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Exploring the dynamic nature of value representations in business markets

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Abstract

Representation is a key overarching process that drives the four processes: value creation, communication, appropriation and measurement. We contribute to the literature by exploring value representations as layered and changing objects with a degree of common meaning between actors in a business network. We apply two case studies, the first in the automotive crash repair industry and the other in the cloud computing space, to ground our theoretical work on layered representation objects. The cases are organized around three periods to capture the change in representations in a dynamic network context. Our analysis shows that: (1) representations are discrete, (2) they rely on past representations, and (3) they have meaning in preparing for the next. Past representations are no longer visible, but become assumed within the next, so affecting the way resources are combined and activities pursued. For the effectiveness of value processes, representations are not only relevant with respect to the space dimension, i.e. different actors with different value representations, but also in time.

Key words: Value processes, Representation, Layers, Dynamic network.

1. **Introduction**

Recent literature has clearly stated that value does not stem anymore from the 'object' of exchange — products, services — or even only from within specific business relationships; rather value emerges in interactive processes that occur in use (Edvardsson, Tronvoll & Gruber 2011; Håkansson & Snehota 1995; Vargo & Lusch 2008). Therefore, understanding value requires considering more than the economic, social and cultural context in which interactions take place and rather to consider how actors interpret that value.

As a consequence of this shift in attention from the '*objects'* of value, to the actors' interpretations of value, new concepts are emerging, such as value symbols (Akaka, Corsaro, Kelleher, Maglio, Seo, Lusch & Vargo 2014) and value representations (Corsaro 2014). In this paper we will in particular refer to value representations as the way managers translate their own idea of value into something that can be observed by the other party, and thus there is a shared meaning (Corsaro 2014). Value representations matter as they impact the different value processes: value creation, communication, appropriation and measuring. Also, considering that collaborations occur increasingly in networks where there is a heterogeneity in the actors' views there is a need to explore how value is communicated and developed as a central element of business relationships.

The inherent ambiguities in views of value arise from different positions and time perspectives of the network actors. As actors seek to understand value processes the topics of communication must change from generic characterizations, i.e. generic themes and symbols, towards specific and shared concepts. We see this necessary movement in topic specificity quite naturally in a dynamic network perspective. One implication is that companies must have different layers of value representation as they interact to arrive at a mutual understanding of how to create value. These different representations also allow both buyer and seller to manage their own understandings of the four value processes.

Nevertheless, the dynamic aspect of value representations has not been explored until now, with empirical evidences being very scarce. Also previous research did not sufficiently explain the development of shared value representations because such research remained rooted in the individual perspective.

The aim of this paper is to understand how value representations affect companies' activities and processes and, in turn, how they are affected by them. To do that we will use two cases, one named Cloud Systems from the cloud computer industry; and the other named Aggiustami.it, from the car repair industry. The paper will show the dynamic nature of value representations, which modify as interaction unfolds, and how the new representation effects value processes. We also show that a certain level of overlapping among the representations of the different actors is needed to coordinate their behaviors effectively and create further value.

The paper is composed as follows: Section 2 contains the literature review on the value concept and on the five value processes which represent the interpretative framework of the study; Section 3 focus on the dynamic nature of value representations; Section 4 describes the methodology of research and Section 5 the two cases studies; Discussion and conclusion end the paper in Section 5.

2. A different conceptualization of Value

Studies from neoclassical economics have inspired the initial conceptualization of value. More specifically, classical and neoclassical economics has seen value as embedded in products and services. Thus, value is found in the concept of exchange, where the utility that parties are able to draw from the object of the transaction translates into the price dimension. According to the economic view, and due to the absence of uncertainty, decisions become impersonal and are undertaken without conviction or the evaluation capacity of individuals (E., Corsaro, Roberta & Mele 2013).

At a certain point, the influence of socio-organizational studies has led research in marketing to go beyond the traditional centrality of the concept of exchange given by economists in favor of the role of relationships, primarily in their dyadic form and then within complex networks. From that moment the economic dimension of exchange started to be accompanied by the social dimension of relationships. In marketing, this change was strongly driven by IMP studies on inter-organizational relationships (Håkansson & Snehota 1989) and by the diffusion of relationship marketing, with a significant impact on value conceptualization (Grönroos 1997: p.411). Scholars began to recognize that the attributes relevant to the creation of value were no longer those related to products and services but also, and especially, those pertaining to the relational processes.

The new conceptualization of value that followed has taken place mostly through the search for the best combination of benefits and sacrifices that compose the value of relationships (Blocker, Flint, Myers & Slater 2011; Ulaga & Eggert 2006), which can be understood both in monetary and non-monetary terms (Biggemann & Buttle 2012). Nevertheless, this approach implied assuming that relationships are of a circumscribed content, observable and measurable; in other words, the notion of relationship value was still strongly influenced by neoclassical economic studies. Implicitly, relationships were again treated as objects of exchange, like products and services.

Marketing scholars have started to criticize this prevailing notion of value, especially calling attention to the influence of psychological and social aspects that turn away from the economic model of objective convenience (Grönroos 2011). Many researchers have gone beyond the notion of 'homo-economicus', stressing the ambiguity that characterizes managerial choices and the notion of limited rationality (March & Simon 1993). This is evident also in managerial practice, where actors often have only partial information and a narrow time to undertake decisions. These considerations, jointly, have led the literature on value to become more and more interdisciplinary and not only with respect to business-to-consumer markets, but also with reference to B2B. The value in use of

complex industrial solutions, for instance, can be both emotional and social, and this marks a deviation from traditional B2B literature, whose focus has been mainly on utility maximization (Blocker et al. 2011). Payne, Storbacka and Frow (2008) further developed this position and affirmed that value is composed of emotional, cognitive, and behavioral elements, all interrelated.

