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## **The Effects of Disruption on Strategic Management**

*Illustrated by the case study of a Danish SME*

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# The Effects of Disruption on Strategic Management

Illustrated by a Case-study of a Danish SME

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**Abstract**—There is a lot of interest in Disruption these days even though the concept itself is still under formation. Disruption can be traced back to the idea of disruptive technological change and the late 1990s but has reemerged in the public eye in current years under guises such as Big Data, Digitalization, Globalization and much more. Furthermore, the effects of disruption are now being felt by organizations and industries all over the world. In this paper, we will try to outline and illustrate some of those effects using the case-study of an international, Danish, SME. The case company has been forced to face some challenges caused by disruption and in the process of doing so has changed its strategy process significantly towards a more learning based approach to strategic management. **Keywords:** disruption; case-study; SME; strategy process.

## I. WHAT IS DISRUPTION IN A HISTORICAL PERSPECTIVE?

To the surprise of those who worked in the field of innovation management in the late 1990's, the concept of disruption has come back to create interest in the fields of management research, in the general public and notably amongst politicians all over the world as witnessed by, for example, the current conference and its theme [1]. In the author's native land of Denmark, the current Government has even appointed an advisory board to advise the Government on the effects of disruption upon the Danish Society [2]. Interestingly, the members of the advisory board consist of a mixed selection of top managers from old industrial companies, representatives from NGOs and people from the cultural elite, including a comedian, but, alas, no scientists specializing in disruption [2]. Perhaps, it is a good idea to devote some space and effort to trace the origins and contents of the concept before proceeding any further with the current paper. We will trace the origins of disruption in this section.

### 1.1 The origins of disruption

In tracing the origins of disruption, it is hard not to mention Clayton M. Christensen, who introduced the concept of "disruptive technological change" in his seminal "Innovator's Dilemma" from 1998 [3]. And it is true that the word "disruptive" – as opposed to so-called "sustainable" technological changes, changes that help current market leaders to continue to be so – seems to have been coined Christensen and his school of thought.

However, Christensen was far from the only one to acknowledge the importance of technological changes to the field of management and, more importantly, to the work of top managers all of the world. For instance, back in 1995, Bettis and Hitt writes in that same issue that: "... *technology is rapidly altering the nature of competition in the late twentieth century* ..." and, in fact, guest-edit an issue of the Strategic Management Journal entirely devoted to discussing how technology will change the nature of competition and strategy in the years to come. Bettis & Hitt refers to the situation as "the new competitive landscape" [4].

It is also paramount to mention the work of Downes & Mui, who, at the same time as Christensen and others tapped into technological change, offered some form of explanation as to why technology and technological change seems to have such a profound impact on competition and strategy [5]. Downes & Mui observed that the basic problem of technological changes is that they often happen much faster than we as people, organizations or societies can adapt, see figure 1 for an

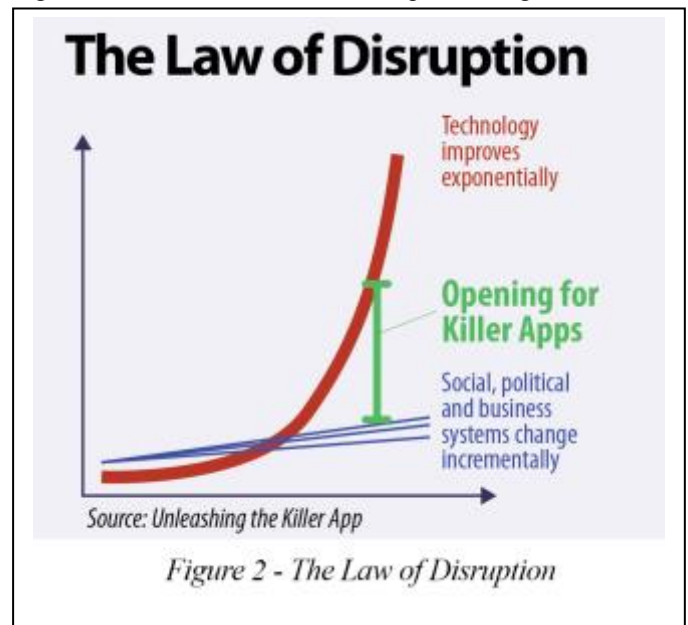


Figure 2 - The Law of Disruption

illustration.

Figure 1: Downes & Mui's "Law of Disruption" [5].

### 1.2 Other views on Disruption

People such as Christensen, Downes or Mui did not create the concept of disruption by themselves. Many others contributed to the discussion of a new competitive landscape and speculated on how this development might reflect on the area of strategic management. For example, back in 2001 this author published a book on the effects of the new competitive landscape on strategic management [6]. Based on a contingency-view of strategic management, this author outlined that strategic management ought to be conducted according to three different situations, or managerial tasks, namely those of exploiting existing (and non-changing) technologies, of working with sustainable technological changes and the task of dealing with disruptive technological and other environmental changes [6].

Off course, many of us felt that the latter managerial task – that of dealing with disruptive changes in the environment of an organization was by far the most interesting and challenging task for managers and management researchers alike. This created a huge interest in making the connection between strategy and innovation that Clayton Christensen, but also others, has pointed to. In table 1, on this page, the author has tried to illustrate this discussion within research by collecting a few seminal references on strategy, innovation and disruption from back in the day.

