


Actor transformation in service: a process model for vulnerable consumers

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Abstract

Purpose – The purpose of this paper is to develop a process model for the role transformation of vulnerable consumers through support services.

Design/methodology/approach – The study is based on four years of participant observation at a community-based support service and in-depth interviews with the consumers. Visual ethnography was used to document the process of the consumers' role transformation through service exchanges.

Findings – The main outcome of this study is a consumer transformation model, describing consumers' role transformation processes, from recipients to generic actors. The model demonstrates that vulnerable consumers will transform from recipients to quasi-actors before becoming generic actors.

Social implications – Vulnerable consumers' participation in value cocreation can be promoted by providing social support according to their dynamic roles. By enabling consumers to participate in value cocreation, social support provision can become sustainable and inclusive, especially in rural areas affected by aging and depopulation. Transforming recipients into generic actors should be a critical aim of service provision in the global challenge of aging societies.

Originality/value – Beyond identifying service factors, the research findings describe the mechanism of consumers' role transformation process as a service mechanics study. Furthermore, this study contributes to transformative service research by applying social exchange theory and broadening service-dominant logic by describing the process of consumer growth for individual and community well-being.

Keywords Transformative service research, Social exchange theory, Service-dominant logic, Visual ethnography, Service mechanics, Vulnerable consumer

Paper type Research paper

Introduction

In 2020, the worldwide population aged 65 years or over reached 727 million, and this number is projected to more than double by 2050 (United Nations [UN], 2020). In addition to aging, urbanization is another significant trend in modern societies; in 2019, one of every two people resided in urban areas (UN, 2019). As a result, rural areas face the challenges of both aging and depopulation. Additionally, people moving to urban areas are mainly of working age, and there is an increased need for social support among rural older people with impaired functional abilities affecting their daily living.

In Japan, the country with the highest percentage of older people, more than 30% of the population live in the Tokyo area (Cabinet Office, Government of Japan, 2014). The financial



crises of local governments have made it difficult to meet the various needs of rural residents through public service provision. Consequently, a large number of older people have become vulnerable consumers. Vulnerable consumers are people who have a limited ability to maximize their utility and well-being through economic transactions in a service ecosystem (i.e. their community) (Smith and Cooper-Martin, 1997). The decline in the functional ability of older people, which affects their daily living, has increased their vulnerability in the service ecosystem in rural areas. Although service robots have the potential to help improve the well-being of older people (Caić *et al.*, 2018), resource limitations hinder the application of such technologies in rural areas. Therefore, social support by community members is necessary to support vulnerable older people. Residents can maintain their well-being if the community, comprising “a group of people sharing specific geographic and social contexts for activities” (Edwards *et al.*, 2000, p. 292), functions as a self-contained and self-adjusting service ecosystem (Lusch and Vargo, 2014). Vargo and Lusch (2017) noted that networks have a purpose; community networks have the fundamental purpose of improving individual well-being as a partial function of collective well-being.

Food deserts, which are caused by the withdrawal of grocery stores and the decline in public transportation, are a growing problem for older people in Japan, and the phenomenon poses a potential challenge for older people in other developed countries (Kohijoki, 2011). For example, Berkowitz *et al.* (2018) found that there are about 9,000 areas where 100 or more households do not have vehicle access and live more than half a mile from a supermarket in the US problems with daily shopping or no access to grocery stores have led to service exclusions for older people. The Japanese government estimates that over seven million older people find it difficult to perform their daily shopping (Ministry of Economy, Trade and Industry, 2014). In addition, a government survey reported that 82% of municipalities were concerned with food access problems (Ministry of Agriculture, Forestry and Fisheries, 2018).

To help older people, other residents have begun to provide community-based support services such as mobile supermarkets or transportation support to limit service exclusions (Ho and Shirahada, 2016). Community-based support services are defined as social support provided by residents to support vulnerable consumers in their community. Resident-providers act as orchestrators in the service ecosystem by coordinating value cocreation of vulnerable older people who suffer from resource shortages or are unable to independently access resources within the system. Although Kelleher *et al.* (2020) imply that orchestrators function well in the short term, they may become overloaded if the same people serve as orchestrators in the long term.

Therefore, to develop sustainable service inclusion (Fisk *et al.*, 2018), providers have to encourage the recipients of support services (i.e. vulnerable older people) to actively participate in value cocreation for their community, in addition to passively receiving support from other residents. Vulnerable older consumers can develop their skills and learn how to help other residents through support services, and their growth, in turn, leads to service ecosystem viability (Vargo and Lusch, 2017) and contributes to community sustainability and individual well-being. Service exchange is dynamic, and actors transform their role by learning through repeated social interaction (Edvardsson *et al.*, 2011). Changing roles in value cocreation means that vulnerable older consumers who have only received support and consumed resources become involved in resource integration (Baron, 2008).

Service researchers began to focus on human well-being as a service outcome in the last decade, and these studies fall under the category of transformative service research (TSR; Anderson *et al.*, 2013). For example, Blocker and Barrios (2015) demonstrated that value related to the well-being of vulnerable consumers could be delivered through services. Other studies have identified how to promote consumer participation in value cocreation, contributing to acquisition of well-being value, such as value offering (Meshram and O’Cass, 2018), meeting consumers’ needs (Rosenbaum, 2006), interactions between consumers (Fehrer

et al., 2018) and role readiness (Verleye *et al.*, 2014). However, little is known about how consumers transform their roles through service, and how role transformation contributes to their well-being. As service is an exchange process (Lusch and Vargo, 2014), service researchers need to identify the mechanism of dynamic actor transformation in the service exchange process. The purpose of this study is to develop a process model for consumers' role transformation through support services.

Clarifying the process of consumers' role transformation, this study contributes to the service literature in three ways. First, our work contributes to TSR by revealing the mechanism of the growth process of vulnerable consumers in service exchange. Beyond identifying the factors promoting actor transformation, this study describes the mechanism of the process, that is, the relationships among the factors. Our findings demonstrate that vulnerable consumers who only receive support can also grow and actively participate in value cocreation for their community through repeated service exchange. Furthermore, consumer growth leads to both micro (i.e. individual) level and macro (i.e. community) level increases in well-being. Using visual ethnography to track the longitudinal process of actor transformation, this study contributes to the service literature, which thus far has only been concerned with classifying referent factors, even though uncovering the mechanisms of service processes is a crucial mission of service researchers.