A more multidisciplinary approach is thus needed to understand relationship value. In particular the relationship value conceptualization and measurement seem to fade, given the subjective view of managers and the specific contextual aspects - the expression of the space and time in which interactions take place. As it will be better described in the next section, this also implies to take into consideration realizing value as a set of interconnected processes.

2.1 The interpretative framework of the study

Interaction in the b2b context generates ever-changing and complex interdependencies, which means that value is continually changing and open to managerial influence. Thus Corsaro (2014) identified four interconnected key value processes that matter for managing relationship value. They are value creation, value communication, value appropriation and value measurement. That author also introduced the concept of value representation, which is seen more as a way to manage the other value processes.

Value creation. Value creation refers to how actors combine their resources in an interactive context. Supplier and customer are both actively involved in the value creation process (i.e., products, services, and/or knowledge components). Actors in networks co-create value through interactions in a common value sphere (Grönroos & Voima 2013). The company offering should be seen as an input that becomes part of the process of value creation for the customer, and not as its output. Similarly, goods and services are not static entities but flexible ones, and the customer is an endogenous variable to the company and part of the value network. Finally, customers experience and perceive this

value through both the content of the value proposition and the processes by which it is realized (Aarikka-Stenroos & Jaakkola 2012).

Value communication. Communicating value is a tricky question in the context of value *co-creation.* It is no longer a one-directional concept and should involve all parties in a constant dialogue and common sense-making activity to support value co-creation (Ballantyne & Varey 2006). While customer value propositions have been traditionally defined as statements on the benefits of a particular product or service (Rintamäki, Kuusela & Mitronen 2007), recent research argued that value propositions are co-created through interactive communication processes (Ballantyne, Frow, Varey & Payne 2011). According to this perspective, value propositions should emphasize the potential value that customers can realize from their relationships with suppliers, rather than the benefits customers might derive from particular products or services.

Value measurement. Actually, no measurement of relationship value has obtained universal acceptance (Sánchez-Fernández, Iniesta-Bonillo & Holbrook 2009) and only a few firms have the necessary knowledge and skills to measure it (Anderson, Narus & Narayandas 2009). Measuring value is difficult for various reasons, including the several levels of analysis involved, the different perspectives of observation, and the troubles in distinguishing between monetary and non-monetary value. If some components of value are fairly easy to identify, measure and quantify, others are less obvious and indirect even if equally important (Gadde & Snehota 2000). Most of the value that the customer draws from the relationship with the supplier is intangible and, unfortunately, less knowledge exists regarding the methods of assessing the value of intangible resources than of tangible ones.

Value appropriation. Value appropriation refers to the portion of value that each party can capture from the total value created (Möller 2006). Value appropriation processes are closely related to those of value creation (Ellegaard, Medlin & Geersbro 2014). The context of interaction generates ever-changing and complex interdependencies, which are

also reflected in the appropriation of the value created. Asymmetries in the value appropriated by the different actors can generate perceptions of inequity, tensions, misunderstandings and frustrations. Customers tend to experience value ambiguity and are often uncertain of the potential value they will realize from prospective offerings (Anderson & Wynstra 2010). Without a clear understanding of the potential value of a supplier's offering, customers tend to make their purchasing decisions based on a multitude of factors.

Value representation. One of the biggest challenges management faces is to deepen the relationship with customer to help them in *seeing a* value proposition that is offered in its entirely (ISBM 2011). Symbols and representations can support this process; thus there is an increasing interest in their role, even in business to business markets.

Symbols are a central factor in value co-creation because they support communication among groups of actors as well as the integration of resources and evaluation of value for individual actors (Akaka et al. 2014). Specifically, value representations have been defined as "how an actor translates its own idea of value in something that can be observed by the other actors, and its meaning shared among them" (Corsaro 2014: p. 992). Thus, a value representation process applies symbols, but does so in a changing way to make observable, as layered representations, the potential for realizable value by the buyer and the seller.

Value co-creation derives from the integration of resources (i.e., the enactment of integrative practices) among multiple actors, which in turn requires communication and coordination (Maglio & Spohrer 2013). In this way, value co-creation is necessarily a kind of joint activity, which depends on establishment of mutual understanding to achieve common goals among distinct entities. Value co-creation results from the enactment of practices among multiple actors and so there are many perspectives of value, also called value heterogeneity. Value representations can be used in more strategic terms to generate a common value sphere (Grönroos & Voima 2013).

Representing value is thus important for value management by affecting all the other value processes, which are all inter-connected: value creation, value communication, value appropriation and value measuring.

Value creation implies an interactive communication during which the benefits expected from the relationship are made explicit, depending on the capacity of the company to continuously adapt to dynamic markets; this adaptation is realized through communication. At the same time, communication influences value creation, for instance the supplier communicates in advance its value proposition.

The value created needs to be measured to determine the portion actors should appropriate and evaluate the potentialities for future value creation. Thanks to an effective communication, partners could also eventually accept temporary inequities in the value appropriated.