### 1.3 Disruption defined anno 1997

The list of research clearly illustrates that **the original concept of disruption, in its many variations, can be defined a changing force for strategic management.** Not only is disruption potentially altering the basis for competition for current organizations in several ways. Disruption, also, forces us as researchers of strategic management to change our conceptions of strategy, strategic management and strategy processes to reflect a new managerial landscape created by disruption. The above statement on the changing content of strategy is, indeed, the very background for this paper.

Also, the author finds it important to note that the concept of disruption anno 2017 differs from the same concept Anno 1997. A lot has happened since the 1990s and the seminal contribution to the concept of disruption, so perhaps it should not be too much of a surprise for us that the general public and its representatives, the politicians and civil servants, pay much attention to the idea of disruption and its effects after 20 years of having the concept around?

On a personal note, the proposition that the concept of disruption for good reasons has changed over the years is much more appealing to this author than the alternative (that politicians simply have not picked up on all of our work on disruption for 20 years or that we have failed to communicate its importance to said politicians?), so before we even attempt to define disruption as a changing force for strategic management in theory and practice, let us consider the driving forces of disruption of today. The latter is the subject of section II of this paper.

TABLE I. EXAMPLES OF EARLY IMPORTANT CONTRIBUTIONS TO DISRUPTION

[7]	Strategic Innovation	Strategic innovation is a means for planning in dynamic and turbulent environments, a middle-road between deliberate planning and emergent learning that requires synergy between thinking and acting. Strategic innovation is an outside-in approach, and it is value-driven, synthetic rather than analytical, heuristic rather than procedural, and it requires lateral thinking
[8]	Streams of innovation	The ability manage disruptive and incremental streams of innovation leads to new markets and the possible rewriting of industry rules
[9]	Strategic innovation	A fundamental reconceptualization of what the business is about, which in turns leads to a dramatically different way of playing the game in the industry, i.e., it is about breaking the rules and thinking of new ways to compete
[10]	Value innovation	A new strategic logic that makes the competition irrelevant by offering fundamentally new and superior value in existing markets and by a quantum leap in buyer value to create new markets
[11]	Strategy innovation	Here strategic innovation is the rethinking of the basis of competition for any company in any industry. Particularly new business models and breaking through traditional boundaries to create new market space.
[12]	Disruptive innovation	Disruptive innovation is seen as the creation of entirely new markets and business models and creation of growth from new ways of competing
[13]	Business model innovation	The fundamental reconceptualization of the business model and the reshaping of existing markets (by breaking the rules and changing the nature of competition) to achieve dramatic value improvements for customers and high growth for companies

## II WHAT DRIVES DISRUPTION AS A CONCEPT?

The concept of disruption is not a fixed and stable concept. Instead, the concept is still emerging as we speak. This is partly

because many people contribute to our understanding of the concept through research, thinking and practice. Also, several external drivers contribute to the continuous evolution of the concept of disruption.

Based on the author's research over the years, the drivers of the concept of disruption Anno 2017, and, hopefully, beyond, can be described under a number of drivers. In my recent book, I identified and discussed ten such drivers. For this paper, however, the drivers have been clustered into three categories. The categories are:

- A. Digitalization.
- B. Big Data and Industry 4.0.
- C. Individualization

For an up-to-date and more comprehensive view of the new competitive battlefield of strategy Anno 2017 and its importance for the concept of strategy, please consider this author's most recent book – "Fast Forward Strategy" [14].

### *II.1 Digitalization as a driver of disruption*

Much of what we think that we know about strategy and the forces of competition is, in fact, based on research and contributions that are 20-40 years old and, albeit seminal in nature, born under circumstances that have changed considerably since then. With a contingency view of (strategy) theory as starting-point, it is important to note that society, in general is in the process of moving from the industrial society to a different form of society known as, for instance, the knowledge society [14]. It is in this light that we need to consider the concept of disruption and the evolution of disruption itself.

Consider, for instance, one of the most influential models of competition and competitive forces within an industry, Porter's Five Forces Model of Competitive Forces [15]. The Five Forces model remains part of the standard toolbox of the strategic manager to this day. However, the model was created based on thinking related to the economic and strategic situation of the 1980s – a situation characterized by serious competition, predictable cyclical economic changes and relatively stable organizational structures [14].

Since the 1980's, however, much has changed in the world. The development of an important internet economy over the past couple of decades, for instance, is one of the factors that has fundamentally changed economic and competitive conditions since then. This has led many to claim that the five forces model can no longer be used to explain or analyze dynamic changes in environmental changes for modern organisations [14].

For instance, Larry Downes – co-author of one of the seminal works related to disruption "Unleash the Killer App" [5] – has published another important work for our purposes in this paper, "Beyond Porter" [16]. In this paper, Downes states that the basic assumptions (regarding environment and economic conditions) behind the five forces model are no longer valid. Based on this claim, Downes identifies three new forces of a state-of-the-art analysis of competition for modern

organizations: digitalization, globalization, and deregulation [16].

