A Language for Value Co-Creation

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# A Language for Value Co-Creation

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Value co-creation—What’s in two words?

From Value …

Value literature draws primarily on three theoretical perspectives which have resulted in value being measured in different ways.

- Theory of production
- Theories of competitive strategy
- Theory of the consumer

… to Value Co-creation

Value co-creation literature isolates primarily two theoretical dimensions of value co-creation with three constituents each.

- Value co-production
  - Knowledge sharing
  - Control sharing
  - Actor interaction
- Value-in-use
  - Experience
  - Personalization
  - Relationship

Compared to value, the value co-creation concept makes a difference in business analysis and modelling through emphasizing value exchanged between actors embedded in networks and ecosystems – as already noted by Gordijn et al. (2000)


Theorizing value co-creation is a highly dynamic field

The surge in academic and practical interest in value co-creation highlights an equivocal understanding and theoretical ambiguity.

Service-dominant (S-D) logic pushes value co-creation to the forefront of value-related studies.

<table>
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<tr>
<th>G-D logic</th>
<th>Paradigm shift</th>
<th>S-D logic</th>
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<tr>
<td>Value-added activities</td>
<td>Process of value creation</td>
<td>Value co-creation</td>
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<tr>
<td>Value-in-exchange</td>
<td>Central view of value</td>
<td>Value-in-context</td>
</tr>
<tr>
<td>Firm</td>
<td>Participants in value creation</td>
<td>Multiple actors</td>
</tr>
<tr>
<td>Operand resources</td>
<td>Central resources</td>
<td>Operant resources</td>
</tr>
<tr>
<td>Production</td>
<td>Driver of value creation</td>
<td>Resource integration</td>
</tr>
<tr>
<td>Firms</td>
<td>Context of value creation</td>
<td>Service ecosystems</td>
</tr>
</tbody>
</table>

The shift of many organizations from a traditional goods-dominant (G-D) to a service-dominant (S-D) logic motivates intensified VCC and service research.

Power-by-the-Hour is a term coined by Bristol Siddeley in the early 1960s. It was used to describe a support service provided for Viper engines in the dh125, HS125 and BH125 business jet aircraft. For a fixed sum per flying hour, a complete engine and accessory replacement service was provided, thus allowing the operator to forecast such costs with great accuracy, and thus relieving the purchaser of the need to purchase stocks of engines and accessories. [Wikipedia]
Since products and services differ fundamentally in their nature and design …

<table>
<thead>
<tr>
<th>Materiality</th>
<th>Products: Stability &amp; Control</th>
<th>Services: Flexibility &amp; Individualization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature</td>
<td>Detached objects</td>
<td>Complex systems</td>
</tr>
<tr>
<td>Adaptability</td>
<td>Customizable (at most)</td>
<td>Obliged to adapt to constant changes</td>
</tr>
<tr>
<td>Durability</td>
<td>Storable</td>
<td>Perishable</td>
</tr>
<tr>
<td>Potential</td>
<td>Standardization</td>
<td>Individualization</td>
</tr>
<tr>
<td>Protection</td>
<td>Can be patented</td>
<td>Very difficult to patent</td>
</tr>
<tr>
<td>Quality</td>
<td>Control quality with data</td>
<td>Define quality by experience</td>
</tr>
<tr>
<td>Repeatability</td>
<td>Repeatable</td>
<td>Very difficult to repeat</td>
</tr>
</tbody>
</table>


Services—that is, economic activity where an immaterial exchange of value occurs—comprises five key characteristics: Intangibility, Inventory, Inseparability, Inconsistency, and Involvement.
... services require value co-creation with customers before and during the actual usage of services.

«The processes and activities that underlie resource integration and incorporate different actor roles in the service ecosystem» (Lusch and Nambisan 2015, p. 162).


