SOCIAL MEDIA AS A COMPETITIVE TOOL IN ORGANIZATIONS: THE RED QUEEN EFFECT

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ABSTRACT

Today’s organizations, public or private, pursue both substantive and organizational goals, which they must balance in their operations. Also, they have to change themselves against environmental conditions that challenge them every day. Organizations seek both to maintain (or expand) their own autonomy and authority and to achieve their substantive goals, such as maintain their customers and find new ones. Therefore, strategic management and its applications are one of the most essential subjects for organizations. One of the most popular strategic application in recent years is social media management. Globalization and high competition have made social media applications as a part of organization’s daily life. So, what does social media means for organizations? It is the effective and efficient use of resources so that an organization can survive in the long term, ensure a sustainable competitive advantage and achieve above average profit in the competition system. The Red Queen Effect (RQE) which is the research topic of this paper is seen as an important issue in the context of the use of social media as an important competitive tool in the organization-environment interaction.

Keywords: Red Queen Effect, Organizational Change, Social Media, Big Data, Competition

INTRODUCTION

Nowadays, rapid technological changes, extensive globalization, and intense competition have created significant pressures on organizations. To build an agile organization, one of the most essential issue is how to build an organization that can respond rapidly to the changing business environment. Organizations with different organizational structures have different organizational behaviors when responding environmental changes (Wu et al, 2009). In this study, social media will be investigated as one of these behaviors.

Social media are fundamentally changing the way we communicate, collaborate, consume, and create. They represent one of the most transformative impacts of information technology on business, both within and outside firm boundaries. Social media have revolutionized the ways of organizations relate to the marketplace and society, creating a new world of possibilities and challenges for all aspects of the
enterprise, from marketing and operations to finance and human resource management. In particular, social media have been integral to recent advances in relational inference about consumer preferences, novel peer-to-peer and targeted marketing techniques, and demand prediction (Aral et al, 2013:3).

For example, Fortune 500 companies have begun to understand the value of a social media presence. In 2011, nearly 83% of Fortune 500 companies were engaged in some form of social media to connect with either their customers or consumers.

Across the entire landscape of modern society, the proliferation of social media and also “Big Data” have completely changed the way of government, large and small businesses, sports teams, nonprofits, and most organizations communicate with their stakeholders. For example, in January, 2016, President Obama had over 6.9 million Twitter followers; NASA had nearly 15 million Twitter followers; and LeBron James, an NBA basketball player, had nearly 28 million Twitter followers. Yet, despite the proliferation of social media in today’s market and the success many companies and industries have experienced with the use of social media in both a business-to-consumer (B2C) and business-to-business (B2B) setting, some very successful companies still do not use social media, and others do not use it either efficiently or effectively.

Countless sales books, news articles, and other research publications promote the idea that interpersonal relationships, including face-to-face selling techniques are the most effective sales strategies in a B2B environment that involves complex negotiations, long sales cycles, and may involve many people in the process.

Although the importance of interpersonal relationships is still an integral component of selling highly technical products and services in industrial markets, the limited face-to-face time sales people have with customers adds to the importance of social media in staying connected with customers (Flanigan and Obermier, 2016:18).

So, in this study, The Red Queen Effect assumption by social media seen as an important tool for organizations to achieve competitive advantage under changing environmental conditions. There is so little research on the study topic in the literature. The main aim of this study is trying to complete this gap.

**LITERATURE REVIEW**

The relations of institutions with their environment have been investigated by organization theorists for many years. Numerous studies have been carried out in the field of organizational adaptation and organizational ecology. The influence of the Red Queen also resembles the theory of ecology. Because the hunt-hunter relationship in the theory of ecology and the influence of the Red Queen described “the better to be better than the competitors should run faster” statements seem similar. Organizational ecology approaches do not address institutions one by one. They consider the group as a group and explore their relationship with their environment. At what point a hunter can be fastest, how much of a tree in the forest alone can grow and / or extend, the costs of being longer or bigger can be beared up to the stage, how long can a hunter survive and how long can it be hunted? The answers of these and similar questions are tried to be answered in the context of social media concept and organizational competition in this study.