Second, this study broadens service-dominant (*S-D*) logic which is the framework most used currently in the service research field. In *S-D* logic, consumers are always regarded as generic actors (i.e. resource integrators). While this assumption would work well in business situations where consumers actively participate in value cocreation from the beginning, many vulnerable consumers of support services only consume resources (i.e. social support) passively, following the goods-dominant (*G-D*) logic perspective. Our findings indicate how to activate passive consumers in service exchanges to broaden the application range of *S-D* logic.

Third, our proposed model combines social exchanges with economic exchanges in service exchanges. Support services are exchanged based on relationships of the past, present and future for value cocreation for the community. Therefore, this study combines social exchange theory with *S-D* logic to describe the longitudinal transformation process of consumers' role in service exchanges. This study analyzes service exchanges of consumers based on the first proposition that changes in the costs and rewards of exchanges in support services will transform the role of consumers and promote their prosocial behavior. Our findings provide three other propositions that deepen the first proposition by describing how vulnerable consumers transform their roles through service exchange.

The following section explains the analysis perspective of this study by providing the first proposition through a literature review on *S-D* logic and social exchange theory. Then, a visual ethnography to map the barriers and values of consumers in using support services is presented. These results inform the design of a consumer transformation model illustrating the process of consumers' role transformation. The paper concludes with a discussion of the contributions and limitations of our study.

Theoretical background

Service-dominant logic

According to *S-D* logic, a singular "service" is a basis for exchange, and it is defined as the actors' application of competencies to a specific context (Lusch and Vargo, 2014). Plural "services" are units of output (Vargo and Lusch, 2017) and often represent business production. The *S-D* logic has refined our understanding of value by redefining markets with the concept of service exchange, as opposed to *G-D* logic, whereby value is located in the product (Vargo and Lusch, 2004). While consumers only purchase and consume value

embedded in products in *G-D* logic, *S-D* logic assumes that value is cocreated by providers and consumers. Therefore, consumers' value cocreation behavior should be investigated from consumers', rather than providers', perspective in *S-D* logic (Fliess *et al.*, 2014). Consumers play various roles in service exchanges that are more about implementing a specific action, and they can benefit from the improved value cocreation (Dong and Sivakumar, 2015).

Both providers and consumers are regarded as generic actors that integrate resources in the process of value cocreation, and these generic actors constitute a service ecosystem (Vargo and Lusch, 2016). A service ecosystem is defined as a "relatively self-contained, self-adjusting system of resource-integrating actors connected by shared institutional arrangements and mutual value creation through service exchange" (Vargo and Lusch, 2016, p. 161). The viability of a service ecosystem is enhanced when generic actors integrate their resources and act to obtain value by providing benefits to others (Polese *et al.*, 2017). System viability relates to actors' behaviors in the iterative processes of service exchanges (Gummesson *et al.*, 2019).

The sustainability of a rural community can be enhanced through community-based support services; community is a service ecosystem constituted by residents, including both support service providers and vulnerable older people. However, although the *S-D* logic sees the consumer as a generic actor, consumers do not always regard themselves in the same way (Heinonen *et al.*, 2010). In depopulated rural communities, the number of generic actors who participate in value cocreation for their community is limited. Vulnerable older consumers, who account for a large portion of the population, relate to support services through the lens of *G-D* logic. They do not view themselves as generic actors and instead see themselves as recipients of the support they are provided. As a result, the burden on the providers of support services increases in rural areas where resources are scarce, and the services could become unsustainable if consumers do not participate in value cocreation and leave providers to cater to consumers unilaterally.

Recipients can develop their ability and promote participation in value cocreation for their community (Baron, 2008) by using support services so that service ecosystem viability will be enhanced. As community-based support services are provided by residents living in the same community, professional knowledge and skills are not mandatory. Vulnerable older consumers can be involved in value cocreation in many ways. An increased number of generic actors will enhance ecosystem viability by providing benefits to other residents (i.e. prosocial behavior) beyond the servicescapes of support services. Thus, the role transformation of vulnerable older consumers leads to sustainable and improved well-being in the community and enhance service ecosystem viability.

Social exchange theory

While community-based support services involve both economic and social exchange, prosocial behaviors for the community are primarily social exchanges. Social exchange theory offers a framework for explaining social exchange beyond market transactions. This theory relies on a rationalistic principle that explains people's behavior as the maximization of benefit, which is the difference between the rewards and costs of exchanges (Homans, 1958). Social exchanges cannot be separated from personality and social context because personal resources are also involved (Cropanzano and Mitchell, 2005). Therefore, alongside immediate transactions, exchanges might often occur based on future commitments (Blau, 1964) and institutions for social exchange are firmly established in communities based on mutual redistribution (Lévi-Strauss, 1969). Social exchanges are not limited to two actors; rather, they also function as institutions between social networks (Hoang *et al.*, 2018).

Consequently, social exchange theory is a framework for clarifying the structure of society through individual exchanges.

Social exchange is governed by human relationships (Thibaut and Kelley, 1959), and thus, the possibility of repeated interaction governs the costs and rewards of exchange. Actors are motivated to face new costs and continue with the exchanges if further rewards are expected from repeated interactions (Emerson, 1976). Service exchange in communities can reduce the risk of resource uncertainty, thereby building trust relationships more easily than in general markets (Cook *et al.*, 2013). This process of building trust in exchanges also helps transform the role of actors to facilitate resource integration for the communities (Lawler *et al.*, 2000). Social exchanges based on trust enable the provision of favors (Blau, 1994) and alleviate power inequalities among actors (Thye, 2000). As a result, solidarity and reciprocity are fostered through social exchanges (Molm *et al.*, 2007). Institutions of these social exchanges develop and propagate in a social group to sustain community (Cook, 2000), and their dissemination leads to prosocial behaviors in terms of altruistic exchanges that transcend the logic of rational economic exchanges (Sen, 1977). In view of social exchange theory, this study proposes the following proposition for analyzing consumers' role transformation through support services.

- P1.* Changes in the costs and rewards of exchanges in support services will transform the role of consumers and promote their prosocial behavior.