The prime driver here is that of digitalization in the form of the emergence of new information and communications technology making it possible for all players in a market to have access to far more information than previously [14]. This information will make it possible to create new digital business models and alter competition at a rate and speed that was inconceivable in the 1980s, thereby changing the basis for competition in existing markets at an unprecedented scale [10]. Digitalization, therefore, drives globalization as traditional political and geographical boundaries lose their importance due to, among other things, digitalization. This, in turn, makes it necessary to deregulate as laws and legislation must yield to the forces of globalization and digitalization much as depicted in the model of disruptive changes shown in figure 1 and in "Unleash The Killer App" [5].

Downes' paper is from 2001, but it seems as if very little has done to slow down or counter the developments outlined in the paper. Instead, socio-cultural development related to globalization such as the importance of sustainability, circular economy and corporate social responsibility are current trends based on the forces outlined above [14].

### *II.2 Big Data and Industry 4.0 as drivers of Disruption*

Sometimes a good memory and a sense of history can be quite annoying. As an example, this author has been around long enough to have witnessed the early promises from research on robotics and "data mining" and been disappointed many times over the years. The author's 20-odd year wait for a C3P0-like butler-robot to greet guests at the Drejer-household is a testimonial to the effects of an exponential development of technology – the kind that drives disruption in general [14].

As illustrated in figure 1, an exponential development can be characterized as a rather slow development in the early stages of the overall development. In fact, a mind thinking in linear terms might find the early development of exponential technology somewhat disappointing compared to the "usual" linear development of, say +10% a year. Hence this author's annoyance of the "slow" emergence of robots for the home, unmanned cars and the so-called "Internet of Things" ... However, an exponential development does not always come across as "slow". Because the current development of Information and Communications Technology is created by Moore's Law – a doubling of computing power every 18 months – this development will take off big time at the so-called "Singularity Point". The latter is a term coined by Ray Kurzweil [14] that has even led to the establishment of the so-called "Singularity University". The point of the singularity point is that we are presently right in, or even right after, the singularity point where development speeds and the resulting opportunities/threats emerge much faster than business, social and legal systems can keep up [17]. Unmanned vehicles represent a functioning technology in existence, but the laws necessary to get unmanned cars on our roads is sadly behind the curve along with the necessary social changes. Apparently, a major issue is whether or not humans should be allowed on the roads of the future along with robot drivers ... [14]. Two

current trends that the reader might appreciate along these lines are those of Big Data and Industry 4.0.

Based on, among other things, idea of “Data Mining”-reaping the benefits of having enormous amounts of data available for analysis - Big Data is a relatively new term that has surfaced recently to the mainstream media and has become a buzz word for management writers and media alike. In fact, the very term “Big Data” was introduced in the Oxford Dictionary as late as 2013 as:” ... *Extremely large data sets that may be analyzed computationally to reveal patterns, trends, and associations, especially relating to human behavior and interactions* ... “ [18].

However, the mainstream media and others are behind the curve on the development of Big Data [14]. An early study of the literature on Big Data in 2014 showed that the main interest was on the moral/philosophical and technical aspects of Big Data with little or no interest in the implications of Big Data on competition, economy and, ultimately, strategy [19]. Later work has made us a more knowledgeable on what Big Data is, for instance a recent study defines Big Data as characterized by Volume, Velocity, and Variety [20].

The important point about Big Data, however, is that the concept of Big Data has already moved from the conceptual stage to the application stage regarding services and businesses. There is a world of difference from the study [19] in 2014 that revealed little or no concrete thoughts about the application of Big Data in business to an already obsolete map of the existing “Big Data Landscape” from 2016, see figure 2.

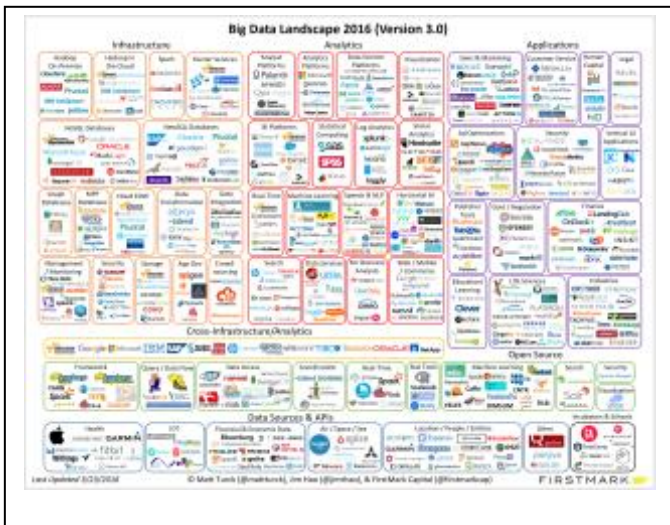


Figure 2: Big Data Landscape 2016 [21].”

The map in figure 2 – version 3.0 of that year – is a reminder to us that the concept of Big Data is altering the way we think about business and strategy in a major way. And very fast too. As with robotics and unmanned vehicles, Big Data has already moved into the world of business and strategy faster than the mainstream media (and politicians and the general public) can fathom. Business Models based on Big Data will be an important factor of changing the business world of tomorrow, starting today [20].