Why do successful organizations often move in new directions and then fail? We propose that this pattern is especially likely among organizations that have survived a history of competition. Such experience adapts organizations to their environment,
through so-called “Red Queen” evolution, but being well-adapted for one context makes moving into new contexts more hazardous. Meanwhile, managers in such organizations infer from their histories of competitive success a biased assessment of their organization’s ability to change. Consequently, although surviving competition makes organizational change especially hazardous, managers in surviving organizations are especially inclined to such initiatives.

Many who study organizations note a puzzling regularity: Successful organizations often take new challenges and this action can cause to failure. Some in the field of strategic management argue that organizations can avoid this fate by developing the “dynamic capabilities” required to successfully change.

In parallel, consulting firms specializing in change management abound, helping organizations to deal with this problem. And formal systems of management education routinely include courses on how to manage the difficult and hazardous process of organizational change. Presumably, as these initiatives progress, organizations will increasingly develop the ability to change, and so be less inclined to follow the all-too-familiar pattern of rise and decline. The challenge is well articulated in this quote from an authoritative book on the subject: “Too much capital, and, more important, too many social commitments are involved in industrial concerns for change to occur through the elementary birth and death cycle usual a hundred years ago. Firms must keep alive, and in order to keep alive they must become adaptive; change must occur within the organization and not through its extinction and replacement, if it is to occur at all.” (Barnett and Pontikes, 2008;1237)

The search for differences in performance between competing institutions is a fundamental issue in strategic management. A number of answers to this complex problem have been presented to this day. According to the studies on the sector structure, the barriers encountered in the sector such as access to sector or mobility within the sector affect the performance of the institutions. According to the opinion of resource dependence; It is emphasized that the institutions have unique and valuable resources according to their competitors, and that the behaviors of the competitors are limited. According to the performance differences between institutions, the theory of evolution is seen as the function of a competitive race to explore profit opportunities. According to this view; high performance is achieved through speed and innovation, which enables organizations to be ahead of their competitors (Derfus et al., 2008).

When the organizational strategy studies are examined, it is seen that the majority of the institutions focus on adapting the internal environment to the external environment. Adaptation theory suggests that organizations should screen the environment for opportunities and threats, formulate strategic actions, and adapt their organizational behavior accordingly, taking into account their strengths and weaknesses. Similarly, contingency theory proposes the formation of organizational structures in the context of environment-technology.

However, due to the dynamic environmental changes faced by today’s institutions, it is not practical to suggest that an organization can maneuver quickly enough in response to challenges. These theories fail to take account of the limitations and constraints on which organizations are fast enough to adapt to environmental opportunities and threats. Therefore, ecology approach is seen as critical for contingency and adaptation theories (Hannan and Freeman, 1977; Wilbon, 2015).
Researches on the subject present that; the basic characteristics and capabilities of the institution and the time needed to make changes can vary from environmental impacts (Hannan and Freeman, 1984). There are two important reasons for not being able to adapt to the organizational environment in these researches. The first is the limited perceptions of managers and the limited rationality expressed as information processing systems. They conclude that these institutions cannot react appropriately because they do not have a reliable and complete knowledge of their dependence on other actors in the environment. However, the more data on the subject, the more attention to their environment will be easier to understand. But attention is also a limiting process. A person may be inadequate at the same time, and some events are overlooked. The most important result at this point is; limited ability of individuals to understand the environment is seen as an important reason for the failure of institutions to adapt to their environment.

The second reason for the failure of institutions to adapt to their environment was put forward by population ecology theorists. According to them, the reason why institutions fail to change is simply; either because they cannot have the resources they need or cannot act fast enough to provide these resources. Organizations fail to have enough information about their environment and change their environment while failing to change their strategies and structures quickly enough (D’Aunno and Price, 1985; Hannan and Freeman, 1977).

Based on these two reasons, the Red Queen Effect was chosen as the research topic. Evolutionary and ecological theories focusing on the RQE show how institutions interact each other and to their environment. The Red Queen applied in a business context can be seen as a competition in which each institution’s performance style depends on whether it complies with or exceeds the actions of its competitors. In this race, as a result of innovative actions, the performance increase achieved by an institution may cause performance degradation in other institutions (Derfus et al., 2008).