3. Dynamic aspect of value representation

Given the uncertainty and dynamic nature of markets, it is even more critical to contemplate the competitive context not in terms of its structural and objective characteristics, but rather considering how managers interpret it and its evolution over time. Understandings in networks are continuously negotiated (Finch, Zhang & Geiger 2013), created and shaped (Harrison & Kjellberg 2010; Kjellberg, Storbacka, Akaka, Chandler, Finch, Lindeman & Nenonen 2012; Mason, Kjellberg & Hagberg 2015) by a complex network of interactions among different stakeholders. Actors' worldviews condition their networking choices and network outcomes, and consequently the way networks evolve over time, subsequently leading to changes in actors' cognitive frameworks. (e.g. Abrahamsen & Håkansson 2015; Abrahamsen, Henneberg & Naudé 2012; Corsaro & Snehota 2012; Öberg, Henneberg & Mouzas 2007). However, the concept of dynamic and substantive interactive processes between supplier and buyer in

and within time notes a more nuanced issue because as interaction proceeds between the parties their understandings of possibilities change.

How understandings change seems to rely on both a shared view as well as specific actors own understanding of relationship value, and the on-going layering of these understandings on each other. For example, Mouzas and Henneberg (2015) note how inter-cognitive representations inscribe shared understandings and thus provide an objectified basis and guidance for further interactions. Also Araujo and Kjellberg (2015) emphasize the link between (coordinated) action and the resulting (shared) cognitive structures that guide future coordinated action. Similarly, Medlin and Törnroos (2014) present the idea of the "in-between", as a shared dynamic mental interaction space between actors where sensemaking cues are jointly detected and shared. All of these authors argue that coordination depends, to an important extent, on the creation of common contexts of action.

However, individual actor understandings and representations also play a role. Medlin and Törnroos (2014) note how sensemaking and shared understandings are shaped by individual self-interests and the specific interests of firms. Likewise Pernu, Mainela and Puhakka (2015) note how the shared-view creation process is strongly dependent on individual interplays with customer units over time. An organization's relationship management is thus dependent upon relationship-specific events and corresponding individual cognitions and actions.

Individuals construct collective frameworks as they interact (Porac, Ventresca & Mishina 2001) and the emerging collective frameworks, in turn, influence the frames applied by the individual actors (Kaplan & Tripsas 2008). Following these thoughts one arrives at the role of the object of exchange in forming contested views of a market network (Finch & Geiger 2011). Thus, the object undergoes transformation, even when stable, as an exchange proceeds; simply because understandings of value change as the network adjusts (Medlin & Saren 2012). The object, which is often at the center of an ongoing

interaction process, is not the site of value representation, nor possibly the main element of a value calculation. Value seems somehow caught up in how representations are changed and understood within a network of actors.

Thus, we pursue the role of individuals and their representations within specific interactions. Individual actors' perceptions are important if we assume that bonds arise in business relationships as two related actors mutually acquire meaning in their reciprocal acts and interpretations (Håkansson & Snehota 1995: 197). Interaction shapes the development of business relationships, and thus is important for the evolution of the structure of the business network, and also for value considerations.

4. Methodology of research

To acquire in-depth knowledge on the empirical phenomenon and its dynamics a case study approach was chosen (Eisenhardt 1989). The choice of research strategy was based on the applicability of case studies for understanding a specific setting (Dubois & Gadde 2002; Eisenhardt 1989). Moreover, investigating multiple cases generally provides a more robust base for developing theory that is better grounded, more accurate and more generalizable (Eisenhardt & Graebner 2007).

To explore the link between value representations and value processes two in depth case studies have been performed to ground our theoretical work on layered representation objects. The first is in the cloud computing space and the other is Aggiustami.it, a web platform dedicated to the automotive crash repair industry. The cases have been selected because changes in value representation are an important part of how each company has evolved within its context. Furthermore, the selected two cases could provide insights into the particular behaviours and processes being studied (Adams & Schvaneveldt 1985)

The case studies presented in this paper were based on studies of archival records, web sites and interviews with key informants both in the company and with its business partners. We in any case adopted the perspective of the focal firm. For the first case one interview was conducted, whereas for the second case a total of 5 interviews were conducted. All interviews were between approximately forty minutes to two hours in length. The interviews were conducted with the assistance of an interview guide, and were recorded and transcribed.

A dynamic perspective of the business network was recognized in the research method (cf Medlin & Törnroos 2014). Two time perspectives were developed in case re-constructions by the researchers. The interviews sought to obtain information about how value representations changed over time and, in turn, how these changing perspectives affected the different value processes. To highlight the first time perspective cases were chosen where there was a changing business model: thus a before and after view of representations was observable. The second perspective was the changing representation within a single buyer-seller interaction.

Data collection and data analysis was carried out by a research team in order to achieve complementary insights and enhanced confidence in the findings (Eisenhardt 1989). The data analysis was based on detailed case study write-ups for each company, followed by a thematic analysis.

5. The case studies

First case - Data Center Case

Data centers are composed of computers, communications systems and data storage systems. These centers allow companies to store data and data processing capacity off-site with varying degrees of risk reduction and security. Companies need their internet connected information systems to run continuously. Failure of a data center means lost

business. If backup systems are not provided, along with a capacity to switch operations at a time of failure, a company can lose millions of dollars very quickly. For this reason data centers are built with redundant power and communication systems and backup storage, either on or off site. The value of data centers also means security is important, with increasing use of finger print recognition and mantraps amongst other measures.