Accordingly, this study develops a model describing the process of consumers' role transformation to identify the changes in the costs and rewards of exchanges in support services. This study treats the barriers to service exchange as costs because consumers who face barriers pay a cost for participating in exchanges. Conversely, the value obtained by the consumers represents the rewards of social support. Thus, the process of consumers' role transformation can be described in terms of changes in (1) the barriers to service exchange, (2) the social support in support services for overcoming those barriers and (3) the value reaped from that social support.

Methods

Samples

The data were collected from a mobile supermarket in Nomi City, a typical aging rural area in Japan. The city spans across 84 km² and has 50,000 inhabitants. Although the number of households exceeded 15,000 in 2016, compared to more than 10,000 in 1985, the average number of people per household in 2016 was 3.1, down from 3.9 in 1985. This is because the number of older people living alone has increased, alongside the trend toward nuclear families. The aging rate (population aged 65 years or over) exceeds 40% in about 60 villages in the mountainous area of the city, although the aging rate is about 25% over the whole city. Many older people encounter difficulties performing daily shopping because of the absence of nearby grocery stores (Plate 1a). Local public buses run less than 10 times a day in the mountainous areas and deliver residents to the center of the city.

To address this food desert problem, the women's section of the Chamber of Commerce of Nomi City assembled a volunteer group in 2012 to organize a mobile supermarket, and their grocery truck visits villages twice a month in the mountainous areas (Plates 1b and 1c). Supplies are purchased at the store price from stores registered with the Chamber of Commerce. Therefore, unlike commercial home delivery services, consumers can buy food at reasonable prices. In addition, the mobile supermarket buys crops grown by consumers to sell in other villages, as older people in mountainous areas often grow crops to feed themselves. This idea has introduced the goal of producing high-quality crops for sale, providing a stimulus for older people. The support services have increased the interaction



A mountainous area in Nomi City
(a)



A mobile supermarket on summer
(b)

Plate 1.
The mobile
supermarket



Plate 1.

A mobile supermarket on winter

(c)

among residents and catalyzed prosocial behavior within communities by strengthening relationships among residents. Vulnerable older consumers have become active and promote resource integration for their communities through the support services.

Data collection and analysis

The transformation process of the consumers' role was documented over four years through participant observations. This is an ethnographic method wherein researchers participate as members in the activities of the group being studied to observe characteristics that cannot be gleaned from the outside (Spradley, 2016). The authors collected the primary data through participant observations in a shared context with community residents. Ethnography has been used to describe the transformation process of vulnerable consumers (Hill, 2001), and enables researchers to identify the dynamics of the value cocreation process and obtain phenomenological insights (Tronvoll *et al.*, 2011).

The authors participated in the mobile supermarket as service providers more than twice every six months and recorded exchanges among the actors through field notes, photographs and interviews. While photographing service exchanges at the mobile supermarket, the authors observed how value is cocreated and how consumers transform their roles. These observations were documented in the field notes along with descriptions of the photographs. Further, the authors interviewed residents occasionally on the site of the mobile supermarket to inquire about community culture or individual customs to enrich the understanding of their behaviors, and these were also recorded in the field notes. In addition to the data from the longitudinal participant observation, we conducted in-depth interviews with two service users to deepen our understanding of how the value of the mobile supermarket has changed. Each interview took about 60 min, and the respondents were asked their opinions on support services and what they perceived as the value received from the mobile supermarket. To

secure informed consent, the purpose of the participant observation and in-depth interviews was explained to the providers and consumers, and the recorded data were anonymized.

Visual ethnography was used to explain changes in the barriers to support services and the value of the exchange to develop a model describing the process of consumers' role transformation. Photographs capture the social context, culture and collective norms undergirding social activity (Schwartz, 1989). Thus, describing exchanges through photographs ensures a deeper understanding of the social and cultural background of behaviors (Schembri and Boyle, 2013). Furthermore, photographs enable the sharing of contextual details between the authors and readers. In this study, over two hundred photographs were taken during the participant observation and classified into five groups: barriers, social support, values, roles and others. Then, the authors selected the photographs that best represent each factor to validate the explanations of the field notes. Finally, five postgraduate students in the fields of sociology and marketing reviewed the selected photographs through group discussion.

The consumer transformation model

Findings from the participant observation and in-depth interviews

Many support services cease to exist after a short time because resources are limited in depopulated and aging rural areas. However, the mobile supermarket in this study is a good example of a service provision that has continued for over five years. The reason for its longevity is that it has supported the growth of the vulnerable older consumers and promoted their participation in value cocreation instead of providing services alone.

The participant observation revealed three types of barriers to service exchange for vulnerable older consumers and the social support provided to overcome each barrier (Table 1). With these three forms of social support, consumers were able to obtain value from the service exchange. For the value as rewards in service exchanges, this study focuses on value-in-use from a consumer's perspective, as value emerges from consumer experience (Jain et al., 2017). Interviews can illuminate the changes in consumer's perception of services (Bonsu and Belk, 2003), and we therefore also, conducted in-depth interviews to determine how obtained value changes (Table 2). Two older people who had used the mobile supermarket for more than three years were selected as respondents to represent consumers who have transformed from recipients into generic actors. They lived in different villages, but both had worked to connect providers with residents since the mobile supermarket began.

Role of consumers	Barriers and social supports	Value of social supports
Recipients	Overcoming the lifestyle barrier requires instrumental support.	The gain of functional value emerges through regaining a market relationship (The instrumental support allows consumers to gain functional value, which is the core value of support services).
Quasi-actors	Overcoming the capability barrier requires companionship.	The gain of social relationship value emerges through building a reciprocal relationship (The companionship enables consumers to gain social relationship value by strengthening social capital).
Generic actors	Overcoming the trust barrier requires emotional support.	The gain of emotional value emerges through reaching a mutual understanding (The emotional support allows consumers to gain emotional value by cocreating positive emotions).