Another, not unrelated, trend based on the availability of data, sensor technology, robotics and automation in general, deserves a mention is that of Industry 4.0. As a long-time researcher of the world of manufacturing, which is still an essential part of the business world of 2017, this author has studied the concepts of industry and the development of these driven by Information and Communications Technology, Automation, and New Management Systems, for more than 25 years. Many researchers agree that research in manufacturing can be characterized into different, distinctive, schools of thought – some according to research traditions [22] and others according to contingent situations of management [23].

In accordance with the latter tradition and very much in line with the approach of this paper, Industry 4.0 has been described as the latest version of how manufacturing is perceived at a conceptual level in light of the advances of technology, automation, and management thinking, see figure 3.

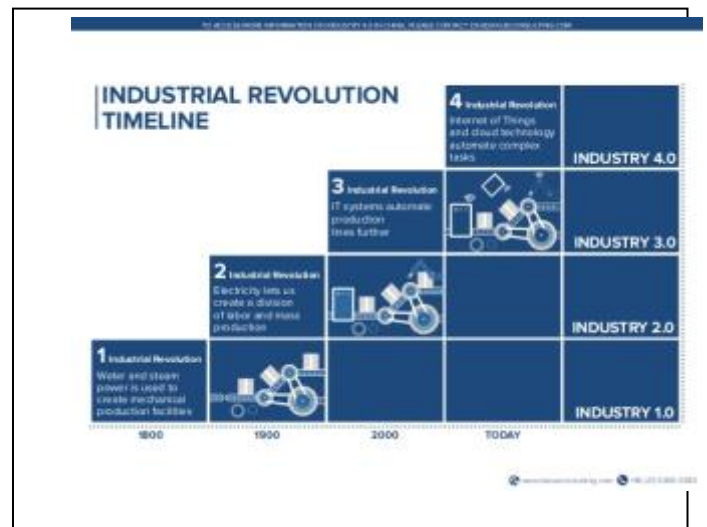


Figure 3: The Concept of Industry 4.0 [24]

The main point of bringing this large area into the current discussion as a mere illustration is to make the reader aware of the fact that even the manufacturing floor – the very place where our products become physical reality – is becoming the victim of the concept of disruption [14]. This will change the world of workers and organizations related to manufacturing all over the world in the years to come as well as those of us who merely consume the products being produced by industry 4.0.

In summary, the derived effects of the exponential development of Information and Technology that is behind the very concept of disruption have some profound implications for the way we live and exist tomorrow. – also as researchers and practitioners of strategic management. Other important effects, however, are socio-cultural and pertain to the very life we lead.

### II.3 Individualization as a driver of Disruption

The continuing evolution of Disruption seems to both help create and is being sustained by several socio-cultural changes

among customers and markets [14]. The starting-point for this driver is that of individualization and starts with technology. As more and more services and business models are becoming digitalized, it becomes possible – or even necessary – to tailor services and relations with customers individually [14].

First, the tailoring/individualization being made possible by digitalization leads to the dismantling of the perception of a market as a uniform whole that may need to be divided into a limited number of segments – a perception born of the industrial age. Instead, we are looking at a perception of the market as consisting of (individual) customers each with unique needs and demands [14]. This leads to some of the more interesting modern strategy research, where the needs of customers are the very centre of strategies and business model, consider for instance the work on “Blue Ocean Strategy” [7] or Hamel & Prahalad’s contributions to the strategy field [10].

Second, the author finds that philosophers and others have started to discuss a more basic change in societal form away from the industrial society towards what, for instance, Giddens has labelled a post-modern society [25]. In such a society, in man is more reflecting and free from traditions and customs of old [25]. Obviously, the latter idea draws on earlier works by people such as Toffler [26] and others [27], but it seems as if the ideas of a societal change are currently becoming reality in much the same manner as the disruptive technologies of figure 1, albeit a little slower. However, just as the author has mentioned exponential growth of technology – and been disappointed of the perceived slow growth in the beginning – only to find that when the technologies really take off, it is hard to keep up, perhaps we find that the post-modern society is developing faster than we can imagine?

Notwithstanding the critique of Giddens from people such as Bourdieu [28], it seems as if the disruption is creating changes in society on a grand scale. Consider, for instance, our family patterns. In Denmark, the National Office of Statistics used three categories to denote citizen’s marital status in 1950 – in 2017 the number of categories has grown to 29! [14]. Something is certainly happening, but to label this “individualization” alone is probably a misrepresentation. The emergence of shared economy and services such as Airbnb, Uber and others suggests that we are still willing to part of communities albeit communities of a less stable and more short-lived nature than traditional communities.

The main point, however, is clear: when disruption anno 1997 connects with the market, the effects are enormous. Consider, for example, what streaming services such as Netflix have done to the traditional notion of flow-TV or what Twitter has done to American politics. No pun intended, almost. The effects in the market place are certainly part of the continuing evolution of the concept of disruption.

It is within the context of this development that we must view the emphasis on uniqueness and unique competitive advantage that has flourished recently, seminally exemplified by Tovstiga [29].

