. Hence, it is relevant to relate the value co-creation process to the entities of the service system as well as to the relationships among them.

We call the former co-elevation, which focuses more on value co-creation led by entities in the system. Co-elevation is a zigzag-shaped spiral process of customer expectations and provider abilities. Higher expectations of service by intelligent and literate individuals lead to higher-quality service and greater social values (needs-pull). High-quality service, in turn, increases customer expectations (seeds-push). For example, in the morning, Tokyo commuter subway trains arrive and depart every three minutes and 40 seconds. The driving force for such punctual, safe, and frequent service is the high level of service demanded by customers and the provider's ability to meet such requirements.

D. Co-Development of Value

We name the last phase co-development because it pays attention to the co-innovation generated by simultaneous collaboration among various entities. Co-development of service innovation is usually carried out in the context of customers evaluating and assessing the value and providers learning from customer responses. Collaborative improvement of Linux software by anonymous engineers and developers is a typical example of co-development.

4 Value Orchestration Management Strategies

The value orchestration platform facilitates and orchestrates new value co-creation process by customers and providers. Since we assume the process consists of four Co-phases, it is clear that the platform has to take care of each of them to support the activities. Figure 3 first shows that in order to support co-experience and co-definition phases by attracting customers and providers, the platform has to take appropriate involvement strategies. Secondly, by introducing a term of curation, the figure claims importance of re-examining content and meaning of existing information and putting a new interpretation. Finally, empowerment of customers and providers is concerned with co-elevation and co-development phases.

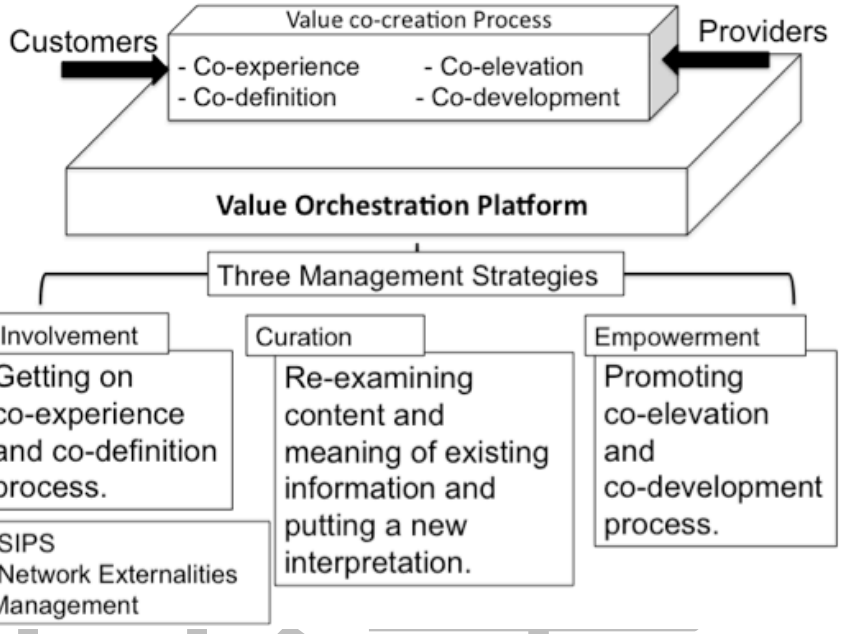

Fig. 3 Management Strategies of Value Orchestration

4.1 SIPS: Strategies for attracting customers and providers

4.1.1 SIPS

Platform orchestrator is primarily concerned with the methods to get appropriate customers and providers ”on board” the platform and to vitalize interactions between customers and providers. Hence, strategies for the platform to attract and involve customers and providers to maximize profit are crucial. Indeed, one of the advantages of an online value orchestration business such as e-commerce is that they have no limitations on the number of customers who can participate, so that they can enjoy scale of economy .

A cycle of Sympathize, Identify, Participate, and Share and Spread (SIPS) (Figure 4) is useful for identifying how customers and providers become interested in a platform (Dentsu 2011, [5]). It generates interest among customers and the provider toward co-experience and co-definition phases.