In the past data centers were primarily owned and operated by the firm, however increasingly this function is able to be out-sourced. In 2001, the National Institute of Standards and Technology (NIST) (2011: 2) defined the previous industry understanding of cloud computing as, “a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.” This definition is “intended to serve as a means for broad comparisons of cloud services and deployment strategies, and to provide a baseline for discussion from what is cloud computing to how to best use cloud computing.” (National Institute of Standards and Technology 2011: 1) A firm’s use of cloud computing can be scaled to a degree of resource rental or ownership of data centers, but in all cases there is an increased transparency “to optimize resource use by leveraging a metering capability at some level of abstraction appropriate to the type of service (e.g., storage, processing, bandwidth, and active user accounts).” (National Institute of Standards and Technology 2011: 2) Cloud computing is a pay by use model, rather than the traditional firm capital expenditure decision.

The supplier

Cloud Systems (CS) is a new generation data center based at a large regional city in Australia. CS is composed of two arms, the first a Data Bank (DB) firm provides rental space for data in a secure location, and the second is a Cloud Consultancy and Intermediary (CCI) firm. The second arm acts on behalf of firms seeking to place their data and software processes on the Cloud. The business model for DB is based on a number of advantages. First, being located in a regional city means DB gains cost

advantages, as land and resources are in less demand. Second, the central location relative to multiple large population centers provides faster internet searches on average for customers of DB's clients, as well as for the dispersed employees of the clients. Third, being a new data center has allowed DB to implement a more flexible modular design and the latest power technologies for cooling.

The CCI arm handles large customer firms that want globalized or national data center spread. CCI negotiates with other data center firms to meet the customer's requirements. In effect CCI operates as a type of intermediary to secure the best value for a client needing very broad data distribution within the cloud. In some cases DB is also a supplier to these client firms. The combination of two arms works well for CS as smaller clients who require a centrally located data center are supplied by DB, whereas larger clients are supplied first by CCI and then possibly by DB if that is a suitable solution. Further, the DB operation notes for clients that CS is not only an on-seller of cloud services, but is deeply in the cloud system as a provider of the latest hardware functionality.

Final Client

Clients in the data center market are generally large and middle size firms that require secure locations for data storage and dissemination. A data center service is a mission critical function for most large firms. The level of risk is a key factor in making a contract decision, and the clients tend not to be price sensitive. *"They want to know that they're price competitive, but they're not looking for the cheapest price. No Chief Information Officer (CIO) ever got fired by buying a more expensive data center. They get fired when it breaks."* (DC CEO March 2015)

Intermediary Firm

To minimize risk the clients will often employ a third party, an Information Technology (IT) firm or one of the major consulting firms, to scan the world and complete due diligence on contract specifications. Contracts will cover storage capacity, power usage, temperature variation and fire prevention systems. The clients generally will err on the

side of least risk according to advice received from their third party. The paid advice means that the client decision maker is not at fault in the case of any disruption.

International Association

The protocol for maintaining data security is contained in the Telecommunications Industry Association's TIA-942 Telecommunications Infrastructure Standard for Data Centers. TIA-942 was published in 2005, and amended in 2008 and 2010. Four tiers of data centers are proposed, with Tier 1 being a basic server room and Tier 4 designed for mission critical systems, including full subsystem redundancy. The Uptime Institute (2015) also defines a four tier classification, according to the possible data availability from a specific location and hardware (see table 1).

Table 1: Four tiers of data center

Tier	Specifications
1	A single communication path serving the IT equipment Non-redundant capacity components Basic site infrastructure with expected availability of 99.671%
2	Meets or exceeds all Tier 1 requirements Redundant site infrastructure with expected availability of 99.741%
3	Meets or exceeds all Tier 2 requirements Multiple independent communication paths serving the IT equipment Dual-powered IT equipment and a second concurrent site infrastructure Redundant site infrastructure with expected availability of 99.982%
4	Meets or exceeds all Tier 3 requirements Cooling equipment is independently dual-powered Fault-tolerant site infrastructure with electrical power storage and distribution facilities Redundant site infrastructure with expected availability of 99.995%

The four tiers of hardware capability implied in table one mean that data center design is usually modular, requires specialized air conditioning and efficient energy and fire

control systems. The result is that Tier one and four installations have a rated downtime of no more than about 29 hours in a year versus 27 minutes respectively.

Interactions

The interactions between DC and the client and the client and a third party make an interesting set of processes for selling a data service contract. Depending on the geographic spread of data required by the client they will interact with either CCI or DB. However, in any of these scenarios the client only interacts with the staff of DC, and then contracts are enacted either through the CCI or DB entity.

The usual pattern of interaction is that a client will approach DC and according to requirements a solution will be prepared and a representation will be presented to the client. The solution will comprise data banks, their locations, and the safety and back-up features required by the client (see table 1). *"… when we came to the idea of the module, one of the things that you then look at is the idea of the module is really about tearing down all of the presuppositions of the data center and this customer."* (CEO of DC, March 2015)

The next step involves a due diligence check by an intermediary firm, who will provide specific advice usually on a least risk basis (e.g. include gaseous fire suppression). At this point there are discussions and representations made by the supplier which tailor a solution based on risk assessment, needs and the understanding imparted by the supplier of the new technologies they provide. For example, the risk of fire in new data modules is low and in the case of fire, water is a safe extinguisher with a lower cost. Negotiation then leads to a final representation, which is detailed in a service contract. This contracted representation and the discussions, negotiations and changing representation have different effects on the value processes.

