CHAPTER 12

Systems Intelligence and New Value Creation

Anssi Tuulenmäki

This article draws connections between Systems Intelligence and New Value Creation suggesting that the two have a lot in common. By using variety of examples I will show how these perspectives can benefit from each other. Much of human interactions are strongly affected by commercial systems, which gives rise to new value creation in the sense discussed in this article. In order to create more enriching and meaningful lives, I suggest we need both systems intelligence and new value creation brilliance.

Introduction

In this article, my intention is to draw connections between two concepts that are not typically discussed together: new value creation (NVC) and systems intelligence (SI). I will show that NVC would clearly benefit from ideas developed in the SI movement. Also, certain concepts in NVC would help in developing SI thinking further. I will first take a short look at the differences and similarities of the two concepts. Then I will present a few examples how new customer value could be created and how these mechanisms of new value creation could help in systems intelligence.

Key Concepts and Scope of the Article

Following the definitions provided by the editors of this book, systems intelligence is "intelligent behaviour in the context of complex systems involving interaction and feedback." (Hämäläinen and Saarinen 2007, p. 3). Here, the main goal is human, as opposed to only economic, which is often the case with New Value Creation, for instance. System intelligence is an innate capability which people will utilize in any case. The question is how productively or how often or how intentionally they use it. SI is like a mandate, a positive option one could take if willing to reach the upscale option of a system. If the option is not fully taken, one does not necessarily act "stupidly." Very often, such behaviour is "normal." That is the option of taking the system as given and adapting to it, in the mode of a reactive object rather than as a (pro)active subject.

New Value Creation (NVC), in turn, is first and foremost business driven mindset used in the context of private, profit-generating companies. Let us start with the first word in the concept, i.e.

"new." Here, I do not want to go to the deep philosophical discussion about what is new and newness. Rather, in this occasion, "new" means that the new value that is created, in the form of New Value Offering (WIN), is perceived as new and valuable by somebody, even though the parts or building blocks from which the offering is put together might exist already before the new value creation started.

Let us jump to the next word. The word "value" has been used several thousands years (Ramirez 1999, p. 50). Value found the modern notion of exchange value during the 13th century and the proposition that utility is subjectively assessed arose in the 18th century (ibid.). In their review, Payne and Holt (2001) found nine streams of research on (customer) value, namely:

- Consumer values (realizing that new value offering must fit in to the customers' values) and consumer value (value-in-use and possession value). Values are not discussed in this article.

- Augmented product concept and flower of service concept. The very idea of New Value Offering (WIN) is affected by the idea of augmented product concept. Competition is not just between and value creation is not just about the factory outputs, rather, it is about what is added on top of the factory outputs; financing, services, guarantees, dealing with exceptions etc.

- Customer Satisfaction and Service Quality: customers must be satisfied with what they get and quality measurement tools are one way to measure that satisfaction. These concepts will not be explicitly discussed in this occasion.

- Value Chain thinking and other ways to conceptualize how value creation is organized. In new value creation, systems and processes are basic building blocks that companies are utilizing when setting up new Value Configurations for customers (Stabell and Fjeldstad 1998). In literature, these configurations have various names depending on value creation logic; Value Chains (Porter 1985), Value Shops and Value Networks (Stabell and Fjeldstad 1998), Value Constellations (Normann and Ramirez 1993), Value Co-production (Ramirez 1999), and Co-creation Experiences (Prahalad and Ramaswamy 2000, 2003, 2004). From this articles' perspective, the way value creation is organized provides one possible source for new value.

- Creating and delivering superior customer value: discussion which links customer value to the organizational profitability, performance, and competitive advantage. These issues are somewhat out of the scope of this article.

- Customer's value to the firm, i.e., value of the customer is an output of, rather than an input to, value creation: gives rise to the concept of Customer Lifetime Value. In this article, I am more interested of creating value for the customer than capturing that value.

- Customer-perceived Value: this is the very core of this article. This concept was developed when scholars realized that value could be best understood as a perceived relationship between utility and price (money + efforts). In more general terms, value is the relation between benefit and sacrifice (Mazumbar 1993; East 1997; Virtanen et al. 2002) – absolute value does not exist. Be it value-in-use or possession value, the offering is valuable only if someone (an individual, a team, a group, a population, an organization) perceives it as valuable. A house, a car, a piece of art, even the value of a currency, let's say US Dollar, or the value of oil or gold is ultimately determined by how people perceive their value. Further, value is always perceived in relation to something, typically, in relation to other offerings. In addition to the pure economic factors like cost, financial payback, or profitability, value is affected by several other types of advantage: status and prestige aspects (e.g. luxury watches), a decrease in discomfort (e.g. air-conditioning), savings in time and effort (e.g. fast food), convenience (e.g. non-wrinkle shirts), satisfaction (e.g. concerts that you really like), an

immediacy of the reward (e.g. if you are really thirsty you are willing to pay more on beverages) etc. Also, in this perceived relationship between utility and price, "static friction" plays important role. Even if people clearly perceive that a new offering could be valuable for them, they do not necessarily buy or adopt the offering because they have some other systems working on already sufficiently well. The new offering must be significantly better than the existing system before people are willing to adopt the new one. Thus, perceived value is a tricky dimension; it is time-dependent, situation-specific, and by no means unproblematic. When examining environmental issues or the history of the atrocities in Europe alone during the last 100 years, it is evident that what is perceived as value at a given time can lead to severe problems and horrible consequences.

- Customer value and shareholder value, or broader, stakeholder value: discussion about who captures the value. As mentioned above, this article focuses more on value creation than value capture.

- Relationship value: value creation involves both the customer and the service organization and value is created over time during various relationship episodes and the relationship itself can have a major impact on total value received by the customer. While being a very important aspect in business, relationship value is somewhat out of the scope of this article.

Similar to concept of value or customer value, the concept of Value Creation does not have a single, universal meaning. As Lepak et al. (2007) discuss, the concept of value creation is used to refer both to the content (what is value/valuable) and process of value creation (how it is created) and "the process of value creation is often confused or confounded with the process of value capture." More concepts are needed before we can define what the Value Creation is. Value Capture refers to the efforts to capture some of the created value, that is, to make money. Lepak et al. (2007) argue, "Value creation and Value capture should be viewed as distinct processes, since the source that creates a value increment may or may not be able to capture or retain the value in the long run." Value can be captured by the value creating organization and/or its stakeholders including shareholders, employees, and/or by its competitors, and/or by society in general.