If the strengths and weaknesses of your competitors is very important for your company’s future and strategies, social media can be use as a one of the best instruments. Because the media evolves our lives as a result of rapid changes in globalization and technology, and accepted as an effective force. The media, which can reach every person and every sector at any moment, are called "social media“ and have a vital importance apart from human life. As the importance of social media for people with legislative entry cannot be ignored, enterprises also use social media effectively to reach consumers and use them efficiently in marketing units. Organizations can ensure direct marketing and sales with social media. Customers can reach every segment of organizations by social networking sites which they desire. Also, the most important point is organizations can understand their environment and competitors much easier with social media.

At this point we can use social media as a competition tool with the RQE. This will cause two important contributions. First, organizations can understand their environment and other competitors more easily. And the second, the more reliable and complete knowledge can be gained from social media and Big Data. So as mentioned above, organizations adle to handle the two important reasons for not being able to adapt to the organizational environment.
Social Media

Social media, as understood today, is simply a means of transmitting and/or sharing information electronically with others. The original social networking sites developed in the 1990s, such as SixDegrees, MoveOn, BlackPlanet, and others, provided a portal where people could connect and share information via the Internet. By the early 2000s, numerous social media sites began to emerge. Many of these sites were specifically designed for people and organizations with common interests (e.g., music, sports, education, movies). This electronic communication forum was originally developed for individuals, but soon the business world took advantage of this new form of communication.

B2B companies have become quite proficient at the use of digital marketing during the past two decades. Using digital channels, such as the internet, wireless, and mobile communications, companies have learned how to communicate and transact business with a wider range of customers. However, the lines between social media and digital media are often blurred, as the elements of social media are “increasingly integrated into the established interactive digital media environment”. While B2B companies have become quite capable at adopting all manner of digital marketing devices, such as sales and marketing support, email and other digital commercials and newsletters, and even e-commerce, these same companies have found it difficult to transfer this success into social media. Countless B2C companies have found tremendous success using social media tools to promote either their company or products. Some of these companies include T-Mobile, Taco Bell, GoPro, Pizza Hut, JetBlue, Dunkin’ Donuts, and others. But the social media experience of these mass-market companies has not been transferred to the industrial B2B market, which generally has a more limited market.

Red Queen Effect

The biologist Van Vallen, who was influenced by a passage in Lewis’s “Alice in Wonderland”, used the term “The Red Queen Effect” for the first time in his “A New Evolutionary Law”. In Through the Looking Glass, you will remember, the Red Queen seized Alice by the hand and dragged her, faster and faster, on a frenzied run through the countryside, but no matter how fast they ran they always stayed in the same place. Alice was understandably puzzled, saying, ‘Well in our country you’d generally get to somewhere else - if you ran very fast for a long time as we've been doing.' 'A slow sort of country!' said the Queen. 'Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!' (Dawkins, 1996: 183). This metaphor allowed Van Valen to explain certain biological behaviors and to analyze how species adapt to their environment in order to stay ahead of their environmentally adapting competitors. After the theory, it was applied not only in biology but also in organizational psychology and even in organizational strategies.

The institutions that are in competition with each other try to improve their market position compared to their competitors and try to achieve a competitive advantage. When they gain this advantage; this time their rivals are trying to gain an advantage in order to overcome this situation or not to be left behind. This means that companies invest more and remain in a competitive environment, and this will ultimately bring dynamism to the sector (Barnett and Pontikes, 2008).
In the literature, this competitive spiral is called the Red Queen Effect (RQE) (Delacour and Liarte, 2012). When we look at the studies in the field of strategic management, it is seen that institutions should strive to achieve a sustainable competitive advantage (Derfus et al., 2008). The process called the Red Queen Effect means that the institutions that face competitive conditions face a step forward in the sector by developing new ways of doing things and try to catch competitive advantages. This situation ultimately creates an imbalance in the environment and competitors see a more successful institution against themselves. On the other hand, competitors are trying to develop better solutions to achieve a new competitive advantage and thus to increase their performance. This evolutionary approach shows the effect of competition on institutions and the overall sector. But the most important point not to be missed; As the process continues, the competitive advantage will inevitably be temporary.