The conceptualization of S-D logic points to relevant constructs to analyze and design value co-creation.
From value-in-exchange to value-in-use

«Contrary to traditional models of value creation, which suggest that value is created by firms (through production and distribution) and, subsequently, used up or destroyed by customers (through consumption), …

… the literature regarding value co-creation suggests that customers are always active participants in the creation of value»


The conceptualization of value creation shifts from a sequential value addition in a supply chain into a joint value creation in a complex service ecosystem.
A Language for Value Co-Creation

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3. Fundamental Requirements for Modelling Value Co-Creation
4. Proposed Research Agenda and First Results from the ValCoLa Programme
IS process analysis, design & management ca. 1980

- Primary objects
  - Business activities/functions
  - Events/decisions
  - Outcomes/performance indicators
- **Evolutionary** extension
  - Business process is a secondary object, maybe an additional diagram
Revolutionary extension:
In ARIS, process becomes the primary object

- Process model becomes the primary object
- Organization, performance, data, IT functions are linked by process model
Value co-creation IS analysis, design & management 2017

- **Primary objects**
  - Business processes
  - Business roles/value propositions
  - Interactions

- **Evolutionary** extension
  - Value creation/exchange is a secondary object, maybe an additional diagram
Revolutionary extension: In ValCoLa, value co-creation becomes primary object

- Value co-creation becomes the primary object
- Processes, actors, resources, institutional arrangements, valuations are linked by value co-creation model

An **evolutionary** trajectory toward a value orientation

**Reasoning**

- **Conservative Trajectory:**
  - Extending existing ISAD meta-models (mostly emphasizing business processes or objects) with constructs and activities underpinning value through the inclusion of value, context, use, multiple stakeholders, co-X etc. …
  - … while preserving their already existing primary focus, e.g. on processes.

- **Optimistic Trajectory:**
  Adding a modeling layer on top of processes (between organization and strategy level) to cover value propositions

**Evaluation**

- Incremental
- Careful
- Adoptable

Additive treatment of value creation would not cover the multi-faceted character and eminent importance of value in actor networks
A revolutionary trajectory toward a value orientation

Reasoning

- **Conservative Trajectory:**
  Adding a new top level/layer to ISAD in the form of a meta-model which is primarily focusing on value, context, use, multiple stakeholders, co-X etc. while moving traditional meta-models into subsequent analysis/design stages

- **Optimistic Trajectory:**
  Replacing the process concept with the value concept to build green-field ISAD methods (process-aware vs. value-aware IS)

Evaluation

Integration challenge with existing ISAD models and methods
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**Foundational Premise** | **Explanation/Implication**
--- | ---
**FP1:** Service is the fundamental basis of exchange. | The application of operant resources (knowledge and skills), is the basis for all exchange.
**FP2:** Indirect exchange masks the fundamental basis of exchange. | Because service is provided through complex combinations of goods, money, and institutions, the service basis of exchange is not always apparent.
**FP3:** Goods are a distribution mechanism for service provision. | Goods derive their value through use – the service they provide.
**FP4:** Operant resources are the fundamental source of competitive advantage. | The comparative ability to cause desired change drives competition.
**FP5:** All economies are service economies. | Service (singular) is only now becoming more apparent with increased specialization and outsourcing.
**FP6:** The customer is always a co-creator of value. | Implies value creation is interactional.
**FP7:** The enterprise cannot deliver value, but only offer value propositions. | Enterprises can offer their applied resources for value creation and interactively create value.
**FP8:** A service-centered view is inherently customer oriented and relational. | Because service is defined in terms of customer-determined benefit and co-created it is inherently customer oriented and relational.
**FP9:** All social and economic actors are resource integrators. | The context of value creation is networks of networks.
**FP10:** Value is always uniquely and phenomenologically determined by the beneficiary. | Value is idiosyncratic, experiential, contextual, and meaning laden.

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Design implications (1, FP6): Prosumption supersedes «throwing-over-the-fence»

The customer is always a co-creator of value (FP6). This implies that value creation is interactional (prosumption) rather than sequential (throwing-over-the-fence).

Design Implications (2, FP8): Services as a relational and interactional processes

A service-centered view is inherently customer oriented and relational (FP8). This implies that service is (1) defined in terms of customer-determined benefit and (2) co-created due to being inherently customer oriented and relational.

Design Implications (3, FP10): Value is a function of context and usage

Value is always uniquely and phenomenologically determined by the customer (FP10). This implies that value is idiosyncratic, experiential, contextual, and meaning laden (i.e., value-in-use).

Fundamental requirements for value co-creation modelling

- Coverage of an increased “window of transaction” (relational aspect)
- Representation of “runtime” context and use as they determine value perception – including runtime service reconfiguration
- Representation of multiple actors (with different concerns and valuation systems) as well as the resulting (maybe runtime) tensions/conflicts
- Understanding value co-creation rather as a joint venture than a multi-actor process
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Extending IS analysis and design

In Progress

Ontology → Known Phenomena → Novel Phenomena → Multiple Case Study → Integration with ISAD → Artefacts

Future Research
Outlining value co-creation’s constructs and its relations facilitates ontology-driven ISAD, a value creation reference language, and a value co-creation meta-model.