Above was argued why it is important to make the distinction between Value Creation and Value Capture. However, Value Creation and Value Capture are focusing on company's i.e. value creator's side but do not wholly describe what is happening in the customers' end. Thus, I introduce another concept called Value Realization, which refers to the amount of created value that is realized from customers' perspective when they are consummating the New Value Offering (WIN). To explain this better, we need to make a distinction between Use Value and Exchange Value. Use Value is perceived by the customer and Exchange Value refers to price that is paid for the perceived Use Value. With the exception of monopoly situations, the price paid by the customer will be *less* than the total monetary value perceived by the customer. "The difference between the customer's valuation of the product, and the price paid is Consumer Surplus (CS)." (Bowman and Ambrosini 2000). Thus, the price the customer is prepared to pay is price + CS. And because customers choose the WIN that will confer on them the largest CS, WINs must be developed so that they deliver more CS than alternatives. CS, in turn, can be increased enhancing the perceived use value of the WIN (and thereby increasing its total monetary value), "whilst keeping the price at the same level, or by keeping the total monetary value constant but reducing the price, or by doing both simultaneously." (Bowman and Ambrosini 2000).

Now, it is time to put the pieces together and to define New Value Creation (NVC). NVC is the term that seemingly is consisted of three sub-processes: New Value Offering Creation (when new value is invented and realized to a New Value Offering), Value Realization (when customers are consummating the offering), and Value Capture (getting money and profits out of value creation efforts). Companies need that captured value to continue their operations and for paying

employees and owners. Thus, in ever-tightening competition between private, profit-generating organizations, NVC is imperative. If a firm cannot create new value for its customers, sooner rather than later, it can not capture value and it will cease to exist. Also, captured value and profit associated with it is the main success measure in business. The general new value creation framework with key concepts is described in FIGURE 1 below.
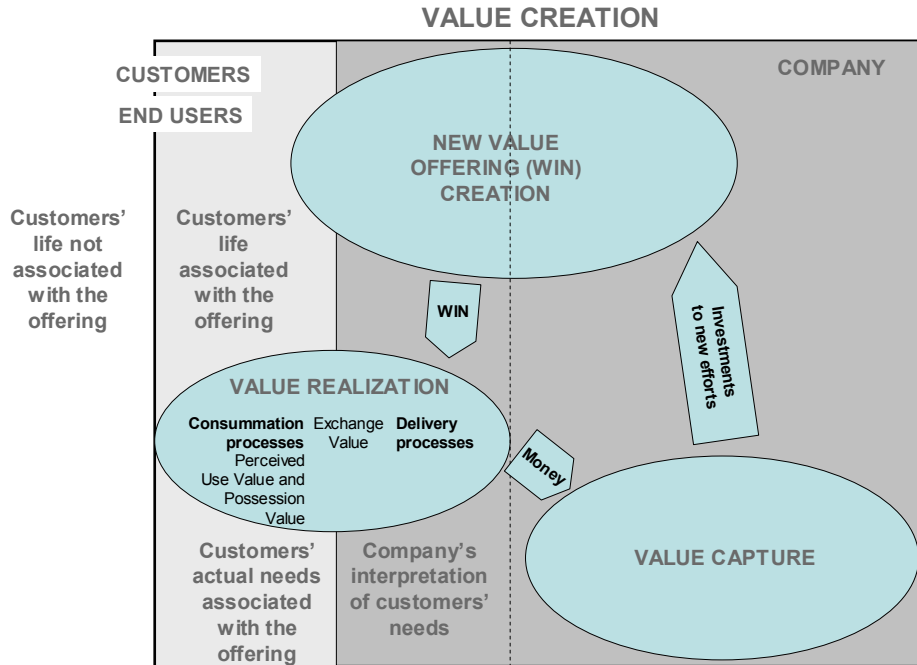

FIGURE 1. The general new value creation framework.

Common Ground in New Value Creation and Systems Intelligence

How could these seemingly distant concepts be linked together? And why bother to search any common ground? My intention is to show that these two concepts share certain fundamental assumptions and that both approaches can greatly benefit from each other.

First, both concepts refer to efforts to improve the existing micro-level conditions. New value creation is so money-driven because we have to earn our living and firms need money to continue their operations. But, if we exclude the NVC's money aspect and imperative to make profits, both concepts are actually very close to each other. This is illustrated in the FIGURE 2 below. In matter of fact, as I will later describe in greater detail, every time money is directly involved in systems intelligence, such activities could be defined to belong to new customer value creation domain. And, every time money is not directly involved in NVC, such initiatives could be defined to belong to the SI domain. For example, airlines offer upscale options of their basic travel system – more space, more personal service, more versatile lunch and entertainment options, quicker check-in etc – but since organizing such upscale options cost something extra, airlines offer those options only for those who are willing to pay more of it. Of course, some facets of human interactions in airline business do not have anything to do with costs or money. Thus, such interactions would be enriched if people only would practice more systems intelligence. But the fact is that quite a many of those human interaction options are strongly limited by up-front choices made by developers of those commercial travelling systems. For example, consider flight attendants who might have 50 passengers for their responsibility and the time window can be 100 minutes to serve them. They operate in a very limited space and they cannot choose what

entertainment options they can provide to customers, or what kind of food or beverages. Further, flight attendants cannot affect customers' travelling experience before or after they are airborne. In short, their options to practice systems intelligence are drastically limited.
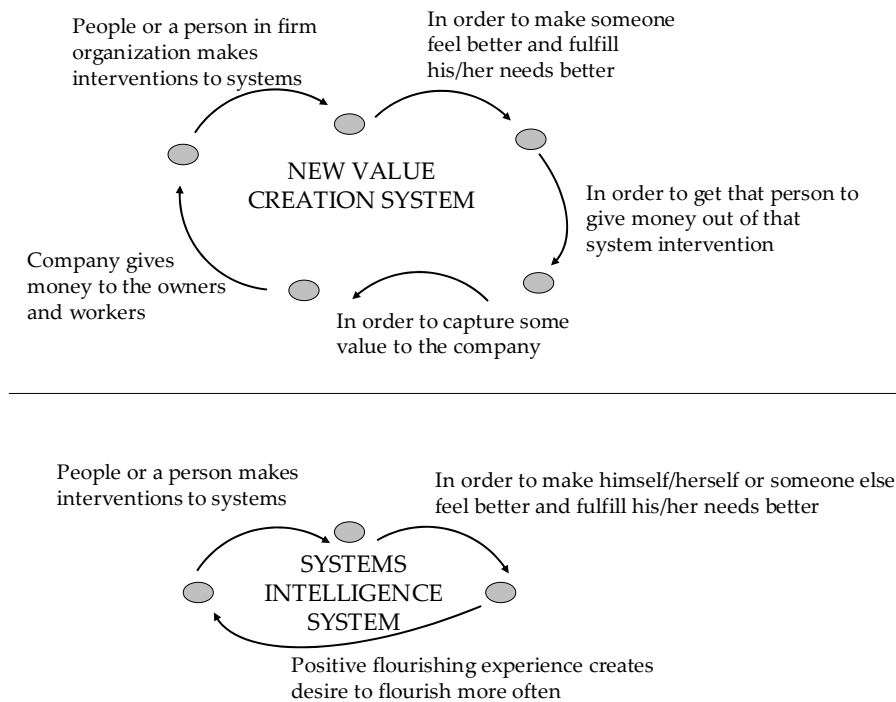

FIGURE 2. NVC system and SI system.