## II.4 Disruption defined Anno 2017

To this author, it is important to note that the concept of disruption has evolved since its origins. When it originated, the concept was primarily an advancement in theory – a concept that thanks to Clayton M. Christensen [3] help us explain why certain kinds of technological change will topple current market leaders in favor of new ones, whereas other types of technological change tend to sustain current market leaders. When the idea of exponential technological change was born, almost at the same time, a lot of researchers concluded that the idea of competition and, therefore, strategic management needed to be changed in light of disruption and the effects of disruption. Obviously, this was important to the scientific community and to managers and entrepreneurs riding the first wave of what was to come, but hardly noticed by the general public and its representatives, the legislators.

This has since changed. Disruption Anno 2017 does not only urge us to find out new ways to conduct strategic management in theory and practice. Disruption Anno 2017 is a force that forces us to rethink how we define our societies, families and social structures in order to survive in the future. **Disruption anno 2017 is a force that changes society as we know it.**

## III RESEARCH QUESTIONS AND METHODOLOGY

Even if the author may have exaggerated a bit to underline the point, it is important to present research on the effects of disruption. While some prefer to work on the societal level – and perhaps the current Danish Government were not stupid in appointing an advisory board on disruption after all? – this author prefers to work with organizations as the unit of analysis.

Furthermore, this author prefers to do research on strategic management in practice. Plenty is written on the theoretical aspects of strategic management – both on environment, content, and process as well as many other subjects. However, all of this theory comes alive and evolves when subjected to meeting the reality of managing an organization at the strategic level.

Thus, in the remains of this paper, we will limit ourselves to consider an individual organization and 1) *how disruption affects this organization* and 2) *how disruption forces the organization to rethink its approach to strategic management*.

We have chosen a rather unlikely candidate as case, as the organization under study is a supplier of physical components to, mainly, the wind turbine industry called Sjolund. At first glance, Sjolund has all the makings of an traditional industrial company – big machines are everywhere, it is dirty and noisy, and blue collar workers abound. Sjolund machines aluminium into large and small components of wind turbines, trains, and parts of buildings, e.g. window frames, support beams and others. Traditionally, the key process in doing so has been that of rolling – an old technology involving a lot of force and a lot of experience on the part of the workers involved. A very unlikely candidate to feel the effects of disruption indeed, but even here – in the industrial backbone of Denmark’s businesses

– disruption has consequences, and forces managers to reconsider the how and why of strategic management.

Methodologically, we are in the realm of a case-study but in the form of action-research. The author has received permission to work with the CEO of Sjolund and his team of top managers on ways to improve their approach to strategic management. This has happened over a period of two years centered around monthly workshops during which different process and content tools to strategic management have been applied in practice. Those that the collective of us deemed to benefit Sjolund were put to permanent use, and after some time a new – more learning based – approach to strategic management emerged.

#### IV CASE ANALYSIS

In this section, we will present the case analysis of the case company, Sjolund, a Danish-based SME that acts supplier to several markets and that has had to rethink its approach to strategic management due to the forces of disruption.

##### IV.1 Context and theoretical background

First, let us clarify our starting-point regarding the subject of research in this case – that of strategic management divided into content and process.

Regarding the content of strategic management, the starting-point is that when one visits the different applications of the concept of strategy, ones quickly realize that strategy has become an everyday word that we used as part of our general vocabulary. Today, people can declare to have “a strategy” for buying a house, getting a job, or setting up a date! However, in professional use, strategy is applied to the firm at many levels: a firm as a whole at the corporate level (corporate strategy); to parts of a firm (business strategy and functional strategy), e.g. marketing strategy or R&D strategy; and specific activities within the departments of the firm (operational strategy), such as quality strategy. Therefore, strategy means many different things and the various applications of the notion of strategy have made it somewhat blurred. One must wonder: how are all these different uses and concepts related to each other? And what do all these concepts mean? This author’s starting-point is the definition of strategy offered by Johnson & Scholes:” ... *Strategy is the direction and scope of an organization over the long-term: which achieves advantage for the organization through its configuration of resources within a challenging environment, to meet the needs of markets and to fulfill stakeholder expectations ...*” [29]. From this definition, it is possible to identify activities and decisions by the management of the case company and analyze how these change over time.

Regarding the process of strategy, the traditional approach to the strategy process is that of strategic planning, strategic management as the result of deliberate, rational and optimizing actions on the part of managers. As the reader (hopefully) is aware, the idea of strategic planning has attracted much criticism over the past 25 years. For instance, William Starbuck cites a study by Brinyer and Norburn where they found that firm’s profitability correlates only very weakly with the formality of planning. Starbuck’s conclusion is that: “*Planning*

*and strategizing generally make unimportant contributions to profits...*” [28].

Of course, the idea of decisions being made as a result of deliberate, rational, and “economic” action is not the only one in the literature. At least three other ideas exist:

- 1) The idea of decisions controlled by the logic of identity through a system of organizational structures, rules, roles, and habits.
- 2) The idea of decisions strongly influenced by the interactive environments of which the decisions are part.
- 3) The idea that the outcome of a decision is not important for understanding how decisions are made.