".. so what we ended up with was then a negotiation around service levels, which lead to a very narrow range of temperature. So to get into the engineering we've gone with a

range of temperature that's 18 to 27°C. Now that's easy, but it's not as efficient as 10-35 because it means we're running the coolers more often. There's no reason why the technology that the customer deploys needs 18 -27 apart from – oh we're just not sure, we're just a bit cautious." (CEO of DC, March 2015)

Value communication

The conventional model of data storage was an in-house system in different locations, so that a disaster at one site did not compromise the firm's operations. The main issue faced by DC, and this is also their main opportunity, is to convince clients to move to new data storage technologies, out-sourced and under the guardianship of possibly many parties. In one sense there is a loss of direct control and in another the distributed nature of storage in the new model is a way to spread the risks associated with data, the main lifeblood of modern organizations.

Therefore DC needs to communicate the main messages of the Uptime Institute and that distributed data storage has many benefits: risk reduction, faster technical data transfer, efficiency benefits through scale, elasticity of capacity (ability to grow and shrink) and choice of high capacity as well as diverse telecommunications channels. *"The market is reasonably well defined globally. It has existed for some time and the idea of selling that product on a per kilowatt basis is something that is generally well understood"* (CEO of DC, March 2015).

Value creation

The double business strategy of DC is a useful tool, as clients learn that DC is not simply an on-seller of other firm's data storage facilities. Owning and operating DB, which is a very new installation, allows clients to be introduced to the latest technologies. *"We take people to the data center we've been running for our first full month in February, we can say 'here it is' and our sort of tag line now that we use with people is 'this is not your Grandad's data center.' This is now something that's new, we're different and so forth.*

And we can then point out to them that this could be even more different if you then loosened up your boundaries and conditions and so forth." (CEO of DC, March 2015)

The introduction of cloud data management and the development of the representations for the new data model also increased value creation opportunities. *"DB are able to offer a lot more efficiency in terms of power, as you know, because we're doing interesting things in terms of that. And we're also able to offer modular systems and space that's a bit more flexible."* (CEO of DC, March 2015)

But there are other opportunities for client centered value creation. CCI offers tailored technical advice for specific client situations. *"What that means in terms of the product, we were starting from the new world and we expected to do this, moving back towards the old world to some degree. We didn't go all the way back, we could have gone further back, but from our point of view that would have been bad because having our customers look like everybody else's customers gives us no differentiation."* (CEO of DC, March 2015)

CS also creates value by working with other suppliers. *"One of the things that's interesting there is we need to be confident of the relationships that the customers already have. So they'll generally have an IT services company that'll be doing some of these kinds of things. There's no point in us jumping all over them, we may as well partner. And so then that's another set of relationships."* (CEO of DC, March 2015)

Value measuring

The global model for data centers provides a basis for comparison of value measurement. The price per kilowatt is a fairly standard measure of customer value. *".. in order to firstly validate the price and competitiveness, they engaged Third Party to do a market scan for them. And back comes the advice, we think you should have gaseous fire suppression. Now that's not something that tends to make sense in the new model of data centers. Fire in a data centers is put out by water and the risk of fire in data centers is*

low. … But because of Third Party saying 'oh you might want to look at this', they're now preparing to spend probably $100,000 on their module putting in gaseous fire suppression that will never be used." (CEO of DC, March 2015)

On top of this the customer can judge other benefits received according to the specific model of data storage eventually implemented. For example, having data duplicated at two different sites, with the ability to switch seamlessly between sites, gives a degree of assurance to the firm's CIO.

The Second Case - Aggiustami.it

Aggiustami.it, an on line platform where users are able to find the best car body shops in a given area and collect the most favourable estimates for repairing their vehicles. The user can request and compare quotes from the comfort of their home, so saving the time of visiting each repair shop. In addition, the potential users can also see the reviews that other customers have published on the website.

The Italian market context in which Aggiustami.it operates can be described as follows: 3,900 dealerships with internal workshop, 19,500 authorized workshops, 30,000 independent Machine Shops, 4,000 authorized bodies and 14,000 independent bodies (UNRAE 2014). The fleet is composed by 37 million vehicles (excluding light commercial vehicles and heavy) of which 29% is from 0 to 5 years and 30% are 5 to 10 years old. Each year there are about 2 million road accidents, involving at least 4,000,000 vehicles, of which approximately half are responsible for the accident. The guilty party does not receive full compensation for performing repairs, and pays on average expenses of 750 Euro + VAT. The mean time to repair by a bodyshop is 7 days.

The supplier

In Italy, Aggiustami.it is the first website that brings together the need of repair shops to gain new customers and the need of private motorists to find a reliable repairer in their

area and at a competitive price. Aggiustami.it offers customers the opportunity to compare various quotes to repair their cars, by using their computer or mobile devices (iOS-Android), thus saving time and money. The mechanism works in the following way. The motorist goes on the website of Aggiustami.it and selects the service they need, choosing between Body, Cutting, Mechanics-Electronics, Revision, and Gas systems and conditioners. The customer provides their data and the details for the car, and provides four photos of the damaged parts. These representations are the base for the value the repairers can get on the transaction.