Close to the first point, both NVC and SI imply active, pragmatic approach. New value can be created by not taking the existing systems as given but rather making some changes that affect real-life behaviour and experience. Consider the following example. One day in spring 1994, Jeff Bezos, a 30 year old Wall Street employee, observed that Internet usage was increasing by 2,300 percent a year. Bezos was by no means the only investing-oriented person seeing that piece of information – rather, it was public knowledge that Internet usage was soaring. In a sense, Bezos acted *exactly* according to the investing system he was involved. If best companies in traditional industries have two-digit growth numbers and you see that some evolving new system has four digit growth numbers you *must* invest in the new one. And indeed, Bezos acted, immediately. After short analysis of top mail order businesses, he realized that books were the commodity for which no comprehensive mail order catalogue existed, because any such catalogue would be too big to mail. The catalogue was perfect for the Internet, which could give access to a virtually limitless database and share that with potentially limitless number of people. In the *very next day*, Bezos flew to Los Angeles to attend the American Booksellers' Convention to learn everything he could about the book business.[1] He found that the major book wholesalers had already compiled electronic lists of their inventory. All that was needed was a single location on the Internet where the book-buying public could search the available stock and place orders directly! Bezos and his wife quit their jobs and sacrificed a promising financing careers in New York, picked up a Chevy Blazer (a gift from a relative) to make the drive to Seattle where they would have ready access to the book wholesaler Ingram and to the pool of computer talent Jeff would need for his enterprise. While his wife drove, Jeff typed a business plan. Hey, if the market is growing 2,300 percent a year there is no time to waste! Amazon.com was founded in July 1994 and the website was launched year later for global public. In October 1997, Bezos hand-delivered the company's 1

---

[1] http://www.wordiq.com/definition/Jeff_Bezos

millionth order to a customer in Japan. Rest is history – less than five years after seeing that growth figure of Internet first time he became a billionaire and one of the richest people in the world. And, from customers' point of view, Amazon creates enormous amounts of new value; buying books has never been easier. There are many system intelligent details in Amazon's offering: one click shopping and peer reviews, for instance.

Similar to NVC, systems intelligence requires an act. It is not enough to understand the existing system – without acting one cannot create new customer value nor can one's behaviour be system intelligent. One can also act system intelligently without rational comprehension of a system. Indeed, in certain systems preferring analysis over action might be the very reason for failure. Real life is the ultimate test for both new value creation and system intelligence; one cannot practice it alone in a drawing board.

Third, both NVC and SI take place in human interaction, in what Hämäläinen and Saarinen call the "in-between". Somebody, quite often with the help of enabling technologies, is creating new value for someone at certain time and place. System intelligence, in turn, is about reaching upscale options of any systems consisting of human interactions.

Fourth, both concepts are highly relative, time-dependent, and situation-sensitive. Someone going for grocery store during lunch break would appreciate different things than someone who needs groceries for his/her family for a weekend. Even the same person on different days will shop differently. Similarly, there might be situations where taking out a cigarette means breaking the ice, but certainly not always. Thus, if there are best practices, they are highly context-specific. In certain situations, in certain contexts, for certain causes, certain tricks, triggers, or acts might be more suitable than others. Referring to the Marshal Mannerheim (Hämäläinen and Saarinen 2007), Commander-in-chief of Finland's Defence Forces during World War Two, he might have noticed that in most cases in a trench context, taking a cigarette out enables soldiers to approach him in natural way. Then, during informal discussion Marshal could strengthen the spirits, maintain the soldier's motivation, observe the feelings in the front line, or give soldiers an opportunity to give direct feedback about the conditions. Similarly, our "toolbox" to create new value or to behave system intelligently can be broader or narrower; we can be better or worse equipped to expose ourselves to systemic opportunities. But in the end, everything comes down to the situation and its unique circumstances.

Fifth, because both concepts are highly relative and situation-specific, there are countless amounts of untried opportunities for both NVC and SI. Indeed, intelligence might not be that much in demand if there would be only few options in most contexts.

TABLE 1. Differences and similarities between the concepts of new customer value creation and systems intelligence.

DIFFERENCES	New value creation	Systems intelligence
Main goal	To make money	To flourish
Success measure	Objective: amount of profit	Subjective experience of flourishment
Role of systems	Raw material for value creation	Ever-present set-up for life
Main actor	Value creating organization	Individual subject
Mode of operating	Imperative, key for survival	Mandate, positive option
Role of analyzing	Mostly planning beforehand and designing key aspects of the offering system and most likely interactions	Mostly doing ad hoc probes and intuitive interventions while being exposed to reciprocal system

SIMILARITIES	New value creation	Systems intelligence
Both concepts are mostly about improving micro-level conditions.		
Active, pragmatic stance towards systems: Systems are to be changed by active subjects.		
Both phenomena fundamentally take place between people, in human interaction. Not inside of a person.		
Both concepts are relative, time-dependent, situation-sensitive; if best practices exists they are highly context-specific.		
Countless amounts of fresh possibilities – most of the opportunities are not tried.		
Ambiguity remains: at best, we can only increase the probability of desired outcome.		

Finally, because the systems and interactions are so complex and there are huge amount of variety among interactions, we can only increase the probability of desired outcome. We cannot guarantee that something happens the way we though it could be. It requires systems intelligence to further react the emerging effects of our first intervention. TABLE 1 summarizes the differences and similarities between these two concepts.

Discovering New Customer Value

In the following I will present few different examples of how new value could be created. My intention here is twofold. First, I would like to provide a picture of what kinds of different sub-systems should be under scrutiny when we are aiming to discover and create new value. By understanding types of sources of new value, we can significantly improve our new value creation efforts. This is particularly important because, I claim, one cannot find rigorous education about new value creation in spite of the fact that is absolutely crucial in business! Business schools are providing education about marketing, logistics, finance, leadership, accounting etc, design schools are focusing on aesthetics and usability, and polytechnic schools have new product and technology development courses, as well as operations and manufacturing courses. The problem is that, in addition that the knowledge is highly scattered, those courses are usually not lectured nor participated with the new value creation mindset. Rather than maintaining the existing disciplines and describing *what* is in it, the emphasis should be more on *how* to change those issues in pursuit of new value creation. Moreover, those issues should be changed in concert with other issues from other disciplines. Taking practice-driven cross-disciplinary jumps are essential because creating new value offerings, in real life, requires

modifications on issues from several domains, not just in manufacturing or marketing domain, for instance.

Second intention in the following is to perceive the new value creation sub-systems in the light of system intelligence. That is, how SI and NVC would benefit from each others.

Improving How Offering Is Used

Think about cutting a cake. The need is obvious and well known. So is the solution – de facto dominant design for a cake cutter has been the same for decades or even centuries. Some cake cutters are more decorated than others, they might be constructed from different materials but the cutting mechanism and the use concept has remained unchanged. Typically, a person slices a piece, puts the cake spoon under the piece, and carries it to the plate where the eating takes place. Use context has also been the same for ages: it is typically a party, a system of its own, in which a guest wants to get a piece of cake. Cutting a cake is like an institution. It has always been done that way. Is there any margin for improvement left? This is often the case in how we perceive systems around us. We take them as given and see no margin for improvement – the upscale options remain hidden. From individual micro perspective, improving the existing offerings and reaching for upscale options in human interactions are somewhat similar phenomena. Both require seeing beyond the first impression.