Table 1. Findings from the participant observation

Table 2.
Responses to the
in-depth interviews

Values	First respondent (Male, 72 years old)	Second respondent (Female, 72 years old)
Functional value	It becomes easy [to undertake daily shopping thanks to the mobile supermarket], particularly for the elderly who live alone and cannot go to the shop.	The number of items is sufficient although it is only a mobile supermarket. If I could not find the items I wanted, I could request them, and providers would bring them the next time. The other day, when I asked, "Do you have a detergent?" they did not have it, but they brought it the next time. So, I want to buy from them because they did it only for me. In the beginning, I did not know what kind of goods were sold in the mobile supermarket. The variety and quantity of goods have increased gradually, so it is enough now.
Social relationship value	[When the mobile supermarket began,] I did not know what service providers were selling here. Therefore, I looked at the faces of providers [to know them] and began to make purchases [for me]. Then, I gradually began to tell other people, "There are some goods like this." [...] A small blind person comes to shop from near the shrine, so I take her home [by my car]. Otherwise, she would have to take her purchased goods home [by herself]. [Interviewer: Did she ask you to pick her up?] No. It is from my side. I thought it was tough [for her]. For about the first three times, she went home by herself. Then, I started to take her.	I was worried at first. Some residents were against the mobile supermarket. In my heart, I wanted them to come to our village; but I did not want them to face trouble. If no one goes shopping, nothing can be sold even if they come. So, we did not accept the mobile supermarket at first. Some wagon retailers used to come here long ago. They were ordinary commercial shop people. But they gradually stopped coming. I guess it became unprofitable because few people buy goods [from them]. That is why I was against the mobile supermarket at first. But now, everybody is waiting [for the mobile supermarket]. When the mobile supermarket has a week off, I cannot meet with providers, and it is sad. They are really nice and kind. At first, I did not know them. But since they started coming, the atmosphere of the village has become quite bright. I would share my salted plum because they said, "Give me some," when I talked about making salted plum. Normally, the same members visit the mobile supermarket now. So, if somebody does not come out, I am worried about what happened to that person. When a person who did not come several times showed up after a long time, I said, "How have you been?" and she replied, "I am okay. I could not come here because of my business." It is good that we are talking with and take care of each other by meeting regularly at the mobile supermarket because there are a lot of older people in my village. We did not have much conversation usually, even though we were neighbors [before the mobile supermarket began].
Emotional value	Before the mobile supermarket started, I was the only one who would talk to other residents. But, now [three years after the mobile supermarket began], all the residents engage in conversation with each other. The mobile supermarket was a trigger. I think that providing reassurance for the elderly is more important [than the ease of purchasing goods] because the mobile supermarket also has a function to look after elderly people. People used to go shopping and talk with each other when there were stores in the village in the old days. But now there are no stores in our village. So, when people come to the mobile supermarket, they say "Oh! How is it going?" Conversations among residents and between residents and providers are increasing. [...] One thing I was worried about was what happened when the weather got cold [in the winter]. I guessed people would not come shopping because it was cold. This village has heavy snow. Still, they came shopping. Everyone who comes to the shop is lively. Because we can talk with each other. Even if you live alone at home, you can talk with people if you come to the mobile supermarket.	

Both respondents reported a similar change process in the perceived value from the accumulation of the use of the services.

The consumer transformation model that describes the growth process of vulnerable older consumers was constructed by integrating the findings (Figure 1). Consumers do not directly transform their role from recipients who only consume resources to generic actors who integrate resources. This study reveals that consumers pass through the role of quasi-actors before transforming into generic actors.

Process of consumers' role transformation

The model contemplates three domains: social support (on the left-hand side), consumers (in the central pyramid) and community institutions (on the right-hand side). Consumers in the middle overcome barriers by receiving social support from support services on the left. Then, they obtain value from the right side of the pyramid, and the institutions of service exchange in the community transform according to the consumers' role transformation. The gray scale of the community institutions domain describes how the institutions of service exchange spread among the community, and it also represents the proportion of social exchange in service exchange.

When consumers first access support services, they are recipients (bottom of the pyramid) who primarily consume resources in service exchange. Recipients overcome lifestyle barriers by receiving instrumental support and gain functional value. The institutions of service exchange consist of contractual norms governing economic exchanges only shared by dyad relationships between providers and consumers.

Recipients who gain functional value and increase their self-efficacy transform their role into quasi-actors (middle of the pyramid) who transmit resources. Quasi-actors can overcome capability barriers by receiving companionship and gaining social relationship value. For them, the institution of service exchange is a mixture of contractual and altruistic norms based on economic and social exchanges in servicescapes.

Quasi-actors who gain social relationship value and intensify social interest transform their role into generic actors who integrate resources. Furthermore, generic actors can overcome trust barriers by receiving emotional support and gain emotional value. As a result,

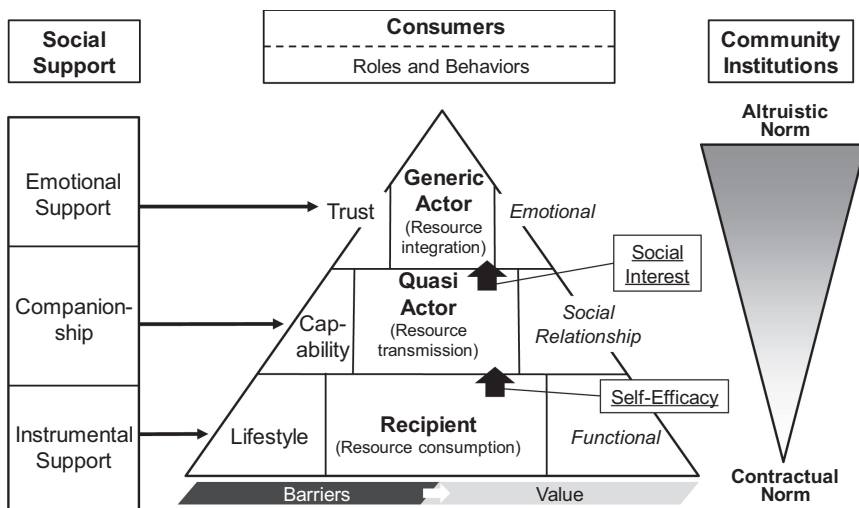


Figure 1.
The consumer transformation model

they promote resource integration for the community, and institutions of service exchange are dominated by altruistic norms for cocreating value with other actors beyond servicescapes. An increasing number of generic actors spreads altruistic norms throughout the service ecosystem, resulting in increased altruistic behavior across the community. Consumers transform their role in service exchanges to promote prosocial behavior by receiving social support and obtaining value. Details of each role are explained below.