Our starting-point is that of decisions influenced by the interactive environment of which the decisions are part. This starting-point has led people such as Quinn to propose the notion of *logical incrementalism* to describe strategy formation. Quinn concludes: “... *My data suggest that when well-managed major organizations make significant changes in strategy, the approaches they use frequently bear little resemblance to the rational, analytical systems so often described in the planning literature...*” [32]. Logical incrementalism denotes successful strategies in practice, a process of the gradual evolution of strategy driven by conscious managerial thought. In other words, rather than major strategic revolutions, managers seemed to formulate and implement strategies in small, incremental, steps. There is a logical step from this stance to the notion of “emergent strategy” as advocated by Richard Lynch [33]. With Lynch, the author sees the strategy process as a process whose final objective is undecided and where elements are developed as the strategy unfolds over time [33], [14].

##### IV.2 The Case Company

Our case company, Sjolund, presents itself as a traditional industrial company. It is an SME with annual sales of more than 25 million euro and a workforce of about 100 men strong. Originally based on the technology of rolling, the company has been in existence for 40-odd years, the last 20 under the ownership and management of CEO Soren Ravn.



Figure 4: Soren Ravn, CEO of Sjolund

Traditionally, Sjolund has thrived as a sub-supplier based on deep expert-knowledge about its key process of rolling, specializing deeply in and around the process of rolling and creating competitive advantage with this focus on a rather rare and knowledge intensive process that customers have had the tendency to outsource rather than deal with themselves. As such a supplier, Sjolund has been a prime example of the back-bone of Denmark's industrial landscape – there have been many firms like Sjolund in Denmark's industrial history. As a contrast to neighbours Sweden and Germany, where industry is driven by large-scale manufacturers, Denmark is characterized by having few large-scale manufacturers and many SMEs, many of which specialize in one or few processes rather than in products or components. Within the realm of manufacturing philosophies, this industrial structure has led some to suggest that this kind of approach – which is found also in Italy and other places – is a viable alternative to the idea of mass-production. This is labelled “flexible specialization” – an approach based on flexible—multi-use—equipment, skilled workers, and the creation, of an industrial community that restricts the forms of competition to those favoring innovation [34].

A traditional craft-based industrial company that has thrived and made results for a long time, Sjolund can be viewed as an unlikely candidate for an organisation that works with modern approaches to strategic management in light of the pressure of disruption. And that is precisely the point – there is a lot to learn from this case.

#### *IV.3 The case of a new approach to strategic management*

A minor detail will be explained to place the case further in context. Under Danish corporate Law, there is a legal distinction between the top management of an organization and its (external) Board of Directors, the latter representing the owners of the organization without working directly for the organization. In the case of Sjolund, which is owned solely by its CEO, this corresponds to a situation where a UK company has several non-executive board members one of which is its chairman.

In the case of Sjolund, the background for the case study was the fact that the board of the company for years had insisted that the top management team of the company prepared rather traditional strategic plans according to the “rule book” of strategic planning. This insistence was to everybody's dissatisfaction, since the plans were never implemented. Outside and unforeseen events – such as major changes in customer demands, new large order or sometimes just the creativity of its owner/CEO – always seemed to pop up taken the Board by surprise. An example of the CEO's creativity is that of buying, implementing and starting to sell components from a 3D printer to entirely new customers (other suppliers in similar parts of the value chain as Sjolund) – something that had “just happened” between two of the author's bi-monthly visits to the company.

After having wrestled with his board and strategic planning for years, the CEO of the case company contacted this author for advice. Unable to give him a ready-made answer, the author instead presented the idea of emergent and learning-based approach to strategic management. and proposed a collaboration based on the principles of action research for an extended period.

The collaboration, which is now in its third year, several results can be reported. By learning from past successes (rather than failures), we found that disruption already has made impact in one of the businesses of Sjolund, that of the building industry. New IT solutions have made it possible for architects and builders to create unique and spectacular solutions in buildings – solutions that needs to be supported by suppliers of components such as support beams and window frames. The management of Sjolund was quick to invest in technologies – IT and automated milling machine among others – to enable the organization to rise to these emerging demands from its customers.

Based on this success, the top management decided that Sjolund needed to move from being a specialist in one process (rolling) to mastering several process technologies, including welding and assembly. The latter enabled Sjolund to bid for the delivery of larger and more complex components in its largest business, the wind turbine industry. Having managed to expand its portfolio of products in the wind turbine industry, Sjolund was able to engage in a dialogue with its customers about its future status. Presently, the notion of becoming a “Tier One” supplier to its main customers within the wind turbine industry is being kicked around and investigated in a continuous dialogue.



Figure 5: One of the more prestigious examples of the context of Sjolund's components – the delivery of 11.000 unique parts to window frames in a uniquely designed building.



The reason why the author has been able to trace these patterns of decisions, experiments and actions is that the patterns have been documented and described in detail by the author. Over the course of the case study, a practice of strategic management has emerged that consists of a monthly meeting of the top management team of Sjolund with its two non-executive board members. These meetings are documented in an easily accessible form, see figure 6. Furthermore, each meeting is prepared by interviews of each the participants in the meeting, also on a monthly basis.