Maria Kivijärvi, a Finnish student of HAMK University of applied sciences[2], designed a new kind of cake spoon called POC (abbreviation from words "piece of cake"). As an eager cake eater she was not fully satisfied with her cake-cutting experience. She realized that cutting a slice is rather straightforward effort but carrying it is not that easy. Therefore, she developed a solution by which a user is able to both cut a piece of cake *and* instantly and easily carry it to the plate where the eating takes place (see FIGURE 3). What has been invented here is to combine two sequential actions or usage sub-phases (cutting and carrying) into one offering. This is especially powerful way of creating new value if we can improve (or eliminate altogether) activities and sub-phases which require most input from users' side – money, effort, time, tools, knowledge and skills. These kinds of issues typically exclude some customer groups from using the offering. For example, even little kids are able to cut the cake but not to carry the piece of cake to their plates. Interestingly, these kinds of issues are affecting in human interactions also from systems intelligence's point of view. In every system, there are certain aspects or features that exclude some people to participate or to add on. If we could develop our ability to see such aspects instantly, we definitely would have more chances to reach the upscale options in our interactions.

Good Grips[3], as the brand name underlines, sells kitchen utensils with a very detectable handle. Handle is developed so that it is large enough to avoid hand strain and it is oval to keep it from rotating in the hand. It has an over-sized tapered hole so that hanging storage is very easy, even for a shaky hand or dim eye. The material of the handle, Santoprene, offers a warm non-slip handle and it enables making flexible fins that bend to an individual finger grip, giving the user more cushion and control, even when hands are wet and soapy (Govindarajan and Gupta 2001). "Fins" (see FIGURE 3) are very easily detectable and also purposefully created part of the product – consumers would immediately understand why Good Grips is better than traditional kitchen

[2] http://www.hamk.fi/

[3] http://www.goodgrips.com/ and http://www.cdf.org/journal/0201_oxo.php

utensils. Every system contains various types of "fins", i.e. little signals or symbols which set the people's expectation levels and thus cause them behave the way they are.
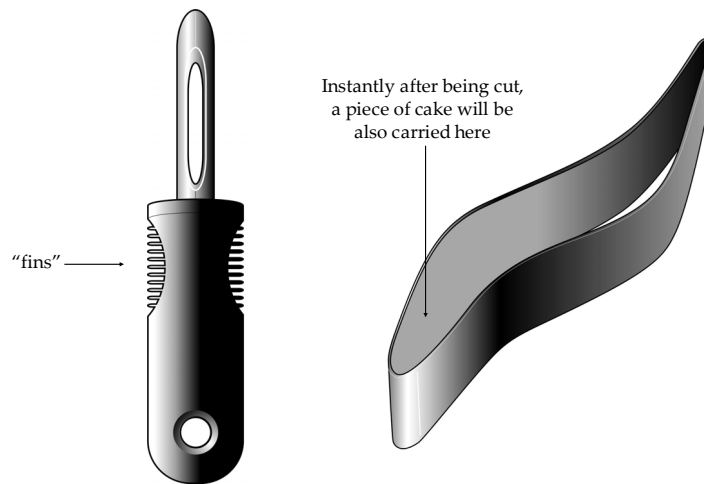

FIGURE 3. GoodGrips's fruit peeler and Maria Kivijärvi's POC

Actually, marketers are using such "fins" purposefully when positioning new offerings in the marketplace. In traditional positioning, we have to decide first in which category we want our offering to belong, that is, to decide its points of parity. For example, an offering which de facto contains a processor, memory, input and output devices, can be positioned to belong to TV, mobile phone, game console, laptop, PDA, camera, tablet etc categories. It is our job to decide in which category we want customers to refer our offering. People do not have any other choice but to compare our offering for something previously experienced. When television was launched mid 1900s it was referred as radio with living pictures because radio was the closest reference point for remotely broadcasted content. Thus, our job is to choose which comparisons favour our offering. This leads to second choice we have to make. After deciding the category and thus points of parity we should decide how we differentiate our offering from other brands and offerings in that category. This positioning process relies heavily on customers' ability to detect the chosen category and its typical features. By doing so, they sort of lock-in their expectations. Do you expect your car to have a fixed place for an umbrella, for instance? Most likely you do not – simply because "car" category does not normally include umbrellas. Car category is only solving certain transportation needs – it should not improve your life in any other ways, right? And, this is essential from systems intelligence's point of view; we are very persistent in maintaining those existing categories exactly as they are.

From Use Phase to the Whole Consummation Chain

With the POC and GoodGrips examples I demonstrated how new customer value can be created by improving how people use offerings. There are millions of examples how various use situations have been changed in order to increase benefits or decrease sacrifice. Usage is a system which happens in certain context when a person wants to do something, e.g. peel a fruit in a kitchen. However, value of offerings is not fully determined by how they are used. There are lots of things happening before and after someone is using our offering. And, quite often those issues actually determine the value.

Before going any further, it is time to make a distinction between consuming and consummating. As Richard Normann (2001) in his fantastic book explains, *Latin language has two words for*

"consume." They and their meanings remain in the English… Consume according to dictionary means "destroy, use up, waste." Consummate means "complete, perfect" (as verbs). It is the "use up" meaning that has come to dominate how we think about consumption and consumers." In this article, customers are not destroying the value that someone is offering. Rather, value is created and realized only if customer is using the offering. In kitchen utensils, for example, customer is not destroying the value of a fruit peeler. Rather, value is being co-created when customer uses the offering. This consummation perspective is even more evident when you consider service businesses like airline. The customer is not destroying the value of a travelling system but co-creating the value with other passengers, taxis, airplanes, airports etc.