The Red Queen Effect creates a link between organizational learning and the theory of organizational ecology. This happens in two ways. First a competition between institutions triggers organizational ecology mechanisms and the second by organizational learning, the strength of competition created by the institution is increasing. When these are combined, learning and competition progressively reinforce each other as the institution develops and leads to a self-improving RQE process. Mutual learning among competitors is another reason why competitive advantage can only be temporary (Delacour and Liarte, 2012).

Red Queen Effect against many of the researches in the field of strategy, considers the interdependence between competitors as positive and even expresses the need for efforts. It also contributes to the development of competitive dynamics by focusing on the analysis of the action and response dilemma. Finally, this multidimensional approach of RQE gives us; at the same time, the opportunity to work on the competitive relations of the environment and institutions. Because some theories, such as organizational ecology and new institutional theory, focus more on organizational structures, they refer less to executive preferences. Some other studies refer to the importance of individual decisions (Barnett and Pontikes, 2008, Delacour and Liarte, 2012).

**Big Data**

Although the concept of big data itself is relatively new, the origins of large data sets go back to the 1960s and '70s when the world of data was just getting started, with the first data centers and the development of the relational database. Around 2005, people began to realize just how much data users generated through Facebook, YouTube, and other online services. Hadoop (an open-source framework created specifically to store and analyze big data sets) was developed that same year. NoSQL also began to gain popularity during this time.

The development of open-source frameworks, such as Hadoop (and more recently, Spark) was essential for the growth of big data because they make big data easier to work with and cheaper to store. In the years since then, the volume of big data has skyrocketed. Users are still generating huge amounts of data—but it’s not just humans who are doing it.

With the advent of the Internet of Things (IoT), more objects and devices are connected to the internet, gathering data on customer usage patterns and product performance. The emergence of machine learning has produced still more data. While
big data has come far, its usefulness is only just beginning. Cloud computing has expanded big data possibilities even further. The cloud offers truly elastic scalability, where developers can simply spin up ad hoc clusters to test a subset of data. Big Data and Data Analytics can benefit at two points,

- Big data makes it possible for you to gain more complete answers because you have more information.
- More complete answers mean more confidence in the data—which means a completely different approach to tackling problems.

The current emergence of 'Big Data' is both promising and challenging for social research. Originally coined to describe digital data sets so large that they required standard computational facilities and software for storage and analysis, the term has now come to encompass a wider range of remarkable properties inherent in these data. Beyond the scale of these data attention is drawn to their proportionality - these are 'whole' data sets, capturing everything within a particular field utility records) or on a particular platform (e.g. Twitter); are dynamic - capturing social activity in real-time, over time; and they offer information on what people do and say 'in the wild', rather than what they say they do in views and surveys.

The digital nature of these data also opens up new potentials for mining and data linking, allowing connections to be made between diverse data. However, Big Data also raises some challenges for social research. These emergent, but it is clear that there are new and important ethical issues to deal. Furthermore, in between the enthusiasm of some Latour suggests '... it is as if the inner workings of private worlds have been pried open' - and the scepticism of others, for whom these data are ephemeral froth distracting us from more serious sociological endeavours, lie some important ontological and epistemological questions: what do these data represent and claims can be made from them? Finally, before we can address either of these issues fully, there are methodological challenges. Indeed, until we know how to apprehend and analyse Big Data, we cannot appreciate the range or scale of ethical and logical questions that may arise; and will arise variously across different forms Big Data. For although the term may imply coherence and uniformity, 'Big Data' not one thing but many, differentiated inter alia by content, structure, ownership availability. Whilst much has been made of the potential of Big Data for research, for reasons of privacy and/or commercial sensitivity, many of these datasets remain in the hands of governments and private corporations.

One significant exception to this is Twitter, the micro-blogging website whose content is (almost entirely) public, visible to anyone who chooses to search and follow users, and available via Twitter's own Application Programming Interface (API), which depending on the methods used - allows access to (1) a small selection of the tweets the search or streaming service, (2) the 'garden-hose', a 10 per cent random sample, (3) the 'firehose' of all tweets made. Not surprisingly, Twitter has generated a considerable amount of interest amongst social scientists: since its launch in 2008, there been over 110 scholarly publications about Twitter. Whilst little of this has been listed in mainstream sociology, there is much here to interest sociologists, for instance in attention to practices of impression management, micro-celebrity and personal branding; and to questions of participatory democracy and political mobilisation (Tinati et al, 2014).
DISCUSSION

Social media have fundamentally transformed the relationship among firms, employees, and consumers. They have changed the norms of behavior at various levels and have introduced a bewildering range of new opportunities and challenges. All stakeholders must, therefore, learn how to optimally use this new set of tools to meet their respective objectives. Research opportunities abound at multiple levels.