Given that the photos can be interpreted in different ways by the different actors, the back-office of Aggiustami.it acts as intermediary between customers and repairers: it controls, verifies, and possibly corrects, the record before making it available to repairers. Next the repairers receive an SMS and an e-mail to alert them that they can prepare a quote for a new customer. Each time a repairer wins a quote they receive a "token" (which is intended as a cost per contact), the amount of which varies depending on the service requested by the driver.

When repairers register with Aggiustami.it they make an initial payment of 79 Euro + VAT, which covers the cost to verify the company is registered. This payment is to be considered as a mountain-credit from which are then scaled the "tokens" consumed. After the repair, the driver and the technician issue a text feedback and a score from 0 to 3.

Intermediate client: Repairer shops

Aggiustami.it needed to directly approach the owners and workers of repair shops because many did not use the Internet for business. Many owners have a low level of education; they are not open to dialogue and thus could not understand how the proposed service was to work. The salespeople for Aggiustami.it developed a simple, even trivial, direct language to communicate to body shop owners how the ‘value pie’ will be shared between the body-shops, the customers and the on line intermediary.

Final client: Driver

At the base of Aggiustami.it's value proposition, there was the need for customers to fix their cars at more competitive prices, and increase their contractual power over body shops who tended to charge them an extra price for value they had not created. Typically car repairs are expensive, but also obtaining and comparing quotes can waste a lot of time. This has fueled the tendency for customers to always turn to a single body shop, usually in the area where they live, even if this is not the most worthy choice. However, the need to cut spending because of the economic crisis has prompted consumers to seek savings. People are also time poor and yet they would like to compare multiple quotes, both to save money and also to compare the terms of execution.

National body shops association

The national body shop association is a very conservative institution not very open toward innovation. This body was not positive towards the new service and was in fact obstructive. The association had previously blocked and cause to fail an initiative similar to Aggiustami.it.

Interaction

Prior to Aggiustami.it starting business, each actor attempted to gain different value according to their own context: the body-shops owners sought to gain an extra-price for repairs, the customers preferred a repairer located nearby to their home as alternative solutions looked complicated, and the trade association wanted to leave things unchanged. The resulting market that emerged from these representations was characterized by inefficiency, opportunism and inequities.

The entrance to the market of Aggiustami.it has however led the different actors to change their value representations and start to share a common representation, characterized by a higher level of fairness, transparency and safety of payments. Around this new representation each actor has coordinated their behaviors, allowing Aggiustami.it to become a successful initiative. This new representation also has

differing effects on the value processes.

Value appropriation

The advantage for the body shop owner, who is actually the customer Aggiustami.it, is to increase its customer base in the face of a low economic investment, acquiring particularly customers who they would not have had otherwise. The fact that the customer has now the possibility to easily compare the prices of different offerings enables for a better market competition and thus eliminates the extra-price body shops owners tended to appropriate just because they were the only choice. Value is now better distributed, avoiding generating inequities and rewarding those body shops that offer the better price/service relation.

Value communication

A big problem that Aggiustami.it had to meet during the initial creation of its network was to overcome barriers posed by the repairers, who were highly suspicious and even reluctant to change and innovate. In this regard, Aggiustami.it has tried to leverage on new customers who have to personally pay for the repair, without the intervention of the insurance company. For these customers the repairer does not have to work with the constraints imposed on spare parts and labor costs by the insurance company.

In parallel, Aggiustami.it has also strengthened their relations with the trade associations, who gather most of the auto mechanics. Aggiustami.it also started to communicate frequently with the national trade association, and this facilitated the supplier in appropriating a bigger slice of the value pie by increasing customer satisfaction and improving the customer intentions to collaborate in the future (Wagner, Eggert & Lindemann 2010). Aggiustami.it also developed advertising campaigns, which used very simple messages so as to be easily understood by everyone.

With respect to the communication process between the body shops and the drivers, in the primary phases of interactions it was not anymore direct, but intermediated by

Aggiustami.it, and this guaranteed fewer mistakes in the communication. Aggiustami.it's website and control process aligned the language to one meaning, which improved coordination between the actors. In the prior model communication was mainly verbal, as the driver went to the repairer to show the damage. The pictures and details brought together the different actors considerations.

In this case communication clearly became a means for creating a shared understanding among actors (Mouzas, Henneberg & Naudé 2008): "Effective communication reduces misunderstanding due to difference between exchange parties' world views and provides an opportunity for both parties to increase the clarity of communication exchanges" (Hung & Lin 2013: 3). The improved communications and increased acceptance of the service: thousands of body shops are now part of the Aggiustami.it's network.

Value creation

The introduction of this new market actor and the development of the new representations also increased value creation opportunities, such as the expansion of the service portfolio to include service of motor vehicles as well. Other new intermediation activities consisted of spare parts supply, special equipment for self-repairers and the potential to work with insurance broker services.