To illustrate the broader new value arena we are discussing now, we can sketch a generic consummation chain for an offering, i.e. linked sets of activities customers engage in to meet their needs (see FIGURE 4). First, people have to become aware that they need something. Then they start searching information about possible solutions. After choosing one of the offerings they order or purchase or agree to sign up. Then they have to finance, contract and pay before they receive a product or enjoy the first service encounter. Normally there are various installing efforts before the actual use begins with storing, moving, using and cleaning. Or, in the case of a service, if a customer is satisfied with the first encounter, he or she typically has several other encounters which involve some efforts. Then, before final disposal or contract renewal there might be all kinds of services needed, repairs etc. We all are consumers (at least you are consummating this book!) and we know that most of the generic phases mentioned above have several sub-phases. For example, information search phase might involve driving, walking, reading, surfing in the Internet, discussing, making phone calls, visiting stores, trying out the offering in limited basis etc. There are lots of things happening during the course of whole consummation chain – it is not just the use phase that determines the value, it is clearly the whole experience that matters. From this perspective it is weird how much efforts companies are putting into traditional new product development (NPD), which focuses on only improving the product and its use phase. Instead, we should use the word "New Value Offering Development" to manifest our quest to find and create value in all of its forms. FIGURE 4 represents typical consummation chain of a manufactured product.
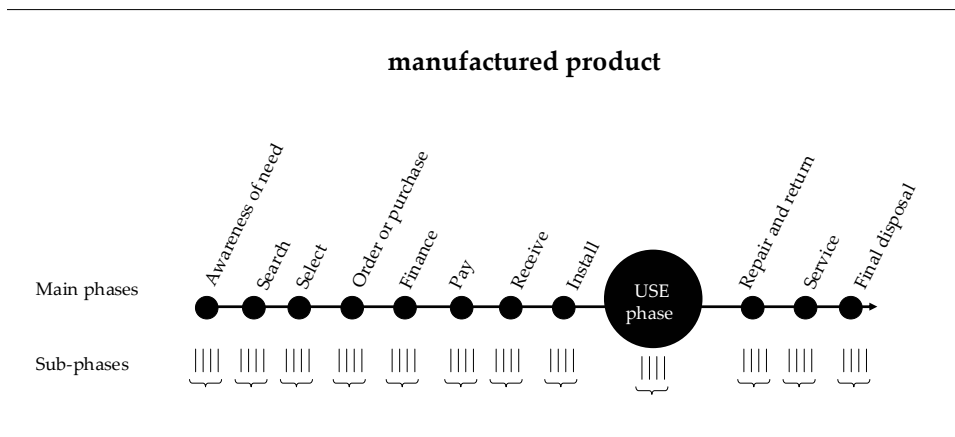

FIGURE 4. Generic consummation chain (modified from McGrath and MacMillan 2005).

McGrath and MacMillan (2005; MacMillan and McGrath 1997) have identified several "Market Busting" moves (as they call strategic moves that drive exceptional market growth) that involve changing the consummation chain. One of such moves is monopolizing a trigger event. A trigger is an event that causes customer to proceed to the next phase of the consummation chain. For example, Finnish-based Kone Corporation is monopolizing trigger event by monitoring elevators

remotely to prevent problems before they develop, getting early warnings of events that might trigger a maintenance call. Triggers make the world go around. Every system has its own triggers. Marshal Mannerheim's cigar was a trigger that moved private soldiers from formal hierarchical system to informal chatting system. From business perspective: if you can be the first to know that a trigger event has occurred, or if your firm is the first in line or first in mind when the triggering event occurs, or, if can you create triggers that favour your firm or offering, you are most likely in very profitable position.

To Whom Are We Creating Value?

In the previous chapters we focused first on improving the use phase and then the whole consummation chain. However, we took for granted whose consummation process we were improving, to whom we were creating value. It is time to broaden our view by making another big conceptual leap which enables us to see the world around us differently. Let us begin by elaborating the concept of user.

Faulkner (2000) identified many different kinds of users. *Direct users* use the system themselves in order to carry out their duties. *Indirect users* are ones who ask other people to use the system on their behalf. *Remote users* do not directly use the system themselves but nevertheless they are dependant on it upon output. *Support users* are a part of the administration and technical team, which supports the work of other people. Every type of user is in different position of a system, and has a different relationship towards the system, and thus has different needs and determinants of what is valuable for them. Further, there are three kinds of users when looked from the point of view of their expertise: *Novice users* have little or no experience of the system that they are using. *Intermediate users* use the system occasionally or use it for periods of time and may perhaps have a break in using it during several months of time. *Expert users* know everything there is to know about the system.
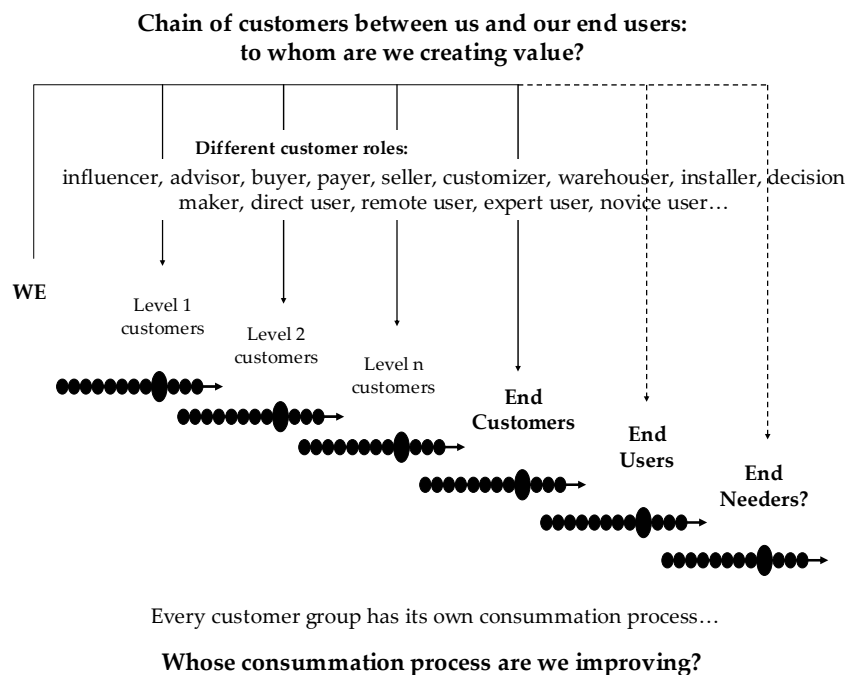

FIGURE 5. Different kinds of customers – to whom are we creating value?

Users might be, but not necessarily are, customers. In addition to the fact that there are always very many different kinds of users there are also many different kinds of customers. So, who is the customer? Typically there is not just end customers, rather, between us and the end customer is a whole chain of customers. Our customers have their own customers, who, in turn, might have their own customers. And so on. Do you know who they are and what they need, to whom *they* want to create value? Do you know what their consummation process is? One of the key choices in value creation is to determine which customer level we want to focus on, to whom we want to create value. The most typical customers to focus on are the customer level closest to our own business (first level) and the end customer level. Those are the customers we easily perceive as being "our" customers. It is very common that the whole industry focuses on to the same type of a customer, be it the purchaser (as in the office equipment industry), the user (as in the clothing industry), or the influencer (as in the pharmaceutical industry). So, the whole industry is dancing according to the same system. Understanding our first level customers and end customers is essential, but really new opportunities are often found from taking closer looks to the other customer groups.