Social media are making individuals publicly visible as never before. Almost every person now practically forced to engage with social media in one way or another, even if it is just to maintain one's resume on LinkedIn or to listen and respond to what others are saying about him or her in other social media. Every business person must now have a personal social media strategy. We agree and believe that a deeper understanding of what such a strategy entails represents a promising research opportunity.

Social media are transforming the way in which jobs and talent get matched. The emergence of career-oriented social networks, such as LinkedIn and Xing, is an important example of how things are shifting. This development raises important practical and theoretical questions with respect to how individuals should strategically behave to maximize their chances of obtaining the career results they seek.

Firms are increasingly deploying social media internally, to enhance their knowledge management and intrafirm collaboration efforts. Such deployments have implications not only for firm performance but also for the ways in which employees should behave to optimize their career trajectories.

Social media platforms fighting for profitability and growth are faced with a wide range of strategic considerations. Just to name a few: How can platforms maximize their influence and revenue? What is the product development, pricing, partnership, marketing, and acquisition strategies that achieve the best results? Should platforms be open or closed, standardized or ad hoc? Many of these questions are special cases of questions studied by the field of platform (or two-sided market) economics. This field studies firms that, like social media, add value by providing the infrastructure that brings together two or more groups of affiliated customers (e.g., in the case of Facebook, these would be users and advertisers). Research in this space can benefit from past work in platform economics but can, of course, also explore questions where social media platforms introduce unique elements that enrich that discourse.

Whereas firms had grown accustomed to pushing their messages to consumers through well-defined marketing and sales channels (as well as completely controlling communications with employees), they have now become mere nodes in complex networks where messages are propagated, attenuated, and amplified by users themselves and where employees are often active participants. This new environment represents a shift that requires the development of new firm strategies and tactics. This emerging literature has investigated the use of social media as a tool for awareness building, persuasion, and the achievement of other marketing objectives.

Social media introduce new management and organization questions at virtually every level of analysis. Of all parts of our framework we feel that this is, perhaps, one of the most under researched, and an area where our research community can produce much needed, high-impact work in years to come.

Through social media, users form new emergent forms of user-centric organizations, such as self-help networks (e.g., Patients-LikeMe), knowledge communities (e.g., Quora.com), shopping networks (e.g., Groupon), etc. It is
becoming important to understand how users self-organize and manage such communities, and how different ways of organization and management affect outcomes, such as community growth, levels of user participation, and user satisfaction. There is already a sizeable body of research in this area coming from sociology, but the range of questions is broad, and there are still several promising directions for future research. Topics in this space include how to incentivize participation and contribution, how to regulate member behavior, how to deal with newcomers, how to get a new community off the ground, etc.

Social media platforms themselves are organizations that need to be properly managed. For example, some people partly attribute the success of Facebook in becoming the dominant social network to good management practices, similarly pointing to management mistakes as key factors for the failure of other competing platforms, such as Friendster and Myspace. Social media platforms raise important management questions, such as how to plan for and manage rapid growth, how to properly balance the need for revenue growth with privacy concerns, how to organize for constant experimentation, how to listen to and respond to the user base, etc. As before, there is little scholarly attention currently devoted to these topics; we consider this a wide-open opportunity for high-impact research.

From the firm side, social media are often initiated and moderated by certain functional departments, such as marketing or public relations, and are often outsourced to external service providers. However, customers often do not distinguish between functional divisions within a company but increasingly expect the firm to be able to respond (regardless of whether they face a service problem), want to express their brand enthusiasm, offer advice for product improvements, or need answers for technical questions. Making full use of the business potential of new media (as well as avoiding its pitfalls) thus requires organizational conditions that reflect the transformational potential of active contributions by customers, the potentially wide-ranging effects of negative customer articulations, and their interdepartmental perspective. There is, currently, little understanding with respect to the best ways in which companies should organize and manage social media. There is no consensus with respect to how responsibility for social media should be allocated within organizations, how social media activities should be funded and governed, what should be outsourced, and what broader changes with regard to an organization's structures, processes, leadership, training, and culture are needed to harness the potential of this transformative force. There is no established path of activities that lead a company down the path of "social readiness," and there are no widely accepted industry-specific best practices.