Recipients

Recipients only consume resources in service exchanges (Plate 2a). Their behavior corresponds to *G-D* logic view. They act according to the economic exchange principle based on the expectation that a deserved benefit will be received by paying money, following contractual norms as shared institutions between provider and consumer. In terms of the barriers to service exchanges, they suffer from lifestyle barriers that arise when they have to change their living environment to participate in service exchanges. Budget and time constraints are typical factors of the lifestyle barrier to receiving social support (Ho and Shirahada, 2019). When the mobile supermarket was launched, it was accessible only at a time convenient to the service providers. However, vulnerable older consumers could have been working in the fields (Plate 3a) or visiting a hospital at these times. In addition, older people are reluctant to access new shopping services because they live on pensions, and some were unable to shop freely because of family and childcare obligations.

To overcome these lifestyle barriers, the providers persuaded supplier stores to sell products at store prices and asked the consumers about the convenient times for using the support services (Plate 3b). This kind of practical assistance from support services is instrumental support (Rook, 1987), which can allow consumers to overcome lifestyle barriers. Ensuring the availability of the mobile supermarket for consumers as a form of instrumental support has improved the quality of life in communities, making it easier for vulnerable older consumers to purchase groceries and not depend only on the crops they grow. Consumers could shop in a short time, and even the ones caring for their grandchildren could shop (Plate 3c) because the providers stop the grocery truck close to their homes. Furthermore, providers asked the supplier stores to repack the goods in smaller portions, adapted for consumption by vulnerable older consumers.

Recipients gain functional value from service exchange by receiving instrumental support. Vulnerable older consumers who could not travel for shopping had begun using readymade lunch box delivery services in the mountainous areas of the city. The mobile supermarket allowed them to buy fresh food and cook own meals themselves, thereby improving their quality of life and vitality. It also enabled vulnerable older consumers who usually had difficulties visiting shopping areas far from their homes, such as older people living with physical disabilities, to go shopping again (Plate 3d). Instrumental support of the mobile supermarket restored the relationship between consumers and grocery stores. As a result, the consumers gained functional value, which forms the core value of the mobile supermarket, that is, access to food.

In the in-depth interviews, both respondents referred to functional value gain at the beginning of using support services (Table 2). The first respondent stated that the mobile supermarket allowed vulnerable older consumers to have easy access to daily shopping. The second respondent reported that product variety was an important factor for vulnerable older consumers when shopping. Kohijoki (2011) also found product variety to be the functional value for vulnerable older people.

Through the mobile supermarket, vulnerable older consumers can choose and buy small size products that are easy to consume at store prices. As a result, the quality of life in the



Consumer as a recipient

[The provider on the right bring foods in front of the vulnerable older consumer on the left]

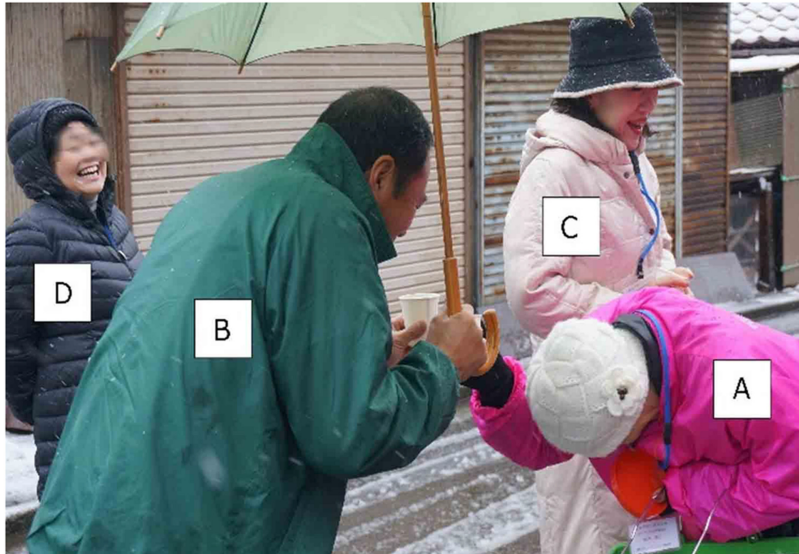
(a)



Consumer as a quasi-actor

[The consumer on the left points out a food box, surprising other two consumers]

(b)



Consumer as a generic actor

[The bystanders (C&D) laughs by a joke of the provider and consumer (A&B)]

Plate 2.

(c)

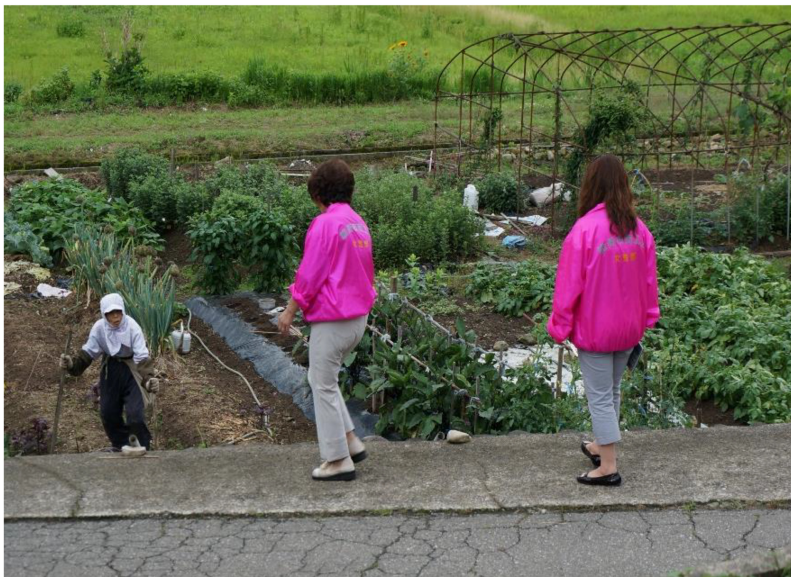
community has improved through the mobile supermarket. Moreover, the mobile supermarket is available even on mid-winter days when it is difficult for residents to go shopping. Consumers who previously had difficulties with everyday shopping can now shop, increasing their self-efficacy (Bandura, 1982). The recognition of their ability to shop increases when consumers can choose fresh foods by themselves in the mobile supermarket rather than via mail order or home delivery (Ho and Shirahada, 2016). As self-efficacy increases, the recipients transform into quasi-actors.