Ensto case illustrates customer concept nicely. Ensto[4] is a family-owned company, founded in 1958 in Porvoo Finland, offering equipment and solutions for electricity. Between Ensto and its end customers (e.g. families living in houses) are various wholesalers, retailers, electricians and so on. That is, there are many possible customers to target at. With the help of Finnish design consultancy called Desigence[5], Ensto decided to offer sockets that especially eased electricians' work. The rationale in this choice was the insight that customers in other levels – wholesalers and retailers – do not actually touch the socket; their demands are related to price and reliable supply. End customers need foremost electricity and safety; second level need is that the socket fits in to the interior. Traditionally, the more neutral and invisible the socket is the better. Taking those factors as given, the most important decision maker in the whole chain of customers is the electrician who, in turn, demands sockets from retailers and wholesalers. The electrician is an important opinion leader also towards do-it-yourself sector, because the electrician is a kind of authority in questions related to electricity and they opinions are carefully listened. At worst, the electrician refuses to install certain sockets. So, with the help of Desigence, a new socket was designed. The result was smaller, easier and faster to install, cheaper to assemble and manufacture with fewer parts involved. Faster installing directly created value to electricians and reinforced the customer relationship with Ensto. Also, since wholesaling prices were not affected, Ensto was able to capture more value and win market share by selling the cheaper-to-manufacture sockets.

So, every customer group has their own unique system of systems affecting them. They have their own use contexts, priorities, restrictions and roles. Therefore, there are endless opportunities to create new value by re-inventing to whom we are creating the value.

Linking Usage Event to Other Events in Customer's Life

It is time to make a jump from our own offering and its consummation process to broader system called life. Consider cars. There are millions of innovations improving how car is used – more comfortable seats, improved safety, increased performance, fuel efficiency etc. Indeed, cars have improved vastly during last 100+ years in use dimension. Recently, Rolls Royce introduced a car,

---

[4] http://www.ensto.com/

[5] http://www.desigence.fi/

namely Phantom, which contains full-size, pop-up umbrellas in each of the rear doors. When arriving in your destination effortlessly and silently like a phantom, what would be more convenient than having an umbrella right beside you when it rains…? I think all cars should have this option as a standard! I do not need all that horsepower and high tech *inside* the car – I do not use most of the potential of that technology anyway – I want a low tech umbrella neatly packaged when I go out. This is an example of how new value can be created by thinking what happens after our offering is being used. Most of my life is happening outside of a car anyway, why car manufacturers are not considering that more often? It does not need to be an Englishman to realize that it rains every now and then – so, let us provide umbrellas. Why does it need to be a luxury car to provide such option, it should not be that expensive to design it, right? Car manufacturers are focusing on developing cars and umbrella manufacturers are focusing on umbrellas, that is the way the system goes. But life goes on within and through those systems, so should value creation and systems intelligence.

So, the new value invention in Rolls Royce case is to build links to customers' life that is happening around the car, between the individual use events. While the umbrella was an example of considering what might happen right after the car is being used, a heated cup holder (of 2007 Chrysler Sebring Touring and Limited models) is an example of taking account what happens in customers' life right before she sits in a car.
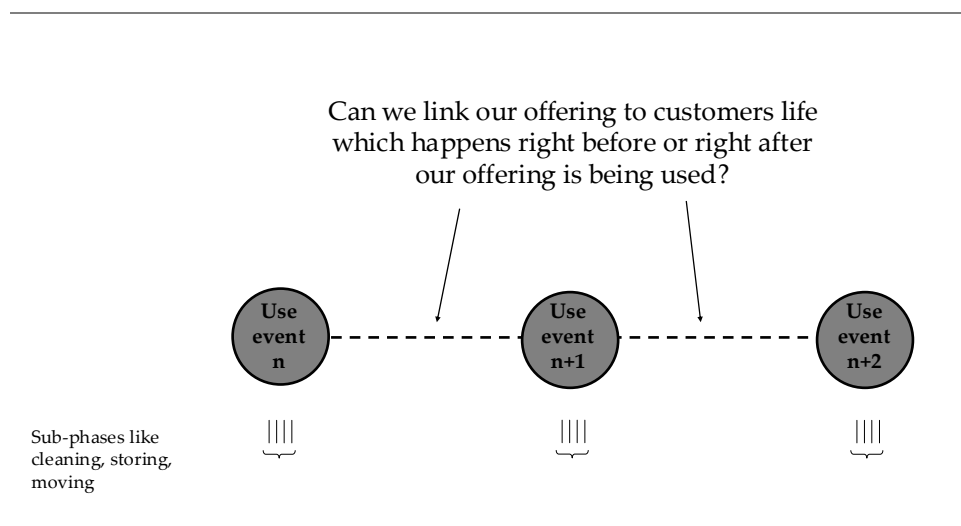

FIGURE 6. Linking offering's use system to customers' life

We should not limit our toolbox of new value creation only to our "own" offering system. For example, it is not so straightforward to go to the cinema if you happened to have little kids. The value of a movie experience is greatly determined by *complementing* offerings – someone should take care of children while adults are watching the movie, they must find a parking place for their car or know how they reach the cinema by using other transportation, how much time and effort they must devote to get the tickets etc. There are always many other things affecting the perceived utility and sacrifice than just our own core offering. We have a name for those issues: it is called life. Thus, offerings are not used in a vacuum; in most cases, other offerings and indeed life affects their value. Thus, we can find countless amounts of new value possibilities by considering what happens in customers' life before and after our offering is being used. Somehow, as businesspeople developing new offerings, we easily forget that "life" perspective and focus only on our own offering and its details. But it is not so strange that business people forget the life aspect if we consider that we human beings quite often forget the upscale options of systems in our own life!

Let us go back again to the Marshal Mannerheim's cigar example. While walking in a trench someone in Marshal's position could have focused only on maintaining the formal hierarchy and perceiving individual soldiers as inhuman parts of the big machine. It requires systems intelligence to realize that soldiers also have life outside of that frontline system and the life before and after that particular moment actually gives meaning and leverage to the whole situation. Thus, important aspect in systems intelligence is to fully get absorbed in the situation in hand while simultaneously being aware of the existence of larger systems. Sometimes, a brief local moment can give meaning to macro systems but perhaps more often, the meaning of a moment and value of the local experience is determined by larger systems. And the main argument of this article is that quite often those larger systems are commercial systems. Being sensitive how systems intertwine is important in systems intelligence and in new value creation.

Discovering New Customer Value by Analyzing Other Existing Offerings

In previous chapters our perspective was to analyze consummation process and its phases, i.e. how people use our offering and whether we could improve that. We also realized that because there are several different kinds of customers there are also many kinds of consummation processes. We even linked our offering to customers' life before and after they used our offering. Now, we broaden our view again by taking a look what is happening customers' life when they are not using our offerings at all. The closest systems to look for are other competing and substituting offerings. What kinds of consummation chains there are? Can we learn what is valuable for customers from there?

First, let us define the terms. *Competing* offerings have the same purpose, similar functions, and similar forms. For example, Finnair and Lufthansa are competing against each other in Helsinki–Frankfurt route. *Substitutes* have different forms but offer the same functionality. For example, leasing cars, rented cars and privately owned cars are substitutes. *Alternatives* have different functions and forms but the same purpose. For example, busses, bicycles, and taxis are different alternatives for getting from here to close there. Subway, McDonald's and Pizza Hut can be treated like competitors since they all are involved in fast-food business. Further, they can be treated both like substitutes and alternatives. It only depends how you define the business you are in. It is important to realize that market and industry boundaries are first and foremost just mental constructions – they often exist only in your head. Or, they exist in the heads of the people who think similarly. What really matters is what consumers are thinking and whether you can do something about that. If we want to reach upscale options of a system or if we want to create new value we should be able to signal that the system is changed.