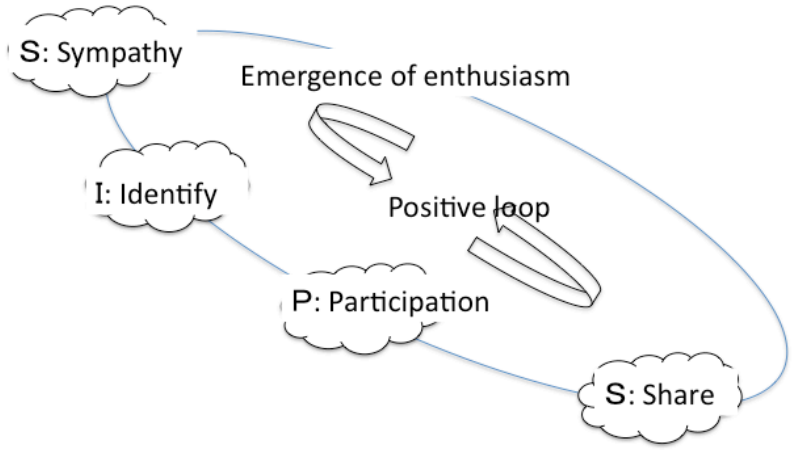
S: Sympathy
Emergence of enthusiasm
I: Identify
Positive loop
P: Participation
S: Share

Fig. 4 SIPS

The SIPS model proposes that the trigger for customers and providers to become interested in a service system is their having sympathy toward it. Presently, people are connected with each other through social media outlets such as Facebook and Twitter. They communicate through rather subjective comments about what they experience, and the comments that gain a certain level of sympathy for being useful and interesting spread quickly throughout these media platforms. As a result, the media triggers sympathy to, for example, a shopping mall and leads to its identification as an interesting place.

In the SIPS model, participation does not necessarily mean purchase of some products or services. Rather, it emphasizes that the experience would lead to sharing and spreading through a common internal model.

4.1.2 Network Externality Management in SIPS: A Mathematical Analysis

When a value orchestration platform drives SIPS to get customers and providers on board, it faces a network externality (effect) problem. This is an essential feature of the value orchestration mechanism, and the platform must solve the problem to be successful.

Network externalities are said to exist when consumer utility in a certain market depends (usually, in a positive way) on consumption of the same good or service by other agents.

A value orchestration platform faces two types of network externality: intra-side and between-side. Joining an SNS (social network service), the more of your friends use, for example, Facebook, the more attractive it becomes to you. The more colleagues and friends use an Android-based smartphone, the more temptation you feel to use one. These are typical examples of (positive) intra-side network externality. However, you may hesitate to come to a shopping mall if you expect a large number of people to also be there because of, for example, a big Christmas discount sale. This is an example of a negative intra-side network externality.

On the other hand, in joining using an e-commerce platform, a buyer takes into account the number of potential sellers using the same platform, in addition to the price she should pay. In other words, the opposite network size works as a type of quality parameter in the platform choice. This is due to the between-side network externality.

Because of these between-side network externalities, the attractiveness of the platform for the customer is determined by the characteristics of the provider and vice versa.

In general, the more customers and providers participate and get involved in a system, the more profit the platform can expect to gain. This is a typical "chicken and egg problem" because to attract nice tenants to a shopping mall, you need numerous good customers but to attract customers to it, you need attractive tenants. More realistically, from the providers' viewpoint, the more customers participate in the platform, the more attractive the platform is. However, from the customers' perspective, the variety rather than the number of providers may be important in many cases.

Here, to derive useful strategies for tackling this chicken and egg problem, we conduct a formal analysis based on a simple mathematical model. Though the model here may look overly simple, it represents the most essential features of strategies for a platform to attract customers and providers [13][7][12].

We illustrate the model in terms of a shopping mall, but similar arguments can be applied to other value orchestration platforms (Figure 5). Let us assume that the number of customers and merchants (providers) are m and n, respectively. In some cases m and n may be interpreted as an indicator of the variety of customers and providers, respectively. In case of e-commerce, we may assume that m and n be essentially be any integers, because thanks to current computation and database capabilities they can process big data about customers and providers.