Illustrating value co-creation

Known Phenomena

Daily-life-inspired cases to illustrate S-D logic's / value co-creation's abstract concepts and terminology

- Understandable for everyone (e.g., mobility, retail)
- Beyond the jet turbine example
- Need to communicate in IS and CS communities

Novel Phenomena

Novel cases to illustrate how S-D logic / value co-creation guide the analysis and design of emerging phenomena

- Socio-technical nature
- VUCA characteristics
- Intensified ubiquity of digital technology


Example: Door-to-door Mobility

Example: Digital Business Ecosystem
## Theorizing value co-creation

<table>
<thead>
<tr>
<th>No</th>
<th>Case</th>
<th>Contextual Conditions</th>
<th>Mechanisms</th>
<th>Outcome</th>
<th>Reference</th>
</tr>
</thead>
</table>

Multiple case studies and a case survey for a micro-, meso-, and macro-level understanding of value co-creation help identifying value co-creation’s
- Processes
- Modes
- Patterns
- Typology
- Archetypes

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Methods for service modelling (1)

The front stage can be modeled and designed at different levels. When designing complex services, thinking with models helps bridging the gap between problem and solution.

Methods for service modelling (2): Multilevel Service Design

<table>
<thead>
<tr>
<th>MSD Steps</th>
<th>Retail Application</th>
<th>Bank Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1: Study the three levels of customer experience</td>
<td>Study the three levels of grocery management experience</td>
<td>Study the three levels of buying a car experience</td>
</tr>
<tr>
<td>Qualitative study</td>
<td>Observation and interviews with 31 customers</td>
<td>Observation and interviews with 26 bank customers</td>
</tr>
<tr>
<td>Quantitative study</td>
<td>Survey with 305 customers</td>
<td>Survey with 420 bank customers</td>
</tr>
<tr>
<td>Step 2: Design the service concept</td>
<td>Design the new retail service concept</td>
<td>Define the bank loan service concept</td>
</tr>
<tr>
<td>Understand the value constellation experience</td>
<td>Map the value constellation experience for buying groceries</td>
<td>Map the value constellation experience for buying a car</td>
</tr>
<tr>
<td>Design the service concept with the customer value constellation</td>
<td>Design a new grocery management service concept in the customer value constellation for buying groceries</td>
<td>Design the mortgage service concept in the customer value constellation for buying a car</td>
</tr>
<tr>
<td>Step 3: Design the service system</td>
<td>Design the retail service system for the new service</td>
<td>Redesign the bank service system for loans</td>
</tr>
<tr>
<td>Understand the service experience</td>
<td>Map the service experience for the new grocery management service</td>
<td>Map the service experience for the mortgage service</td>
</tr>
<tr>
<td>Design the service system architecture</td>
<td>Design the SSA for the new grocery management service</td>
<td>Design the SSA for the mortgage service</td>
</tr>
<tr>
<td>Design the service system navigation</td>
<td>Design the SSN for the new grocery management service</td>
<td>Design the SSN for the mortgage service</td>
</tr>
<tr>
<td>Step 4: Design the service encounter</td>
<td>Design the retail service encounters</td>
<td>Design the bank loan service encounters</td>
</tr>
<tr>
<td>Understand the service encounter experience</td>
<td>Map the experience for each service encounter of the new grocery management service</td>
<td>Map the experience for each service encounter of the loan service</td>
</tr>
<tr>
<td>Design the service encounters with the service experience blueprint</td>
<td>Design the grocery management service encounters with the SEB</td>
<td>Design the loan service encounters with the SEB</td>
</tr>
</tbody>
</table>


The MSD models help multidisciplinary teams to analyze and discuss the existing solution, revealing problems in the customer experience and potentials for service innovation.
Methods for service modelling (3): Service Blueprinting

A service blueprint categorizes process steps according to customer actions, visible employee actions, invisible employee actions, support processes, and managerial functions.

Methods for service modelling (4): 
Process-Chain-Network Diagrams

PCN normally focuses on interactions between organizations, their vendors and their customers. As one of few techniques, it allows to design multi-party service interactions.

Value Co-creation Language Artefacts

1. Ontology
2. Cases → Patterns, typology of relational and reference constructs
3. Language specification
4. Modelling method
5. Modelling tool
References