The existence of Strategic Groups within an industry is quite well documented (see e.g. a review by McGee and Thomas 1986). Strategic group term refers to a group of companies within an industry that pursue a similar strategy. "*It is supply-side concept insofar as it defines structures within industries, but is in all its essentials a behavior or conduct concept fitting neatly between the supply idea of an industry and the demand idea of a market*" (McGee and Thomas 1986, p. 158). From customer's perspective, offerings of an industry typically form a rough hierarchical order built on two dimensions, price and performance. That is, each jump in price tends to bring a corresponding jump in some dimension of performance. Most companies focus on improving their competitive position within, and only within, a strategic group. However, truly new value and new market space can be found in holes between the groups, by combining elements from different groups into a new offering. In order to do so, new value creators must understand what factors determine buyers' decisions to trade up or down from one group to another (Kim and Maubourgne 1999, p. 86). For example, some customers are willing to pay more for a car that has more power and speed or luxury or less inner noise. However, improvement in those key

dimensions always requires a corresponding increase in price. All car manufactures seem to think that silence, for instance, is such a feature that is improved only in higher priced cars; no one is offering a silent and cheap car. I am sure there would be thousands of customers willing to buy such a car. Toyota has already realized a similar idea in the luxury car market, when its Lexus brand created new value by offering the quality of the high-end Mercedes, BMW and Jaguar at a price closer to the lower-end Cadillac and Lincoln. In 1960s, Ralph Lauren was able to create "high fashion with no fashion" concept which built on the advantages of the two strategic groups that dominated the high-end clothing – designer haute couture and the higher volume, but lower-priced classical lines of Burberry's, Brooks Brothers and the like. Polo Ralph Lauren has been very successful because its "*designer name, the elegance of its stores, and the luxury of its materials capture what most customers value in haute couture, its updated classical look and price capture the best of classical lines*" (Kim and Maubourgne 1999, p. 87).

From new value creation's point of view, it is always exciting opportunity if you are first to realize that everybody else is behaving according to a certain system, like according to strategic groups logic. That is, people are not obliged to behave the way they are behaving but that the system generates predictable behaviour. Thus, in some systems, the most important aspect of the system is that you are the first to realize that there *is* a system in action.
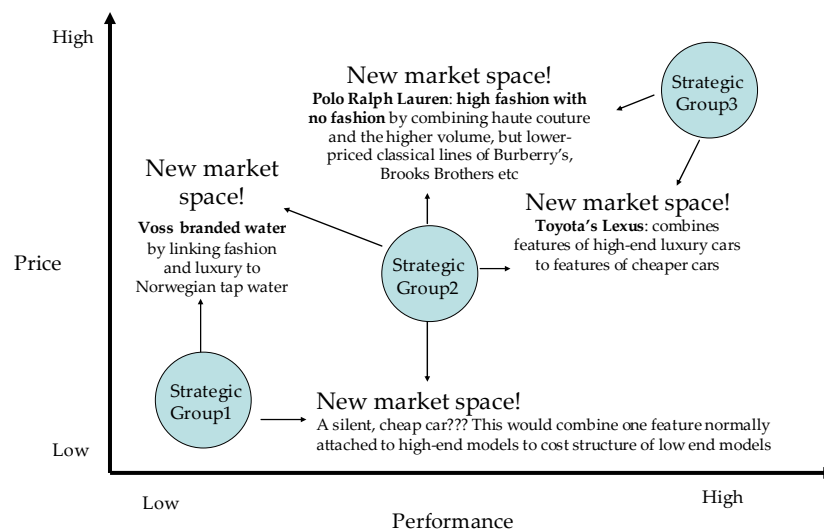

FIGURE 7. New value and new market space can be found between strategic groups.

As we saw already above, creating new value to the customer does not mean that you have to offer more than previously in all of the dimensions. Quite contrary, offering less in some dimension than existing products and services often creates value. This is one of the main triggers in Clayton Christensen's famous disruptive technology concept (Christensen 1997, 1998, 2001; Christensen et al. 2001), as well as Kim and Maubourgne's (2005) Value Innovation perspective.

Intrinsic Value and Positional Value

The idea of Intrinsic and Positional value is taken from Normann (2001). Typically we focus on developing our offerings intrinsic value. For example, cars have intrinsic value as vehicles that can be used when one is willing to go from here to there. Bus stops have intrinsic value in fulfilling their purpose as bus stops in public transportation system. Houses have intrinsic value as homes. Almost all efforts in business life focus on improving that intrinsic value. All car

manufacturers, for instance, focus on improving cars' intrinsic value by making the looks and driving the car as tempting and as comfortable as possible. However, often our offering has, or could have, other value than intrinsic value, namely *Positional Value* or *Situational Value*. Positional value refers to situations when existing assets, offerings, processes, and systems are valuable in totally different value systems. Think about a parked car, for instance. When the car is parked it is not creating any value for the owner of the car. Actually, when a car is parked for a few hours in downtown are, it is creating negative value because of parking fees, requirement for space in already crowded cities and so on. Could you imagine any situation, from somebody else's perspective, in which a parked car could provide value? For instance, given the fact that in every city there are thousands of parked cars occupying roadsides and fronts of every building, cars could be used

- as information signs showing cardinal points or directions to the nearest subways, stations or sightseeing for people looking for such information

- as traffic controllers or road blocks

- as light or electricity providers since cars have power source already

- as a counterweight for some efforts

- as safety cameras in suburban or city areas

- as lockers because they usually have a lot of locked, dry, and safe space in trunk

- as vending machines from which other customers could buy soft drinks by using mobile phones and the like

- as refrigerators for groceries ordered from Internet shops

- as mailboxes (if your car would be parked in the same place in front of your house)

From current car-systems' perspective, those ideas might sound unrealistic and far-fetched. But if such dimensions would be put in the new cars' specification, they will be easily realized. We have developed nuclear bombs, designing a car with a vending machine option would not be that difficult, right? Would it be nice to come back to your parked car and find that the machine has actually earned some money for you? Or done some useful services for somebody else? I agree, it is totally different car concept than the existing paradigm. But being different does not mean it is impossible. I use my car less than two hours a day – rest of the time it is doing nothing valuable for anybody. Why not? It is true that it is nobody's responsibility to think and develop such inter-industry offerings. Everybody is focusing only on their customers and developing intrinsic value of their own offering. However, there are endless possibilities for developing new value offerings based on Positional Value. Let us take a look at a few realized examples.

