Japanese Creative Services as a Next Generation Enterprise Modelling

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Summary

1. Economic Shift in Service economies and Prevalence of ICT:
Increasing service communications with different contexts between service providers and consumers

2. Japanese Creative Services as a next generation business:
Concept: Context-free vs. High context (context-dependent)
[Japan] High context cases: Japanese creative services (JCS)
-> JCS has several advanced cases in globalization

3. How to modelize Japanese Creative Services?
Requirement: late binding mechanism in service
<- Applying a Meta-modelling concept for representing the characteristics of “late biding”
Outline

- Part 2: Japanese Creative Services as a next generation business
- Part 3: How to modelize Japanese Creative Services?
Turning of Industry Structure

Why is SSME so important?
Service innovation driving GDP growth.

Top Ten Nations by Labor Force Size
(about 50% of world labor in just 10 nations)
A = Agriculture, G = Goods, S = Services

<table>
<thead>
<tr>
<th>Nation</th>
<th>% of labor</th>
<th>% A</th>
<th>% G</th>
<th>% S</th>
<th>25 yr %</th>
<th>delta S</th>
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>50% (S) services, >33% (S) services

The largest labor force migration in human history is underway, driven by global communications, business and technology growth, urbanization and low cost labor.

Reference: IBM SSME & UCLA 2007
### Economic Shift in Service economies

Increasing communications between service providers and consumers having different background/contexts.

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<td>Germany</td>
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<td>0.9</td>
<td>30.8</td>
<td>68.4</td>
</tr>
</tbody>
</table>


View all industries from the viewpoint of “Service”

Clarifications: Service vs. Services

- **Services** = intangible products
- **Service** = The process of using one’s competences for the benefit of some party
  - The application of knowledge and skills
- **Service transcends “goods and ‘services’”**

There are No “Services” in Service-Dominant Logic
Service Value Creation

- From product-initiated values towards service-initiated values
- Co-creation of Values, Value-in-Use

A value for any product or service

Product-initiated Value

Service-initiated Value

Manufacture/Provider

Consumer

Service Provider

Process/Interaction

Service Consumer
Resource Utilization and Ownership

Bipolarization of very few heavily-used resource allocation companies and many less resource allocation companies

- Only transfer functions/values without transferring resources (e.g., outsourcing, cloud computing)
- From value-in-exchange to value-in-use
How to represent “Service”?:
One perspective of context-free and dependent services:

**Context-free services:**
Expansion based on standardization based on *explicit* communications

- **Merit:** to target for many consumers
- **Demerit:** to provide average values
  e.g.,
- **Fast Food:** Hamburger, Coffee ...
- **Hotel:** Luxury hotel ...
- **Apparel:** SPA ...
  etc...

**High Context(dependent)services:**
Utilizing the local context based on *implicit* communications

- **Merit:** to customize for each consumer
- **Demerit:** to target for limited consumers
  e.g.,
- **Japan:** Ryokan, Edomae-sushi ...
- **Austria:** Café in Vienna ...
- **France:** Fashion ...
  etc...

One Issue: How to expand High Context(context-dependent) services with remaining the local context in global and service economies?
Discussion: A big picture of new approach of service management for global enhancement in service economies

Goal: Generalized model of global enhancement of High context services

Existing approach

A barrier of commoditization

Co-creation driven by explicit communication

Context-free Services

Modulization

Advanced High Context Services (global)

Co-creation driven by implicit communication

Our proposed approach

Services

High Context (dependent) Services (domestic)

sustainability

scalability

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Part2: Japanese Creative Services as a next generation business
Fundamentals of Japanese Creative Services

- Defined as high-quality, value-added services influenced by such high-contexts as natural, cultural, historical things
- Emphasis on the sustainability of the business

Culture / Tradition / History

- Shinise (Ryokan, etc.)
- Food (Sushi, etc.)
- Traditional Cultural Activities (Flower Arrangement, Tea Ceremony, etc)
- Cool Japan (Character goods, Digital Contents, etc.)

Service Design
Provider
Consumer
Service Operation Evaluation
High Context Communication

- What is Context?
  - Information such as background knowledge, relationships, and/or the clues for interpreting the semantics
  - Ex. “A bank near the river”, “Pick it up!”