Quasi-actors

Quasi-actors mainly undertake resource transmission in service exchanges. Resource transmission is a support behavior for resource integration in which quasi-actors do not integrate new resources for value cocreation but transmit existent resources so that other actors can easily access them. A resource is not immediately integrated by actors, but it must be processed and moved to facilitate integration (Lusch and Nambisan, 2015). Quasi-actors can process and move existing resources as resource transmission, allowing other actors to integrate resources that were previously unavailable. For example, Plate 2b illustrates a consumer on the left side, pointing to a product and explaining something to two other consumers with a surprised look on their faces. In this case, the consumer is informing other consumers about resources they might not have been aware of. Sharing cooking methods with other consumers is another instance of resource transmission often observed in the mobile supermarket. While knowledge of cooking methods is not required for resource integration at the mobile supermarket, quasi-actors transmit these existing resources for other actors and improve the accessibility of resources. Consumers who learn new cooking methods can use that knowledge as an operant resource and integrate it with purchased



An elderly person works in her croft and two service providers on the road visit there to interview her daily life
(a)



Service providers of the mobile supermarket ask needs of food access and convenient times for an elderly person
(b)



An elderly consumer shopping with her grandchild
(c)



Even vulnerable older consumers with curved backs or on wheelchairs can shopping at near of their house
(d)



A consumer on the lower right cannot shopping at the same pace as other consumers

(e)



A wheelchairs consumer comes frequently to the mobile supermarket

(f)

Plate 3.



A provider reads price tags and food labels for a consumer who cannot read it due to deterioration of vision
(g)



A provider holds an umbrella for consumers shopping easily
(h)



A consumer allows providers stop their grocery truck in the private garage and other consumers come there

(i)



A provider finds beautiful garden during the mobile supermarket and the owner of garden lectures about gardening

(j)



The consumers have a quarrel about a rumor during shopping at the mobile supermarket

(k)



The provider on the right listens about the vulnerable older consumer's livelihood

(l)

Plate 3.



Providers supply tea and candy for all consumers to create a comfortable mood

(m)

Plate 3.

goods (i.e. operand resources) to cook better dishes. Thus, consumers who have transformed from recipients into quasi-actors play a role in mediating the value cocreation of other consumers.

Unlike the findings by [Johns and Davey \(2019\)](#), the resource transmission of quasi-actors is not limited to mediation between providers and consumers but refers to broader and more general support behaviors. [Frow et al. \(2016\)](#) argued that actors cocreate a new resource through resource sharing. However, resource transmission differs from resource sharing in that quasi-actors do not cocreate a new resource in resource transmission. Instead, they improve the accessibility of resources for other actors through resource transmission, and the nature of the resources does not change. Using the example of sharing cooking methods to explain resource transmission, the quasi-actor may learn the methods from a cooking program on TV, and then share the information with other consumers in a style that can be easily understood. In this example, the quasi-actor does not create a new resource but improves the accessibility of resources for other consumers. Quasi-actors also differ from orchestrators – a concept proposed by [Breidbach et al. \(2016\)](#). While orchestrators perform resource integration on behalf of referent beneficiaries who are not able to integrate resources by themselves ([Kelleher et al., 2020](#)), quasi-actors comminute resources and increase resource liquefaction ([Lusch and Nambisan, 2015](#)) for the community so that actors in the service ecosystem (i.e. community residents) can access them easily.

People are more motivated to influence others when self-efficacy is high ([Lindblom et al., 2016](#)). Therefore, consumers who transform their role from recipients to quasi-actors will be encouraged to transmit resources. Rather than simply moving resources to other actors, quasi-actors understand the context of service exchange and transfigure resources to improve resource density ([Normann, 2001](#)). The resource transmission is assumed to be based on competitive altruism. Competitive altruism is altruistic behavior for the acquisition of a

positive reputation and does not necessarily imply acting only for the sake of others but also for individual satisfaction (Hardy and Van Vugt, 2006). Consequently, the shared institutions of quasi-actors' behaviors in service exchange are a mixture of contractual and altruistic norms. As illustrated in Plate 2b, quasi-actors' behaviors affect beyond the dyad relationships between providers and consumers.

Quasi-actors suffer from capability barriers that arise when they lack the ability to realize service exchange. Many vulnerable older people have difficulty adapting to a new style of shopping because of degenerating physical conditions. In addition, some vulnerable older people whose cognitive abilities have deteriorated take more time to shop and might be reluctant to have others wait for them, and they struggle to shop at the same pace as others (Plate 3e). Regardless of aging, many vulnerable older consumers have difficulties in participating in service exchanges because of pre-existing diminished capabilities, such as living with a physical disability (Plate 3f). These vulnerable older consumers may feel that they are unable to lead a satisfying life.

To overcome these capability barriers, providers have strengthened the relationships with and among consumers. Building new friendships or strengthening existing relationships through the provision of support services provides companionship (Rook, 1987). It can lead to altruistic behavior; for example, a consumer could offer to help a visually impaired person with transportation or read price tags for them (Plate 3g), and on snowy days, providers would hold umbrellas to make it easier for consumers to shop (Plate 3h). As relationships were established, indirect support also started to occur. For example, a consumer allowed a grocery truck to stop in their private garage, making it easier for nearby residents to shop even on snowy days (Plate 3i).

Older people can receive help to enhance their capabilities by gathering at specific places and engaging with others (Meshram and O'Cass, 2018). In mobile sales, consumers and providers developed helping relationships by regularly meeting at the shopping site. As a result, service was also exchanged through reciprocity beyond ordinary purchasing behaviors. In other words, quasi-actors strengthened their social capital, which is a critical factor for their well-being in the community (Cannuscio *et al.*, 2003). They can gain capability-enhancing social relationship value deriving from strengthening social capital, which goes beyond the functional value of the mobile supermarket. Social relationship value is a benefit received from human relationships (e.g. friendship) in a community.

Evidence from the longitudinal participant observation indicate that quasi-actors receive the social relationship value. Visually impaired older persons can return safely to their homes by having another older friend drive them. As illustrated in Plate 3i, using the consumer's private garage which has a roof makes it easier for other consumers to shop regardless of bad weather. When a consumer found that carrots had sold out, another consumer nearby said, "Because your husband helped me the other day," and handed over the last carrot in the shopping basket. This indicates that reciprocity among residents begins to transcend support services. Another example, not directly related to shopping, is a mini-lecture about gardening between consumers and providers, which began suddenly during a mobile supermarket session (Plate 3j).