Then, the benefit U that a customer gained by participation can be expressed by

$$U = an - f,$$

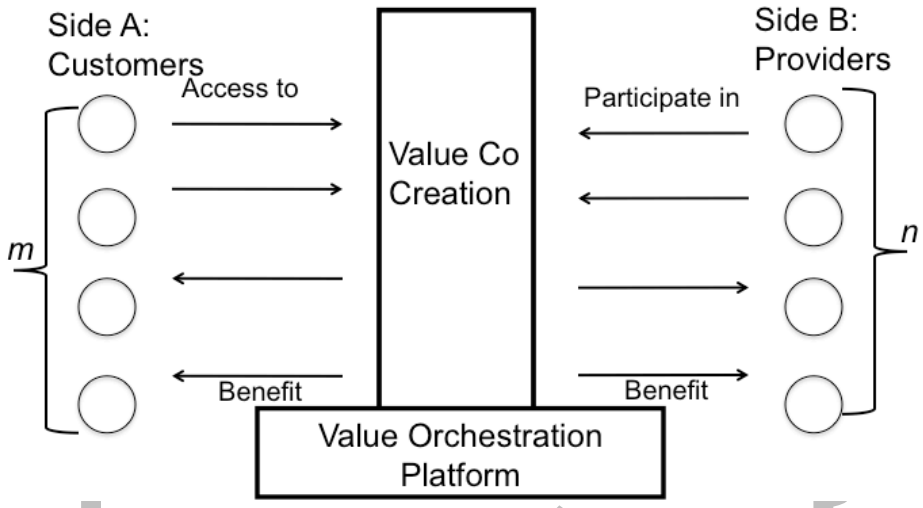
Side A:
Customers
Access to
Value Co
Creation
Participate in
Side B:
Providers
m
n
Benefit
Benefit
Value Orchestration
Platform

Fig. 5 Variety Management of Value Orchestration

where a is the utility for the customer obtained by visiting each tenant and f denotes the participation fee (e.g., registration fee). Symmetrically, we can represent the benefit V of a tenant by participation in the shopping mall by

$$V = bm - g,$$

where b is the utility for the tenant by serving each customer and g expresses the participation fee (e.g., tenant fee). However, since m is determined by the benefit of the customers, we may assume

$$m = F(U),$$

where F is an increasing function of U. This means that the higher the benefit to the customer is expected, the more customers will want to visit the shopping mall. By entirely symmetric arguments, we have

$$n = G(V),$$

where G is an increasing function of V. Now, the platform's utility can be represented by

$$P = m(f - c) + n(g - d),$$

where c and d are management/maintenance costs for taking care of customers and tenants, respectively.

Our key question here is how the platform can maximize the utility P by assuming that their decision variables are f and g. By a simple calculation, we are able to claim that the optimal f^* and g^* should satisfy these symmetric equations.

$$f^* = c - bn + F/F' \quad \text{and} \quad g^* = d - am + G/G'$$

where $F' = dF/dU$ and $G' = dG/dV$.

By observing them, we can derive the following propositions.

Proposition 1

If bn is sufficiently large, then f^* may be less than c. A symmetric statement also holds.

The proposition suggests a below-cost strategy. Indeed, it implies that sometimes it is reasonable that the optimal f^* is below the marginal cost c or that g^* is below d to encourage customers or tenants (providers) to join.

For example, Amazon Japan recently introduced free delivery, through which customers can buy, say, a pencil sharpener for two dollars without paying any additional shipping cost. (In the US, Amazon offers Super Saver Shipping, which allows customers to purchase goods without any shipping cost when the total charge for the purchases costs 25$ or more.) In terms of the proposition, since n is very huge, the access cost f^* by customers is almost zero and less than c.

The free delivery campaign seems incredible because it is certainly not able to produce a profit and even seems likely to cause a loss. However, Mr. Jasper Chan, President of Amazon Japan, claims that the company does not worry about short-term profits but is rather seeking long-term success. It is their philosophy that if they keep providing the best products to customers, then they will be ultimately successful. There will likely be some transactions those would incur a loss, but the company wants to establish a reputation as having the most comfortable Internet shopping experience and is not worried about these losses.

A below-cost strategy can often be adopted when a business is started. For example, in the software platforms Microsoft started by allowing free access to developers (providers) in order to encourage applications to be created and charging users (customers). Similarly, Nintendo made profit from game publishers and set the console price to gamers below the marginal cost. These examples illustrate how a platform can make profit from one of the two sides.

Proposition 2

If F' is large, then customers should be charged by a small fee. A symmetric statement also holds.