- What is High-context Communication?
  - High necessity of “reading between the lines”
  - Non-verbal communication
  - Communication based on the tacit knowledge within the same community

Edward Hall
“Beyond Culture” (1976)
Shinise [ʃinisé] （老舗）

- A shop of long standing (usually more than 100 years old)
- Mainly private, family-owned companies

Kongo Gumi (Construction, Osaka)
Keiunkan (Japanese Hotel, Yamanashi)
Koman (Japanese Hotel, Hyogo)
Zengoro (Japanese Hotel, Ishikawa)
Genda Shigo (Manufacturing, Kyoto)
Tanaka Butsugu (Manufacturing, Kyoto)
Sudo Honke (Sake Manufacturer, Ibaraki)
Tsuen (Tea Manufacturer, Kyoto)
Hotel Sakan (Japanese Hotel, Miyagi)
Ito Tekko (Manufacturing, Yamagata)

http://www2.ttcn.ne.jp/honkawa/5407.html

Reference: Shinise analysis by Teikoku Data Bank, 2009
Shinise [ʃinísé]（老舗）

- A shop of long standing (usually, more than 100 years old) is a typical example of Japanese creative service.

- Japan has more Shinise companies than any other country in the world.
  - About 20,000 Shinise companies (1.6% of total companies) are being operated in Japan.

- Many small & medium sized companies
  - Annual revenue of 2/3 of Shinise companies is less than 300M yen (6.8M TL).
  - Many family-owned, private companies
  - Ex. Fermentation manufacturers (sake, miso, soy source, etc.), Japanese hotels, retail shops
Summarized of JCS: Value Co-Creation Patterns based on Communication Types

- **“Sessa Takuma (切磋琢磨)” Value Co-Creation**

  Utilizing implicit information of either or both side of the co-creation process based on Japanese Hospitality “Omotenashi”

<table>
<thead>
<tr>
<th>Implicit User Needs</th>
<th>Explicit Supplier Intentions</th>
</tr>
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<tbody>
<tr>
<td>1 “Omonpakari (慮り)”</td>
<td>3 “Suriawase (擦り合わせ)”</td>
</tr>
<tr>
<td>Estimate user’s needs for doing appropriate actions</td>
<td>Recognize invariant structure by interactions</td>
</tr>
<tr>
<td><strong>“Meiji” (明示)</strong></td>
<td>2 “Mitate (見立て)”</td>
</tr>
<tr>
<td>Process efficiency (May cause commoditization)</td>
<td>Visualize supplier’s intention intuitively</td>
</tr>
</tbody>
</table>
Japanese Value Co-Creation 1: “Omonpakari”

- “Omonpakari”
  - Estimate/recognize user’s needs for doing appropriate actions without receiving user’s explicit action

- Example
  - Japanese traditional “Kaiseki” restaurants
  - Japanese traditional “Ryokan” hotels

Let customers feel a sense of fun by recognizing their intention through their belabors at service encounter stage
Japanese Value Co-Creation 2: “Mitate”

- “Mitate”
  - Imagine situation by color and shape
  - Remain residuals for further imagination

- Examples
  - Ikebaras (flower arrangement)
  - Kyo-gashi

Users enjoy having imagination by themselves with the process of visualizing objects that contain provider’s implicit intention.
“Suriawase”
- Match between user and provider intentions/knowledge

Example
- A tense atmosphere at Edomae Sushi
- User’s approach orientation at Edomae Sushi

Introduce dialectic interaction to increase values of both providers and users by providing a tense of atmosphere
Brief Summary: High context(dependent) services

High context(dependent) services: utilizing of “implicit context” service providers and consumers have as a background knowledge

One example:
Value co-creation based on Japanese Hospitality “Omotenashi”

Without fixing the service design before providing consumers, be arranged by using the actual context in the service encounter

[In Japan] How to foster Context-dependent services related to “Omotenashi”

- **Provider Side:** Mainly educating by on-the-job training (OJT)
- **Consumer Side:** Leading by a small number of high knowledge consumers

Difficulties of expanding toward other areas having different cultures

- **Provider Side:** *Is it possible* the training by only OJT?
- **Consumer Side:** In the case of *no high knowledge consumers*?
Advanced cases of a global service expansion in Japan

Japanese Creative Services:

Case 1:
“Sushi Kanesaka” - Edomae-sushi in Singapore

Case 2:
“Kagaya” - Ryokan in Taiwan

Case 3:
“Ikenobo” - Flower arrangement all over the world

Case 4:
“Sanrio” - Global Expansion by licensing
Inspiration from Advanced Japanese Creative services

Points of service expansion of these cases:
- extracting local customers’ context
- applying local customers’ context
- remaining the core of their services

+ Requirement of local motivations:

On the other hand, there are failure cases for expanding Japanese Services
- there are local motivation for inviting Japanese services
- But they failed to extract/apply local context and remain their core value

Aiming/Hypothesis: We are required to represent/analyze more detailed mechanisms of treatment of consumer’s context

However, there is no well-developed theory/systems for representing such dynamic aspects considering implicit context in service encounters like “Omotenashi”
Part3: How to modelize Japanese Creative Services?
Context-free services: Be able to represent a static approach

Early binding - analogy of “Static Typing”
- Pre-encounter (Built-in)
  Preparation for overall elements in relation to encounter
- Service encounter (Runtime)
  Execution based on pre-designed + explicit context

Context-dependent services: Be required a dynamic approach

Late binding - analogy of “Dynamic Typing”
- Pre-encounter (Built-in)
  Preparation for overall elements in relation to encounter
- Service encounter (Runtime)
  Execution based on pre-designed + explicit & implicit context

Be able to depict by using standard business process modeling approaches based on static structure:
Cf. BPMN 2.0 Specification(2011), UML 2.0 Specification(2011) and so on

Representing a characteristics related to “context” by using dimension/space, taxonomy and so on
Cf. A survey on context-aware system(Baldauf, 2007), Contextualization of Business Processes (Rosemann, 2008) and so on

But current approaches for “context” are insufficient for representing a “late binding” mechanism within implicit service communications
Research Question and Purposes in modelling

Research Question:
How to depict/analyze/simulate a “late binding” mechanism in implicit service communications?

Purposes:
1. Development a modelling of represent/analysis/simulation for a late binding mechanism
2. Development/Implement of a supporting system for service employees/consumers based on a proposed model
Developing a service meta-modelling based on class/instance level for an early and late binding mechanism

**Explicit context utilizing: “Early binding”**

Class level:
- Class A
- Class B
- Class C
- Class n

Instance level:
- Instance A
- Instance B
- Instance C
- Instance n

**Implicit context utilizing: “Late binding”**

Class level:
- Class A
- Class B
- Class C
- Class n

Instance level:
- Instance A
- Instance B
- Instance C
- Instance n

Development for manuals or machines

**Actual communications** between providers and consumers via script, voice record, video record and so on

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OMI (Open Model Initiative) as a Hybrid Modeling Framework

- Develop a prototype of characteristics of Japanese Creative Services working with University of Vienna
  - OMI: Meta modeling framework, hybrid approach, customization, seamless integration with IT development environment

![Diagram of Conceptualization and Validation processes]

- Characteristics of Japanese Creative Services (Process, Evaluation)
- Ad-on
- Business-related Abstraction of a Development Environment
[OMI] Creative Service Knowledge Management

- Objectives
  - Integrate, Accumulate, and Evaluate of Characteristics of Creative Services on top of IT Environment
  - Human Resource Development for Creative Service Designers
    - Pursing a designer who can design serve applications based on IT environment such as OMI
    - Accumulate creative service patterns towards global service enhancement

- Approach
  - Utilize OMI (Open Model Initiative) being developed at University of Vienna
    - Apply to OMI for implementing such unstructured characteristics as dialectic interaction, tacit knowing, and dynamic evaluation
    - Develop design methodology to distinguish IT-initiated knowledge management process and human-dependent tacit knowledge process
[JCS-OMI] Designing Creative Service Knowledge Management System

Japanese Creative Services
(Shinise, Food, Cultural Activities, Cool Japan)

Service Globalization

Characteristics of
Japanese Creative Services
- Omotenashi Interaction
- Tacit Knowledge Management
- Dynamic Service Evaluation Model
...