JCDecaux invented the "street furniture" concept in 1964, in which the company offers to provide a city with bus stops for free over a twenty-year period, and to maintain them perfectly well. The idea is that perfectly well maintained bus stops are attractive as advertising space for other business companies. That barter idea has carried the firm so that its market value is 4,4 billion euros, its turnover in 2005 was 1,7 billion euros, profit 200 million euros, and the firm has 7900 employees. All that value was created by re-thinking the existing system and detecting the possibility for positional value. Thus, the new value offering was developed by combining elements that were originally developed for something else. So, we have endless amounts of enriching opportunities by just recombining the pieces of existing systems.

Let us take yet another example. A French grocery store developed an idea of having different sizes of shopping baskets depending on customers' marital status. Especially, the grocery store offered special baskets for singles. So, if you are a single and if you want that others can see your

status just take the basket and go for… shopping. Knowing who is a single in a grocery store might be valuable information for other singles. There are lots of people in grocery stores, but traditionally customers create value only for the shopkeeper, not for each other. In "real life," people are very important for each others – why a grocery store would be different? Why grocery stores' upscale potential for our life is limited to finding new fat-free yoghurts?

Conclusion

With the discussion above I showed examples of benefits of thinking new value creation (NVC) from systems intelligence's (SI) point of view and vice versa. SI emphasizes human aspects of interactions and is always searching for enriching upscale options of systems. It is this "enriching life" aspect that is often missing in NVC and in business life in general. However, SI thinking could be also turbocharged by taking account a fact that big part of our daily life is strongly affected by commercial systems developed by business people from their point of view. Business life should not be any different than "normal" life. But the fact remains that the upscale human options are strongly limited by up-front choices made by developers of transportation, housing, shopping, working, energy production, and travelling systems, just to name a few. By combining SI and NCVC perspectives we would create revolutionary innovative and enriching new options for everyone's daily life. By any standard, world is not ready. Quite contrary, world is increasingly full of challenges and opportunities just waiting to be solved. That is our job and we can have a wonderful life while doing so. Let's make it real.

References

BOWMAN CLIFF AND VERONIQUE AMBROSINI. 2000. Value creation versus value capture: Towards a coherent definition of value in strategy. *British Journal of Management*, vol. 11, pp. 1–15.

CHRISTENSEN CLAYTON. 1997. *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*. Harvard Business School Press.

CHRISTENSEN CLAYTON. 1998. Why great companies lose their way. *Across the Board*, October, vol. 35, no. 9.

CHRISTENSEN CLAYTON. 2001. The past and future of competitive advantage. *MIT Sloan Management Review*, winter, vol. 42, no. 2.

CHRISTENSEN CLAYTON, THOMAS CRAIG, AND STUART HART. 2001. The great disruption. *Foreign Affairs*, March/April, vol. 80, no. 2.

DANNEELS ERWIN. 2003. Tight-loose coupling with customers: The enactment of customer orientation. *Strategic Management Journal*, vol. 24, pp. 559–576.

EAST ROBERT. 1997. *Consumer Behavior*. Financial Times / Prentice Hall.

FAULKNER XRISTINE. 2000. *Usability Engineering*. Palgrave.

GOVINDARAJAN VIJAY AND ANIL K. GUPTA. 2001. Strategic innovation: A conceptual road map. *Business Horizons*, vol. 44, no. 4, pp. 3–12.

HÄMÄLÄINEN RAIMO P. AND ESA SAARINEN. 2006. Systems intelligence: A key competence in human action and organizational life. *Reflections: The SoL Journal*, vol. 7, no. 4, pp. 17–28. Reprinted in *Systems Intelligence in Leadership and Everyday Life*, Raimo P. Hämäläinen and Esa Saarinen, eds., 2007, Espoo: Systems Analysis Laboratory, Helsinki University of Technology.

KIM W.C. AND R. MAUBOURGNE. 1999. Creating new market space. *Harvard Business Review*, Jan-Feb, pp. 83–93.

KIM W.C. AND R. MAUBORGNE. 2005. *Blue Ocean Strategy*. Harvard Business School Press.

LEPAK D.P., K.G. SMITH, AND M.S. TAYLOR. 2007. Introduction to special forum. Value creation and value capture: A multilevel perspective. *Academy of Management Review*, vol. 32, no. 1, pp. 180–194.

MACMILLAN IAN AND R.G. MCGRATH. 1997. New points of differentiation. *Harvard Business Review*, vol. 75, no. 4, Jul/Aug.

MAZUMDAR TRIDIB. 1993. A value-based orientation to new product planning. *Journal of Consumer Marketing*, vol. 10, no. 1, pp. 28–41.

MCGEE JOHN AND HOWARD THOMAS. 1986. Strategic groups: Theory, research and taxonomy. *Strategic Management Journal*, vol. 7, pp. 141–160.

MCGRATH RITA GUNTHER AND IAN MACMILLAN. 2005. *Market Busters: 40 Strategic Moves That Drive Exceptional Business Growth.* Harvard Business School Press.

NORMANN RICHARD. 2001. *Reframing Business: When the Map Changes the Landscape*. Wiley & Sons.

NORMANN RICHARD AND RAFAEL RAMIREZ. 1993. From value chain to value constellation: Designing interactive strategy. *Harvard Business Review*, Jul-Aug, pp. 65–77.

PAYNE ADRIAN AND SUSAN HOLT. 2001. Diagnosing customer value: Integrating the value process and relationship marketing. *British Journal of Management*, vol. 12, pp. 159–182.

PORTER MICHAEL. 1985. *Competitive Advantage*. The Free Press.

PRAHALAD C.K. AND V. RAMASWAMY. 2000. Co-opting customer competence. *Harvard Business Review*, Jan-Feb, pp. 79–87.

PRAHALAD C.K. AND V. RAMASWAMY. 2003. The new frontier of experience innovation. *MIT Sloan Management Review*, pp. 12–18

PRAHALAD C.K. AND V. RAMASWAMY. 2004. *The Future of Competition: Co-creating Unique Value with Customers.* Harvard Business School Press.

RAMIREZ RAFAEL. 1999. Value co-production: Intellectual origins and implications for practice and research. *Strategic Management Journal*, vol. 20, pp. 49–65.

RAPPAPORT ALFRED. 1998. *Creating Shareholder Value: A Guide for Managers and Investors.* Free Press.

STABELL CHARLES B. AND OYSTEIN D. FJELDSTAD. 1998. Configuring value for competitive advantage: On chains, shops, and networks. *Strategic Management Journal*, vol. 19, pp. 413–437.

VIRTANEN T, P. LEMETTI, P. JÄRVINEN, AND P. LILLRANK. 2002. *Verkoston arvontuotto ja yritysverkostojen kehittäminen.* Espoo: Tai Tutkimuslaitos.

Internet References

http://www.cdf.org/journal/0201_oxo.php

http://www.desigence.fi/

http://eftours.com/AboutEF/

http://www.ensto.com/

http://www.goodgrips.com/

http://www.jcdecaux.com/

http://www.wordiq.com/definition/Jeff_Bezos

Author

The author is a researcher at the BIT Research Centre, Helsinki University of Technology.

anssi.tuulenmaki@hut.fi