Leaders of organizations worldwide need principled guidance in all of the above questions. We believe that this is an area that offers great opportunities for high-impact research in the near future (Aral vd. 2013).

CONCLUSION

In today's business world, sectors and institutions are constantly developing, market structures are changing and new actors take the stage. At this point, the most important question to be asked is who will be faster and more innovative than competitors in order to make a difference? Otherwise, it will not gain anything until the last drop of power. However, as Dawkins in his paradox states, even in the course of
time the new generations of rival species become superior predators or even more difficult prey, despite the increasing cost of all these, the return of the initial development will diminish or even decrease over time due to the final conditions in which the balance between the two species is preserved.

Red Queen competition plays a key role, shaping both the likelihood and consequences of organizational change. Organizations with a history of competing in a market turned out to be more viable in that market, and yet were especially disrupted when they moved into another market. This result is consistent with the idea that competition increases an organization’s ability to exploit its current context, while it makes exploration especially disruptive. Meanwhile, surviving competition constitutes a powerful datum, feeding the perception that an organization is able to adapt. Decision makers in this situation are especially likely to engage in exploratory change.

Following your competitors in the industry is important to see their strengths and weaknesses and to run faster than them. More importantly, it is possible to determine which direction to go with the studies to be done in this area. When analyzing your competitors, you may notice the changes you need to make in your own strategy and new action plans can be prepared. In this way, predictions about the sector and existing strategies can be developed. Knowing what social media channels your competitors are using, and even the smallest information that you will get by the help of these are useful for companies. It is important to investigate social media channels where your competitors are more active and achieve good results. Taking place in these channels, needs to be evaluated and even faster run than competitors.

In addition to this, many organizations are loyal to channels such as Twitter, Facebook, Instagram, Google+, LinkedIn and YouTube and do not prefer to interact with other social media channels. Of course, there is no need to focus on these channels. While investigating opportunities and threats, it may be possible to determine that the most appropriate one for your target audience is outside of them, which may mean that the channel is running less quickly and reaching the target rather than running faster on other channels. Beyond that, not only social media accounts of rival companies but also employees' social media accounts and data can be obtained.

The most critical point between all social media metrics is interaction rate. The rate of interaction that measures how much a social media account has received, shared and commented on its messages compared to the number of followers is a powerful indicator of how much interactivity the followers have with their social media account. How do the rates of interaction of competitors? If they are high, how do they achieve this? In order to understand the interaction dynamics of your competitors, content strategies should be monitored and compared with your own strategies. Starting from the strategies of competitors, new strategies should be developed, creative and competitive content should be produced.

Besides it offers sharing options with various types of messages on social media. It can reach different goals by using different types of messages such as video, visual, activity, connection. At this point, it is necessary to analyze the content of different messages of the competitors and to see how effective the company is compared with its own messages.

Social media monitoring platforms provide the ability to analyze the topics that are popular in the industry. By scanning the messages that take high interaction helps to
see the topics that are popular in the sector and to see the prominent points by examining different types of messages.

So, what will you get at the end of the day?

The most important goal of using a social media follow-up platform is to reach communication on social media and to draw meaningful results from this communication. By analyzing social media, it is possible to reach important information about products, brands and competitors and reach important data by using this information.

With the analysis of this data, all departments of your company can be included in the game! With the analysis of competition, the marketing team, product team, sales representatives, public relations experts, customer relations managers, business development teams and many other departments can find suitable opportunities in their respective fields. Comparing negative and positive conversations about your competitors will provide a deep insight into the performance of many departments in your company.

In conclusion, this study provides an initial step toward examining the relationship between social media and organizational competition. Given the significance of social media for transforming organizations, hope that future research will develop more scientific models to discover novel insights into the business value of social media.
REFERENCES