Accumulate Templates

University of Vienna,
OMI Consortium Member
Example: Community-based Knowledge Sharing, Business Process Management, Finance, etc.
(http://www.openmodels.at)

CSD
(Creative Service Designer)
Can design service model on top of OMI

Japanese Creative Service
(An Application of OMI)

OMI (Conceptual Design Environment, Domain Specific Modeling Development)

ADOxx
(Meta-modeling IT Development Environment)

Kyoto University

Human Specific Knowledge/Know-how

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CURRENT RESULTS
Current results: a service process meta-modelling platform for “Edomae-sushi (Japanese Sushi restaurant)”

1. Class (abstract) Level - pre-designed service processes

   explicit: implicit: implicit: implicit: explicit: explicit:
   Enter Order: First Drink Order: “Tsumami” Order: “Nigiri” Check Exit

2. Instance (concrete) Level - actual service processes at a encounter

   Consumers Chefs

   Service Process Data Base for communications between consumers and

   How to Interpret?
   differences of experts’ operations against high- or low-knowledge consumers

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Data: via conversation analysis for Edome-sushi

Research Target:
- Edomae-sushi, in Tokyo
- "Okonomi Style": face-to-face order system of chefs and consumers
- There are usually no menu list
- The first step of this service is "drink order"
Overview: Service process meta-model for “Edomae-sushi restaurant”

1. Class (abstract) Level - pre-designed service processes for “Okonomi” style in “Edomae-sushi restaurant”
First drink order communication: Consumer #1
First drink order communication: Consumer #2
First drink order communication: Consumer #3
Comparison of first order for drink, in Edomae-sushi

“Chef: How about a drink?”

Chef: Sake, sho-chu, champagne, wine and so on

Chef: How about a beer?

Chef: Sake, sho-chu, champagne, wine and so on

1. Understand the consumers can not answer
2. Chef explain additional information for helping to answer the order by themselves
ANOTHER RESEARCH ISSUE
[Another Research Issue]

How to extract consumers’ contexts in service encounter?

Statistical View: e.g., Customer Satisfaction

- Expectancy/Disconfirmation paradigm by Oliver (1980)
  - Positive disconfirmation → Positive CS
  - Conformation → Positive CS
  - Negative disconfirmation → Negative CS

Descriptive View: e.g., CIT/SIT

- Critical Incident Technique (CIT) by Bitner (1990)
- Sequential Incident Technique (SIT) by Stauss (1997)

How to connect between the statistical (CS) and descriptive (sequential/process) view?
- May be able to bridge this gap by methods of ethnography, focus group interview etc...
- But this is relatively high cost for Small-and-Medium-sized Enterprises in services sectors.
Research Question and Objective for service evaluation

**Research Question:**
How do we combine the overall service criteria (statistical view) with the variety of each consumer’s criteria (descriptive view) by based on a web questionnaire approach?

**Research Objective:**
Developing an extended web questionnaire system for extracting consumers’ context for understanding differences of each consumer’s criteria
Approach: Developing an ad-hoc questionnaire model

Flow of the “ad-hoc questionnaire model”:

1. Pre-encounter stage
   - Making a questionnaire by consumers

2. Service encounter stage
   - Service Interaction

3. Post-encounter stage
   - Modify/Complete the questionnaire by consumers

This model is going to represent as a web questionnaire system for extracting consumers’ contexts in service encounter.
1 Pre-encounter stage

Main feature:
Before receiving the service, writing down estimated service communications by consumers themselves

Representations of “one process as a one line”:
For example,
1. Entering the restaurant
2. Deciding an order
3. Ordering
4. Waiting
5. Eating
6. Paying
7. Leaving

We put default items related to restaurants, but these are able to be modified freely.

* Screenshot of the web page
(Language: Japanese)
2 Service encounter stage

Occurrence of service communications between service providers and consumers
3 Post-encounter stage

Main feature:
1. Modifying the prepared questionnaire by consumers themselves
2. Completing questions related to overall and each process

Service processes linked CS questions

[6] 事前チェック項目の満足度

- 訪問した店舗名
- 訪問した時刻
- 訪問した人数
- 対象店舗の利用回数
- 対象店舗への事前期待度

【6】事前チェック項目の満足度

- お店に入ることに対する満足度
- 注文を決めるに対する満足度
- カブチーノを注文するに対する満足度
- お会計をするに対する満足度
- 注文を待つに対する満足度
- 居間に座るに対する満足度

【7】使用金額

【8】事前の期待に対する利用後の評価

【9】利用後の全体的な満足度

【10】これから先の再利用意向

* Screenshot of the web page (Language: Japanese)
Example: Data collected via the proposed system

Collected data combined overall service criteria (for statistical view) with each consumers’ criteria (for descriptive view) by this ad-hoc web questionnaire system.