Value measuring

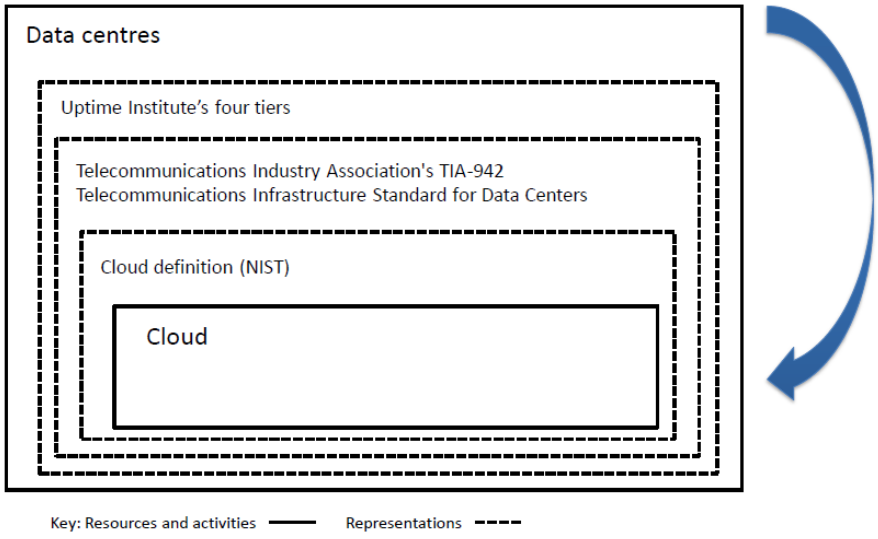
As we said, the new value representation was characterized by a higher level of transparency about the value created and how the different actors appropriate such value. So, while there was considerable ambiguity about these two elements, now each actor is more aware of the value created and appropriated by the others. The value created and appropriated is now measured and communicated to the different parties so that they can agree in advance to the level of service, so reducing dissatisfaction and perceived inequities.

6. Discussion

This paper explores the dynamic nature of value representations and their role in affecting and being affected by value processes. Our study shows that value representations are framed in layers according to the past-present-future and also within a time dimension for a specific buyer-seller interaction. First, we present the framing of representation layers for each case.

In the CS case the translation of the business model from a capital expenditure to a pay per use model exemplifies a market re-framing. This re-framing is supported by representations, each an object that frames the next (see figure 1). In figure 1, each representation is discrete, yet relies on a conceptually lesser representation, and has meaning in preparing for the more specific next.

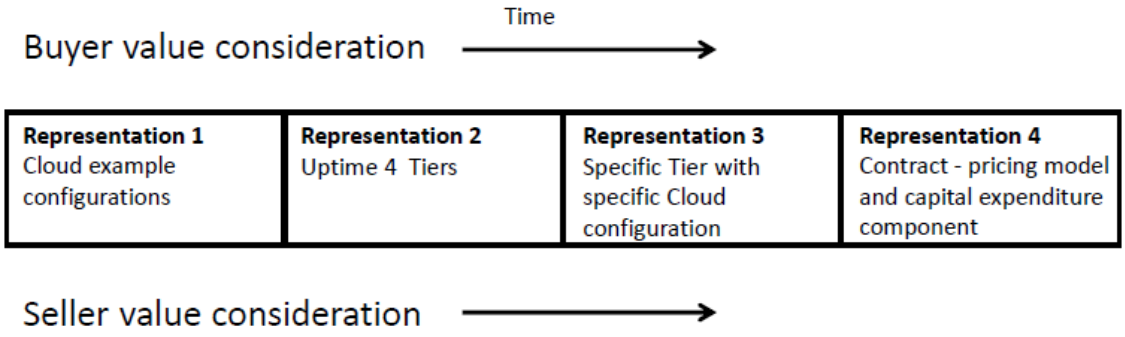
Figure 1: Representations juxtaposed with resources and activities



However, as a specific buyer-seller interaction proceeds representation begins to play a more crucial role for the parties to realize value. Within the framework of the old-new symbols and representation begins a more specific interplay focused on realizing value for both buyer and seller. Now, symbols and past resource and activity deployments are played together with representations of possible futures to work towards specific

outcomes (see figure 2). In figure 2, each representation is discrete, yet relies on a past representation, and has meaning in preparing for the next. Thus, we use the term layered, as the past representations are no longer visible, but become assumed within the next. A useful analogy is with the time layering apparent as observations in an anthropological site.

Figure 2: Example of layered representations



With respect to the time dimension, we have thus stressed the dynamic and recursive nature of value representations. For instance, in the Cloud computing case value representations seem to depend on the sequence of the ideas moving between DC and the Client, and the Client and Third Party. The knowledge base of the Client is tested and extended in the phases because of deploying new technologies. The supplier adjusts the representation to the buyer, but is also trying to offer slightly different representations (i.e. newer technology with better outcomes, e.g. no gas suppression of fire, or place some data in the cloud and so not at the site of the data module, etc.). The newer technology offerings are important because the buyer is stuck in the past of the technology; the supplier is further into the future - because it is their main business. Representations must bridge this gap, and be able to move the buyer forward to new technology – i.e. towards the solutions offered by Cloud.

The representation is of a set of attributes connected to the New Data Center technologies that are being deployed at this site. There is a deeper layering of technologies being added to the representation as the sequence of ideas is extended in the negotiation. The

new and old technologies are contrasted with regard to different risks, so the representation depends on and is relative to the known and tried solution.

The supplier adjusts the representation to the buyer, but is also trying to offer slightly different representations (i.e. newer technology with better outcomes, e.g. no gas suppression of fire, or place some data in the cloud and so not at the site of the data module, etc.). The newer technology offerings are important because the buyer is stuck in the past of the technology; whereas because it is their main business the supplier is further into the future. Representations must bridge this gap, and be able to move the buyer forward to new technology – i.e. towards the solutions offered by Cloud.