 <b>Spillerunde nr.: 5 , den 10-03-2017</b>		<b>Deltagere:</b> Søren R. Jensen (SR) Christian Østergaard (CØ) Finn Mortensen (FM) Michael R. Skovgaard (MS) Jakob Blok Grabow (JB/SL) Anders Drejer (AD/SL)										
<b>Strategisk spilleplade 1: Ledelse og Kultur</b>												
<b>Potentielle spillebrikker:</b> <ul style="list-style-type: none"> <li>• Kulturbarometer</li> <li>• Hvilken kultur har vi (subkulturer!)</li> <li>• Hvilken adfærd ønsker vi?</li> <li>• "Lever" vi vores værdier?</li> <li>• Ledelsesprincipper</li> <li>• Hvilken ledelse bedriver vi i praksis?</li> <li>• Hvordan inddrager vi "mellemledere"?</li> <li>• Ledergruppen i funktion</li> <li>• Hvordan bliver vi en bedre ledergruppe?</li> <li>• Hvordan får vi mere og bedre ledelse i dagligdagen?</li> </ul>	<b>Aktive spillebrikker:</b> <ul style="list-style-type: none"> <li>• Kulturbarometer [SR, CØ &amp; FM]</li> <li>• (Spilles eksternt!)</li> <li>• Præsentation af ny vision mv.</li> </ul>	<b>Evt. gæster:</b> Christian Hjermand   										
<b>Næste runde:</b> DATO: _____ <b>Forberedelse:</b> <ul style="list-style-type: none"> <li>• Nedenstående forhold blev revideret og præsenteres igen</li> <li>• Den overordnede "retning" for Sjolund præsenteres i form af "statements"</li> <li>• Overvejelserne og formen for "kulturudvalget" præsenteres</li> <li>• (Christian Hjermand inviteres evt. med til denne spilleplade)</li> </ul>												
<b>Træk på spillepladen:</b>  <b>Vision</b> Sjolund A/S skal være en førende, globalt orienteret underleverandørvirksomhed og kerneleverandør af metalkomponenter til vind-, transport-, bygge- og maskinindustrien.  <b>Mission</b> Sjolund A/S har stærke relationer til sine kunder og involverer sig dybt i at udvikle de bedste løsninger. Vores udgangspunkt er, at alt er muligt <u>vi elsker udfordringer</u> . Vi er specialister, og vi ved at vores viden og markedsforståelse er fundamentet for vores konkurrenceevne. Vi vil vægtes som kerneleverandør af metalkomponenter på grund af kvalitet, vores innovative løsninger og pris.  <b>Værdigrundlag</b> <b>KVALITET   LOVALTET   OG EFFEKTIVITET</b> <table border="0"> <tr> <td><b>Faglighed</b></td> <td>Kvalitetsbevidsthed, professionalisme, faglig dygtige, kompetente</td> </tr> <tr> <td><b>Innovation</b></td> <td>Nytænkende, udfordrende, kreative og omsorgsfulde</td> </tr> <tr> <td><b>Ansvarlighed</b></td> <td>Trofast, tager ansvar, forretningsorienteret og kvalitetsbevidst</td> </tr> <tr> <td><b>Samarbejde</b></td> <td>Langevarende relationer, serviceindhold, åben, ærlig, løsningsorienteret, gensidig respekt</td> </tr> <tr> <td><b>Ambition</b></td> <td>Interne områder, prispolitik, mod, ethisk, udviklende og resultatskabende</td> </tr> </table> Ovenstående forhold blev diskuteret og revideret i Word dokument.			<b>Faglighed</b>	Kvalitetsbevidsthed, professionalisme, faglig dygtige, kompetente	<b>Innovation</b>	Nytænkende, udfordrende, kreative og omsorgsfulde	<b>Ansvarlighed</b>	Trofast, tager ansvar, forretningsorienteret og kvalitetsbevidst	<b>Samarbejde</b>	Langevarende relationer, serviceindhold, åben, ærlig, løsningsorienteret, gensidig respekt	<b>Ambition</b>	Interne områder, prispolitik, mod, ethisk, udviklende og resultatskabende
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Figure 6: Example of the documentation of strategic learnings in the case.

The reader must forgive that figure 6 is in Danish. It is merely meant to convey that the monthly strategy meetings at Sjolund are being documented in a simple format that is recognizable for the participants and easy for fill out in the course of meetings. The current format has, naturally, emerged over time and is subject to further development.

At every point in time, the strategic management of the case company focuses on a number (no more than five at a time) themes that are deemed the most relevant for the case company at that time. Themes may change over time, but typical last for more than six months. Still, every meeting starts with the question of what themes should be "in play" for the next period. This is where new themes emerge. For instance, due to a "strong wish" of a major customer the theme of buying

a smaller supplier in eastern Europe has emerged as a new theme in the spring of 2017.

Based on experience, the number of themes are kept at a minimum – no more than five themes are dealt with at the same time. This is due to the resources of the organization and the realization that it is better to solve (fewer) tasks than merely to identify (many) tasks. Furthermore, for each theme a number of actions are identified at the monthly meetings. Each action is specified in general and assigned to a member of the organization with a deadline typically before the next monthly meeting. The number of actions are also kept low.

In this way, the top management of the case company has created a process where strategy is a continuous part of the agenda of top management, where it is possible to react to or create sudden emerging changes, and possible to maintain a number of stable elements in the strategy of the company at the same time.