Data: 45 consumers of restaurants in Japan, February 14-23, 2015
Combination a Consumer Segmentation (CS and repurchase intention) with interpretations from specific behaviors

1. Consumers Segmentation based on Customer Satisfaction and Repurchase intention

- X-axis: Customer Satisfaction
- Y-axis: Repurchase Intention

Low price: 0-999 Japanese yen
Middle price: 1000-2999 yen
High price: 3000- yen

2. Interpretation from actual processes

Satisfied cases in Group 3

<table>
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<tr>
<th>id</th>
<th>Services</th>
<th>Cost</th>
<th>CS(all)</th>
<th>Process</th>
<th>CS</th>
<th>Process</th>
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<td></td>
</tr>
<tr>
<td>user69</td>
<td>Restaurant 98</td>
<td>9000</td>
<td>1</td>
<td>Entering 0</td>
<td>Deciding 0</td>
<td>Deciding 1</td>
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Dissatisfied cases in Group 3

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<th>Process</th>
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<td>Ringing for -1</td>
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<td>user35</td>
<td>Restaurant 10</td>
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<td>Entering -3</td>
<td>Deciding -1</td>
<td>Ordering -2</td>
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</tbody>
</table>
Interpreting reasons of dissatisfied and how to handle them

Consumers Segmentation based on Customer Satisfaction and Repurchase intention

X-axis: Customer Satisfaction
Y-axis: Repurchase Intention

In the case of Low Price:

- Low CS CASES: This is NOT crucial problems
  -> service providers may try to do new/challenging approaches with low risk

In the case of High Price:

- Low CS CASES: This is CRUCIAL problems
  -> high motivation to understand consumers’ context
IMPLICATION (OVERALL):
Implication (overall):
Job training for novice employees by using service process meta-model

Visualization of meta-model of implicit context utilizing by expert for novice one
- Class level: Interpretation of the linkage of between class and instance
- Instance level: concrete difference of instance level

Class Level:

Instance Level:

Process for High-knowledge consumers

Process for Low-knowledge consumers

+ Service Evaluation

<table>
<thead>
<tr>
<th>id</th>
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<tr>
<td>user42</td>
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<td>3</td>
<td>Entering 2 Deciding a 2 Ordering 1 Waiting 2</td>
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<tr>
<td>user7</td>
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<td>1080</td>
<td>2</td>
<td>Entering 0 Deciding a 3 Ordering 3 Waiting 0</td>
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</table>
Conclusion 1 for a service meta-Modelling

Research Question:
How to depict/analyze/simulate a “late binding” mechanism in implicit service communications? (cf. Japanese Creative Services)

Results:
Visualization by Edomae-sushi meta-modeling based on two classes: explicit and implicit context utilization class

Implications:
Supporting the job training how to utilize implicit contexts in service encounter

Issues for progressing:
- High cost for depicting the service process via video/audio recode
- Insufficient for representing the “late binding” mechanism in service encounter
- Limited case for modeling

Further Works:
- Make materials automatically via audio data
- Making algorithms for “dynamic typing” in service encounter
- Adapting meta-modeling to several target in services

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Conclusion 2 for a service evaluation

Research Question: How do we combine the overall service criteria (statistical view) with the variety of each consumer’s criteria (descriptive view) by based on a web questionnaire approach?

Result: Collected data combined overall service criteria with each consumer’s by proposed ad-hoc web questionnaire system

Finding: Simultaneous combination with a statistical and descriptive view based on collected data

Implication: Supporting of interpreting/utilizing simultaneous combinations with statistical and descriptive for service companies

Limitation: How to standardize question items writing down by consumers? Insufficient of comparison with existed methods.

Question items: Define “Standard (default)” and “Modified”

Comparison: Extended existed survey methods with this method
Discussion: A big picture of new approach of service management for global enhancement in service economies

Goal: Generalized model of global enhancement of context-dependent services

Existing approach

A barrier of commoditization

Co-creation driven by *explicit* communication

Context-free Services

Modulization

Advanced High context Services (global)

Our proposed approach

Co-creation driven by *implicit* communication

High Context (dependent) Services (domestic)

Scalability

Sustainability