In the Aggiustami.it case the old is represented as a market where repairers have an higher contractual power toward final customers, these last ones seeing them as unreliable and opportunistic in appropriating value. This representation is stressed also due to the difficulties in comparing offerings by different repairers and the excessive time this process implies (the car owner has to bring the car to the different repairers to show the damage for an evaluation). But when Aggiustami.it entered the market, the supplier and the customer started interacting around the picture of the damage; Aggiustami.it acted as an intermediary by auditing the quality of the representation. Aggiustami.it required clear photos and even asked for better and different photos and added verbal and written explanations to the photos. This has progressively allowed the customer and the supplier to converge toward a common representation, which made possible for users to easily make comparisons and also to perceive the whole system as a fair one. Over time the recurring of these activities generated a more shared and stable representation of car repairers as reliable partners, and of Aggiustami.it as an institutionalized player in the market. As figure 3 shows, compared to the CS case, in the Aggiustami.it one there are also nested representations over time: the smaller representation contributes to generate a higher level representations in which the previous is present, even if ‘invisible’.

Figure 3: Representations juxtaposed with resources and activities

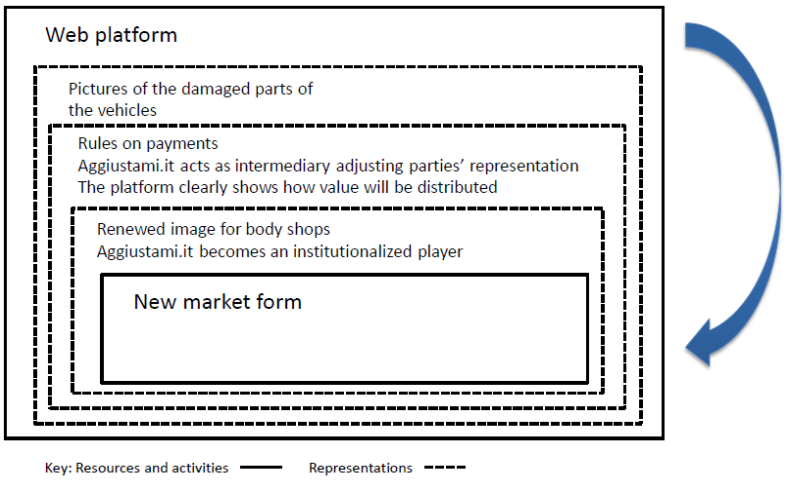
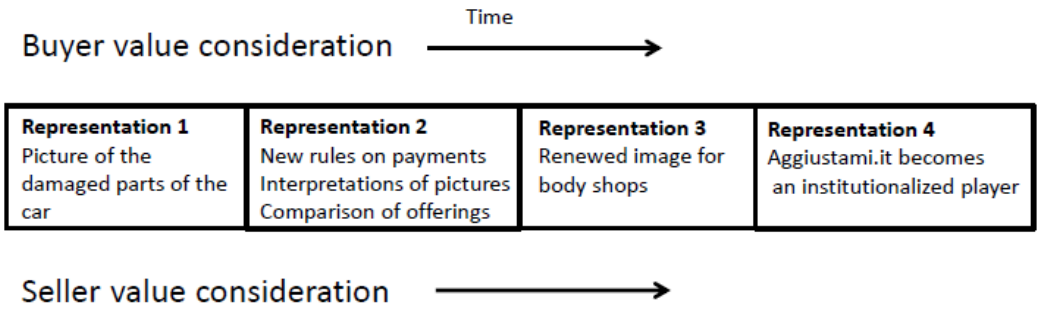


Figure 4: Examples of layered representations



Even if preliminary, our study is also starting to explore under which conditions value representations affect value process and the other way round. It appears that the relationship between them is bi-directional but not 'perfect'. Indeed, a change in one value process does not necessarily determine a change in value representations. For instance, in the Aggiustami.it case the availability of the new technological platform has not been enough to consolidate a new value representation by repairers, still very reluctant toward the new service. Rather, the success to-date has followed from the action of the company's salesmen along with the influence and passive support of the national association.

Conversely, we noticed that a change in value representations by one actor generates effects on the other value processes; at least an interaction process occurs, even if such effect could be not immediate. In the case of Aggiustami.it the new market representations by bodyshops changed the way they interacted with the public system, making them more transparent about transactions and tax payments. The new representation by customers pushed the market to become more competitive and allowed for new partnerships between market players. Finally until the representation by the national association has not changed, the market did not transform since it represented an important barrier for new entrants.

Conclusion and implications for theory and practice

This paper explored the dynamic nature of value representations in achieving success with four main value processes: creation, communication, appropriation and measuring. We contribute to the literature by exploring value representations as layered and changing objects with a degree of common meaning between actors in a business network. Representations are nested over time, but we highlighted they also can move from a lower to a higher level of abstraction. Compared to previous literature on representations and symbols, the two case studies analyzed show that heterogeneity in value representations does not only matter in a space dimensions, i.e. actors have different value representations, rather these representations are layered in time affecting how resources are combined and activities pursued.

Further research should be aimed at better clarify which conceptual categories value representations include, the differences with the concept of symbols, and also to explain the way representations change interaction with activities and resources over time.

In terms of managerial implications, we can assume that even if representations are emergent as interaction between actors occur, this does not mean actors cannot act on

them: value representations should be considered strategically. Actors should thus try to make explicit these representations and manage, influence them in order to reach individual and collective goals.

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