A large F' implies that, even if the customer's benefit increases slightly, the number of customers can increase greatly. According to the proposition, if customers are much more valuable compared to tenants, it is reasonable for the platform to charge the tenants more than the customers. This suggests an asymmetric charging strategy, in that it encourages not balancing the sides of customers and tenants to make the service system more attractive.

For example, Facebook has so far profited from developers by setting user access cost below the marginal cost. However, in September 2011, the company declared that for the next five years, they would strengthen their relationships with "launch partners." This means that they intend to shift their

emphasis from users to developers by taking an asymmetric charging strategy.
In most cases, Rakuten, Japan' s largest e-commerce company, charges a much lower commission rate to merchants than does Amazon. According to Mr. Mikitani, Chairman of Rakuten, merchants involved in Rakuten are major retailers with their own strengths. Because they can sell their products more cheaply than Amazon, Rakuten charges a much lower commission rate than its competitor [1].

4.2 Value Curation Strategy

While strategy for involvement of customers and providers focuses on how to attract customers and providers to the platform, value curation is essential for the platform to encourage customers and providers to co-elevate and co-develop.

Curation can be defined as a highly proactive and selective approach of value orchestration that collects, selects, analyzes, edits, and reexamines the content and meaning of existing products, service, and information on customers and providers to provide a new interpretation of and a new meaning to them. Based on the newly developed interpretation and meaning, it facilitates a value co-creation process involving customers, providers, information, and technology.

To collect information, sufficient technology and methodology is necessary for harvesting appropriate information from an enormous amount of data on the Internet and databases. To provide a new interpretation of the information, it is necessary to combine human intelligence with technology to evaluate, understand, and process data; dig out information and value from that data; and visualize what the data indicates. To facilitate a value co-creation process, multiple approaches to the mental and physical aspects of human beings in both online and offline spaces are essential. Blending new content while filtering and managing other useful information is a productive and manageable solution for providing prospective customers with a steady stream of high-quality and relevant content. While pure creation may be demanding and pure automation does not engage, content curation can provide the best of both.

For instance, the East Japan Railway Company (JR East) is now well known for curating content. This large railway company employs 60,000 people and has lines covering the Tokyo and Tohoku areas. Since Japanese society suffers from an increasing elderly population, the country cannot expect large future growth in the railway industry. As a result, the company is now expanding to a new business by utilizing existing stations as shopping spaces. According to JR East' s 2020 Vision, the company plans to increase sales from non-railway business from 30% to 40% in ten years, with a target sales amount of 1,240 billion yen.

Under the slogan of "station renaissance," JR East has given a new meaning to its stations and established them as a "drop-in area" rather than a "transit point." It has also introduced unique shopping malls called "E-Cute," a coined word created out of a combination of "Eki" (station in Japanese) and "cute." The company has not simply divided the station space into rentable areas for appropriate tenants but edited the sales space on the basis of a unique concept: they curate the content of each shopping mall. The focus of JR East's value orchestration is identifying qualities in tenant candidates and editing those tenants for how much consistent value they will provide for each station.

For example, Shinagawa station's theme is providing "premium private time through high quality service." The company, in a blind taste test, selected the most appropriate patisserie according to their own value system from more than 20 candidates. They successfully persuaded very popular tenants to rent spaces, many of which were hesitant to join E-Cute, going so far as to even propose a unique business model to a tenant or encourage the sale of new products only available at the station's E-Cute. As a result, at the Shinagawa station you can enjoy a lineup of new business operations and brands.

4.3 Empowerment Strategies of Stakeholders

Empowerment is another aspect of value orchestration, particularly for the co-elevation and co-development phases. Specifically, this refers to how a platform empowers customers and providers so that each side finds the other attractive and both are motivated to interact with each other. Customers are empowered by lifting up their aspiration level, while providers are empowered by referring to their capability of providing service.

For example, Rakuten seems keen on its balanced empowerment at the co-elevation phase. The company began in 1997 as an online mall named Rakuten Ichiba and has now grown to include businesses in banking cards and travel. Presently, approximately 60 million customers and 36,000 merchants participate in Rakuten Ichiba, and 40 million types of products and services are featured here.