Furthermore, the in-depth interviews confirmed the gain in social relationship value after consumers gained functional value (Table 2). The first respondent said that he had established a relationship with both providers and other consumers after repeatedly shopping in the mobile supermarket, and he would help a visually impaired consumer with transportation. This is an example of the development of reciprocal relationships among consumers. The second respondent reported that residents in her village did not welcome the mobile supermarket at the beginning. However, they became eager to meet the providers. She explained an incident where she shared goods with the providers after developing a relationship with them.

Quasi-actors gain social relationship value by receiving companionship. They intensify social interest because support services enable them not only to purchase groceries but also to build relationships with residents in the community, including providers. Social interest refers to the degree of interest in engaging with others (Crandall, 1975), and intensifying social interest requires both acceptance of self and others (Adler, 1938). Quasi-actors already have a high level of self-acceptance because recipients increase their self-efficacy when they transform their role into quasi-actors. Then, quasi-actors transform their role into generic actors after increasing their acceptance of others by gaining social relationship value and intensifying social interest.

Generic actors

Generic actors mainly integrate resources in service exchange. Their behavior corresponds to *S-D* logic view. While resource transmission does not create value by itself, resource integration does. Plate 2c depicts a provider (actor A) and a consumer (actor B) sharing a joke, while bystanders (actor C and D) are laughing at the joke. This kind of joking situation cocreates positive emotions among the surrounding actors because the context is shared not only by the two people who are talking but also by other actors in the community. The behavior of generic actors in service exchange follows the altruistic norms of sharing benefits with others.

However, initially, they suffer from trust barriers that arise from distrust toward other actors participating in service exchange. For example, they were suspicious of why the providers of the mobile supermarket were not selling expensive products at the beginning. The trust barriers also existed among the consumers. Older people did not want gossip to spread in the community (Plate 3k). When talking freely about private matters in a small community, rumors can easily spread.

To overcome this barrier and develop a stronger relationship with consumers, the providers communicated that they came not only to sell products but also to listen to vulnerable older consumers and look after them (Plate 3l). The providers received basic training in active listening before the mobile supermarket was launched. The anxiety that consumers may feel about their lives can be reduced by empathizing with them. Accepting others' feelings and offering them warmth and security during service exchange provides emotional support (Rook, 1987). To promote more comfortable interactions, providers supplied tea and candy so that consumers might feel more comfortable to open up (Plate 3m). As a result, the consumers could begin to trust other actors in the service ecosystem beyond specific friendships to form companionship and strengthen belongingness to the ecosystem.

Emotional fulfillment beyond physical help can be cocreated among actors through emotional support. Promoting mutual understanding through emotional support leads to mutual trust (Wang *et al.*, 2019). Consequently, consumers can overcome trust barriers and gain emotional value. Emotional value can be cocreated even with aging and declining physical function, and it can spread throughout the community beyond the boundaries of servicescapes. For example, as illustrated in Plate 2c, when a provider greeted a healthy older person by saying, "How are you?" he would reply jokingly, "I am not fine." This sense of humor between them was established from their past conversations during the exchange of support services. Further, they shared this sense of comradery with surrounding actors so they could laugh together (Plate 2c). As another example, a provider noticed that a consumer had a bandaged finger and inquired about this. This conversation led to the consumer narrating the injury and talking about her daily life in detail, receiving reassurance and empathy from the provider. Actors in these examples cocreated positive emotions by sharing jokes and demonstrating empathy. Consumers spread prosocial behaviors, such as demonstrating empathy and helping others in their community after receiving emotional support from providers.

For the emotional value, respondents of the in-depth interviews reported that social interactions had been activated in the community by strengthening the relationships among

residents through the repeated use of the support services (Table 2). This demonstrates that social interactions would exceed purchasing behavior by the support services. The first respondent explained how the atmosphere in the village has changed and how the residents in the village became livelier through regularly meeting in the mobile supermarket. The second respondent also reported how the mobile supermarket facilitated conversations between residents and decreased anxiety in their life. The residents became concerned about each other after using the support services. The results of in-depth interviews demonstrate that altruistic norms can spread in a community beyond servicescapes.

The repeated cocreation of emotional value builds common contexts for the service ecosystem of communities because institutions are constructed through the accumulation of value cocreation (Wieland *et al.*, 2016). The institutions of generic actors' service exchange are broadened from the specific mobile supermarket to the entire service ecosystem of the community. Generic actors further promote the cocreation of emotional value by receiving emotional support from the providers who listen to their life stories and help them manage unpleasant feelings. Subsequently, they encourage a sense of belongingness and promote resource integration for the community by sharing positive emotions.

Discussion

Theoretical implications

Using a visual ethnography to investigate community-based support services, this study developed a consumer transformation model to describe the process of promoting consumers' participation in value cocreation for the community. Although service is an exchange process, previous studies have not paid attention to the dynamic transformation of actors. By describing the mechanism of consumers' role transformation, our proposed model demonstrates that vulnerable consumers can develop their abilities through iterative service exchanges in support services, and actively participate in value cocreation for their community. Each consumer obtains three types of value related to well-being from three types of social support corresponding to each value, and these value acquisitions promote their role transformation in service exchanges. Eventually, their behavior updates the institutions of service exchange that spread to their community so that the service ecosystem viability is enhanced. Consumers do not only change their propensities in servicescapes, but these changes lead to growth in their lives. TSR should investigate these uplifting changes and improvements of actors' life over minor changes in servicescapes (Mick, 2006). Designing and implementing services mindful of consumers' longitudinal transformation process will contribute to human well-being. As service researchers are required to investigate a process of the identity dynamics of actors (Koskela-Huotari and Siltaloppi, 2020), our findings describe the growth process of consumers for the development of theory in service research (Ranaweera and Sigala, 2015).

In *S-D* logic, consumers are always regarded as generic actors. However, older people in rural areas are vulnerable consumers and do not participate from the start in value cocreation as generic actors. Our study clarifies the process of transforming consumers' roles into generic actors, moving away from the role of recipients who pursue resource consumption in exchanges based on *G-D* logic. In other words, the consumer transformation model broadens *S-D* logic by indicating how to activate passive consumers under the *G-D* logic perspective. While previous studies have discussed the effects of factors promoting engagement (Meshram and O'Cass, 2018) or propensities to value cocreation behaviors (Verleye *et al.*, 2014) in the consumers, this study identified the longitudinal process of vulnerable consumers' growth to generic actors. Although several models capturing changes in human needs have been proposed (Maslow, 1943; Rosenbaum, 2006), they all focused on individual needs. On the other hand, the consumer transformation model describes consumers' role transformation by incorporating interaction

between actors, which is the essence of service, and the engagement of actors always occurs within a dynamic and interactive process of value cocreation (Brodie *et al.*, 2011).