Of course, there have been failures along the way. A joint-venture with a foreign partner had to be dismantled within a year of its creation and some themes, e.g. leadership values, have proven difficult to handle in practice. Still, top management of the case company is a lot less frustrated with strategic management than when they tried to conduct strategic planning by the book. Also, the top management has realized that the process of strategic management itself is also subject to changes and learning.

#### IV.4 Interpretation

Now, let us interpret on the case-study in its current form. The results of the case-study are presented in an abridged that does not do justice to the amount of work and learning involved. Literally, hundreds of interviews have been conducted, dozens of meetings have held and documented, and hours and hours have been spent on the action research. Also, the research is on-going, even though the time to shift attention to another, equally interesting, organization is nearing. Still, some things have been concluded at present.

It is interesting how the concept of disruption is influencing the strategic management task of the case company by creating opportunities and/or threats even for a rather traditional, industrial and technology-based SME in Denmark. Technologies, such as IT, 3D printing and so on, are creating opportunities to design and create organic and stunning forms that alter the way we perceive buildings, cars, windows and many other shapes. The latter creates opportunities for those who supply components that make up these shapes – if they can create said shapes in the right quality at the right price. At Sjolund, a number of giant flowers for a Chinese amusement park was created by hand in the traditional way – because money was not an issue when it came to such one-of-a-kind products. That cannot be said of components ordered by major car manufacturers, here automation and new technologies are absolutely necessary to even bid for the orders. Furthermore, disruption in the form of globalization alters the task of strategic management for Sjolund. Rather wisely, the company chose to become international with the wind turbine industry, for instance by establishing manufacturing in China. The decision to become international creates new opportunities

from China and other places where Sjolund is visible, e.g. large building/construction orders in Dubai, and so on.

It seems clear that disruption is altering competition and the strategic management task for Sjolund. This is not necessarily a bad thing! By rising to the opportunities offered, Sjolund may create new competitive advantages and competencies to replace the old ones of specializing in one process technology.

In terms of strategic management, it seems to this author that the management of Sjolund has engaged in working with emergent strategy in practice with an open mind. It seems that a major strength of emergent strategy is that it is, still, goal-oriented, albeit in a manner that recognises that goals may change over time. This has been of importance to the managers of the case company – rather naturally since their livelihood depend of the results of their organization. But, by learning about the principles of emergent strategy, the managers have come to accept that goals may change – and perhaps should change. It has been particularly interesting to see how the realization that maximizing profit of the organization need not be the only and fixed objective of the strategic management of their organisation has freed managers to try out experiments. We have already mentioned the CEO's spontaneous purchasing and implementation of a 3D printer – an action made easier by the realization that it is an experiment in disruption that may benefit the company later. Not that said CEO really needed reinforcement when it comes to implementing his creative ideas, but still – many organizations that are 40-something old struggle with experiments, creativity and innovation. This is not the case at Sjolund. Additionally, themes that would normally be considered “soft” or “irrational” have found a place in the strategic management of the case company due to the principles of emergent strategy. For instance, the company has made a (small) investment in a communications officer who has seriously updated internal and external communication to stakeholders. Based on feedback from employees and other stakeholders, this experiment seems to have been a viable investment measured in economic terms, not to mention in goodwill from stakeholders.

It seems clear that the principles of emergent strategy can be applied successfully even in a technologically driven SME and that many benefits are reaped from doing so. It also seems that this is not at the cost of earnings (the case company still makes very good results at the bottom-line) or the feeling of control on part of top management.

Naturally, the journey is not over for the case company. Disruption will continue to influence the environment and strategic management task of the organization. During recent months, top management has identified Industry 4.0 as a force to be reckoned with – who knows what industry 4.0 will do to the manufacturing of wind turbines in the coming years? – and attempts to gain proactive knowledge, e.g. by means of benchmarking, have been taken to action. The attempts to gain proactive knowledge is clearly new for the top managers of the case company and is, actually, something that has increased the managers' sense of being in control of the strategic destiny of Sjolund.

## V CONCLUSIONS

The purpose of this paper is to illustrate the effects of disruption on a selected case company. The reason for this is found in the concept of Disruption itself, as the concept of disruption is itself changing and emerging as we speak. The author, therefore, devoted the first part of the paper to a discussion of the concept of Disruption in an attempt to show that disruption has evolved from its roots in technological innovation to a force that makes it necessary for us to reconsider how we think about strategy and how strategic management is done. The discussion of disruption even shows that Disruption has become a force related to global development and has won a much-deserved place on the agenda of visionary top managers and Governments.

The importance of Disruption makes it even more necessary and relevant to look at how ordinary organisations and companies feel the effects of disruption in its different forms.

In order to achieve this end, this paper has presented the research on a case company, Sjolund, in which top management has attempted, somewhat successfully, to change the way they conduct strategic management in light of a changing strategic management task. Through a process of action research, the principles of emergent strategy are applied and process solutions, tools, and models are developed and tried out in practice. Some of these have found to work for the top management of the case company, while others are abandoned in favor of others.

The author hopes that the case study will contribute to the general body of knowledge as both an illustration of the effects of disruption on a rather unlikely candidate and as an inspiration to find and present other cases of disruption and changes to how strategic management is conducted in practice. We have known about the principles of emergent strategy and disruption for quite some time, perhaps it is time to put both conceptions to use so that we may learn from practicing rather than preaching?

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