Rakuten' s business model is simple: the company mainly earns money from merchants in the form of participation and consultation fees, but customers (buyers) join at almost no cost. Using a super database, they conduct cross-business analyses and predict user behavior. They employ sophisticated search methods and social media such as Twitter to deliver useful information especially for each customer, i.e., empowering the customer by personalizing service on individual basis. Due to this, a customer becomes more interested in Rakuten as he/she would know when it has anything he/she wants.

To the merchants, they offer insights and findings obtained from their data analysis. In addition, they empower the merchants by consulting and teaching them methods to make a profit on the platform, which is called E-commerce consultation (ECC). Rakuten is unique in giving small-and medium-size merchants the ability to create blogs and websites, which are, of course, crucial for online business. If these small merchants grow into big ones because of this empowerment, then Rakuten can earn more commissions from them, closing the positive and win-win feedback loop.

Furthermore, Rakuten empowers customers at the co-definition phase. According to the company, customers go to a physical store not only because it is convenient but also because they can talk to shop staff about what to buy. Rakuten wants to create the same environment on the Internet. To do so, they have introduced a chatting system on which customers can negotiate a discount or ask questions about a purchase. This is viewed as a method for the platform to support customers in co-defining an internal model with the merchant.

5 Local Revitalization by Value Orchestration

In this section, to show some generality of the value orchestration platform model, we will apply it to a wider context. In deed, we try to argue local revitalization in Japan in terms of the value orchestration platform.

This is one of the most critical issues to boost the Japanese economy and has been tackled for many years by the central government as well as local government agencies. Local areas possess various local resources. However, it is not easy to utilize these resources to create a new service for revitalizing the local economy. First, difficulties in conducting a market survey, engaging in product planning and development, acquiring the necessary expertise for pioneering market channels, developing a human network, raising necessary funds, and securing appropriate human resources are often encountered. Second, there can be a lack of information about markets outside the local area as well as a lack of a developed human network. Thus, it is more difficult to evaluate the worth of local resources and apply them to new approaches. Because of these factors, it is difficult to complete certain tasks such as establishing a local brand and increasing the value of local resources throughout the region. Third, considerable effort is often expended in developing a new product or service, but later there is a dearth of resources or a lack of creative effort dedicated to publicity and promotion activities. Often, the publicity and promotional activities of government institutions and trade organizations are not focused on informing consumers. Rather, there is a tendency to observe the principles of fairness or trade rules, which become the criteria for promotion.

Government agencies often try to take initiative in orchestrating value, but the task is not easy. Most of them have too much pride to collaborate and find a common objective, and some are too busy with events and festivals to look at a holistic picture of the economic and social re-vitalization of the area.

For instance, the Suwa-Okaya area located near Suwako Lake in the center of Honshu, Japan' s main island, is not only a big industrial cluster consisting of more than 2,000 small and medium-size advanced precise machinery companies and factories, but is also rich with local resources. In Suwa City, we can find not only an industrial cluster of precision machinery companies but also cultural resources such as the Suwa Lake, Tateshina Plateau, Fujimi Plateau, and Kami Suwa/Shimo Suwa hot springs. In addition, we can find edibles and drinks such as eel, miso, and Japanese sake. Large-scale public events such as the Onbashira Festival and the Suwa Lake Fireworks Festival are also held here. These local resources are utilized for activities to revitalize the local area by autonomous organizations, trade organizations, NPOs, local groups, and individuals. However, each organization performs these activities independently, with hardly any effort spent in uniting its activities with those conducted by other organizations.

The companies in the industrial cluster have suffered because overseas competitors in Asia can now provide similar products with a certain quality level. Little synergy exists between the industrial cluster and other commercial concerns. Moreover, no sufficient motivation is present for revitalization among stakeholders in the area.

So far, local government agencies have tried to activate and initiate collaboration among stakeholders, but top-down intervention has often failed to work properly. The cities, towns, and villages in the Suwa area have a common historical background. However, despite their geographic proximity, there is very little collaboration among industry, commerce, and events. In addition, the organizations and individuals involved in various local revitalization activities have not sought cooperation with industries, agencies or other organizations lying outside the local area.

For over a year, we have engaged in a project for developing an area-based information platform (a project for constructing a platform for sharing and disseminating local information) for delivering and sharing local information about the area according to the value orchestration platform model.