This study focused on support services with the primary purpose of supporting food access for vulnerable older people in rural areas. Our findings indicate that support services encourage the participation of vulnerable consumers in value cocreation, in addition to supporting their daily living. By using the perspective of social exchange theory, this study has constructed a service model that clarifies the relationship between the barriers to participating in service exchanges and the value that consumers derive from service exchanges. This attempt enables us to scrutinize the service in support services that are exchanged based on social relationships of the past, present and future for value cocreation for the community. As a result, our findings describe the transformation of consumers' role in service exchange by combining the social exchange theory and *S-D* logic. Promoting the social participation of vulnerable consumers and increasing the number of generic actors contribute to the achievement of service ecosystem viability in addition to sustainable service inclusion in community-based support services. From the consumer transformation model, this study adds three propositions about the process of consumers' role transformation to deepen and simplify the first proposition, "Changes in the costs and rewards of exchanges in support services will transform the role of consumers and promote their prosocial behavior." These propositions indicate how and why consumers transform their roles through continuous service exchange for improving individual and collective well-being.

- P2. Recipients who only consume resources can overcome lifestyle barriers and transform into quasi-actors who transmit resources by receiving instrumental support and increasing their self-efficacy.
- P3. Quasi-actors can overcome capability barriers and transform into generic actors who integrate resources by receiving companionship and intensifying social interest.
- P4. Generic actors promote prosocial behavior by overcoming the trust barrier upon receiving emotional support.

Practical and social implications

In terms of the practical implications, the consumer transformation model can help facilitate consumers' role transformation by providing social support tailored to consumers' role. Previous studies have pointed out the positive effects of empathy in services (Bove, 2019; Tan *et al.*, 2019); however, the consumer transformation model indicates that actor empowerment comes before empathy in terms of the role transformation of vulnerable consumers, as vulnerable consumers need to increase self-efficacy before intensifying their social interest. As a result, interactions among residents will be encouraged to enhance community sustainability. Managing value cocreation by considering consumers' role is the crucial concern of service providers who aim to sustain their service ecosystem by increasing generic actors.

In addition, this study demonstrates how visual ethnography is useful in promoting TSR. As TSR analyzes how services improve actors' lives, the validation of these improvements requires a method that can be described in the long term and the context of service exchanges. Furthermore, service exchange is phenomenological, and visual data are required to capture actors' role transformation. Extant studies have visualized and analyzed quantitative data in service exchanges (Ashman and Patterson, 2015), but qualitative visual ethnography is essential for understanding the social structure (Edvardsson *et al.*, 2011) that form contexts such as actors' intentions. Therefore, this method can be applied to TSR in a wide range of industries.

For the social implications, this study proposes a framework for managing the provision of support services for older people. As the number of older people increases, the world's population structure will change, especially in rural areas of developed countries. Community-based support services are required to cater to an increasingly older population. However, service providers will struggle to provide support for older people unilaterally in rural areas where resources are limited. Support services are also required to transform the role of older people into generic actors in addition to supporting their lives. As healthy life expectancy increases, marketing methods that segment consumers based on chronological age are becoming less effective (Sudbury and Simcock, 2009). Support services can become inclusive and sustainable by providing support tailored to the dynamic role transformation of vulnerable older consumers in service exchange rather than by segmenting consumers with static criteria such as chronological age. It is important to provide appropriate social support to the role of older people depending on their behavior in service exchange.

Limitations and future research directions

Although this study provides a model describing consumers' role transformation through in-depth observations and interviews, quantitative studies are required to verify the model and propositions. For example, the ease of role transformation differs among individuals. Some consumers may obtain more functional value than others despite receiving the same level of instrumental support because value is cocreated phenomenologically. Even when consumers might obtain the same value, they might not necessarily shift to a different role at the same speed. This study was limited to qualitative data, and hence, it has not explored the threshold of consumers' role transformation. Future studies incorporating quantitative data need to analyze the degree of promoting consumers' role transformation further. Furthermore, the model needs to be verified in other conditions to improve generalizability of the results.

This study clarifies the process by which social support can lead to consumers' role transformation, but it does not touch upon the question of what kind of resource integration might help the service provision of social support. Focusing on service providers is essential to achieve service inclusion because their efforts are required to manage the beginning of value cocreation (Chen *et al.*, 2017). It is important to clarify how resource integration in a community could provide social support for the transforming role of vulnerable consumers. For example, the required resource integration styles must vary between the value proposition of instrumental support and companionship. Further research into the service ecosystem design method is required to analyze how communities could provide social support effectively.

Our findings contribute to the service literature by revealing how service exchanges affect actor transformation from a perspective of the dynamic mechanism. The demonstrated propositions (P2–P4) are a foundation for a theory of actor transformation that explains the process of vulnerable consumers' growth based on social exchange theory and *S-D* logic. For further service research, grasping various service exchange styles as a dynamic mechanism that affects actor transformation, what can be called service mechanics, becomes more important in addition to solely identifying factors or interaction patterns in service. The service mechanics includes the viewpoints of (1) actor transformation, (2) dynamic relationships among micro and macro systems and (3) process analyses. The present study demonstrated how consumers' role transformation contributes to community institutions promoting residents' prosocial behavior. As well as understanding how micro systems (e.g. individual role and behavior) affect macro systems (e.g. community institutions), the knowledge of how macro systems affect micro systems will enrich our understanding of the mechanisms of actor transformation. To promote service mechanics research, it will also be important to develop methods to analyze dynamic mechanisms. The visual ethnography in this study enabled the authors to develop a deep understanding of

contexts of service exchanges to construct a model describing the process of actor transformation. As service is exchange process, developing research methods for process analysis is a pressing task for service researchers and related technology developments. For example, analysis of time-series biometric data through wearable devices could help service researchers understand value cocreation and actor transformation in a new way. Based on these viewpoints, service mechanics can broaden our knowledge of how to improve human well-being through service exchanges, thereby developing our society in the future.

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