In the project for constructing a platform for sharing and disseminating local information, the "curator" created a Facebook page to serve as a platform for the use Suwa area' s local resources for the area' s revitalization. Use of this platform creates a process of valuable co-creation among consumers within and outside the Suwa area and serves to realize the goal of increasing value added creation in the Suwa district as a whole. As the curator conducts self-interest promotions, a link is created between consumers and the activities designed to revitalize the local area by employing local resources.

Sharing and disseminating information designed by third parties from their own perspectives has a higher added value than information disseminated by people and autonomous organizations involved in revitalizing the local area. The curator has a strong sense of local information. In general, it is necessary to be able to identify with consumers when designing information for dissemination concerning the use of local resources for activities related to the revitalization of the local area. Therefore, one of the issues is the construction of a mechanism to continuously develop such curators. To enable service providers and consumers co-create value by using the platform for sharing and disseminating local information, the most important aspect is the participation of service providers. This is why the curator offers opportunities to local service providers to learn how to use Facebook. In addition, service providers in local and administrative institutions and trade organizations create opportunities for debates and exchanges of information (workshops etc.), during which consumers can offer opinions and suggestions concerning the services offered.

Curators are people involved in promotion and publicity of others' interests, and they freely involve themselves in activities of information dissemination. This acts as a trigger for link creation between various entities in the Suwa region that serve to improve the performance of the entire region. By using this platform, interested consumers visit the Suwa region and create positive feedback when they relate their experiences to other consumers, resulting in the creation of a stratum of consumers passionate about the Suwa region. Thus, we can expect the perpetuation of these links.

Therefore, by using the platform for sharing and disseminating local information, curators use the value of local resources for activities aimed at the revitalization of the local area from their own viewpoints. They achieve this revitalization by finding, grouping, organizing, sharing, and curating information for dissemination in line with consumer feelings. This leads to consumer participation (SIPS) as well as the connection of these consumers to providers of various services related to the revitalization of the local area on the same platform (empowerment).

According to our experience, when we implement value orchestration management strategies for local revitalization, we essentially need to embed the functions of the platform (i.e., involvement, curation, and empowerment) in the value co-creation process. For this embedding, we need a "service system producer" to design the area as a service system and take initiative to activate a positive feedback cycle of value co-creation.

We identified three different roles for the producer. The first is a role of taking the initiative to attract and involve appropriate people inside or outside the system by showing unique ideas and directing them to a shared future. The role is called "idiot." The term is a direct literally translation from Japanese to emphasize he/she think s outside the box. The second is a role of calmly analyzing the present situation using various data and information from the viewpoint of a disinterested party. We call the role "outsider." The third is a role of implementing necessary activities and breaking free from the past. The role may be called "youngster," although it has nothing to do with physical age.

Another important observation is that for local revitalization, it may be inadequate to involve all the stakeholders in the system during the first stage, even though local government agencies usually set up an executive committee by inviting numerous stakeholders from various categories. Rather, it works better if, at the beginning, only highly motivated producers who play the roles of ”idiot,” ”outsider,” and ”youngster” decisively take maneuverable strategies, and then they get others interested parties to follow them.

Finally, but not less importantly, empowered stakeholders are crucial. Stakeholders need to be not only experts in their specialties but also familiar with ICT. Only empowered stakeholders can be involved in the process of value co-creation.

6 Conclusion

In this chapter we introduced a comprehensive framework consisting of two new models of the value co-creation process and value orchestration platform, as inspired by recent service businesses, such as Amazon and Rakuten in e-commerce.

The process model of value co-creation opens up the concept of dynamic value co-creation and identifies four phases in it; co-experience, co-definition, co-elevation, and co-development.

The value orchestration platform is a platform in which customers and providers are orchestrated and facilitated such that they can interact and co-create new values. Combining these two models, we discussed three management strategies for orchestrating value co-creation; SIPS, curation, and empowerment. We referred to real cases to illustrate each of the three strategies.

The concept of a value orchestration platform is general enough to explain various service systems. We are currently discussing its relevance to public and volunteer services. Particularly, since the earthquake, tsunami, and the nuclear power plant disaster that occurred on March 11, 2011 in Japan, we have recognized that the community service system should become a value-orchestration platform involving politicians, bureaucrats, doctors and medical staff, local people, and volunteers to support the local people. However, the power structure and information flow among these groups and how it would affect such a platform is not as clear as it is in business cases. We need further consideration to tackle the complexity of this problem.

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