

**Does Darwin Belong in Business?  
The Danger and Comfort of  
the Evolutionary Metaphor**

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# **DOES DARWIN BELONG IN BUSINESS? THE DANGER AND COMFORT OF THE EVOLUTIONARY METAPHOR**

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## **ABSTRACT**

The metaphor of Darwinism has been extensively researched and analysed in other research disciplines. The usage of the biological metaphor of “Darwinism” in IT-related headlines is documented and reviewed. The use of the Darwinian metaphor in business studies has changed from its usage by Veblen and Stamp as a descriptor for the scientific method. More recently its meaning has been transformed to synonymy with the “struggle for existence”. The use of this metaphor in IT carries with it a reassurance, which can endanger consumer requirements for performance and accountability.<sup>1</sup>

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## **INTRODUCTION**

In a conference devoted to interdisciplinary research perspectives it is relevant to investigate diverse research on biological metaphors in different disciplines. The last three decades has seen scholarship concerning metaphors and analogies expand to the extent of over 6,000 books and articles on the subject (van Noppen & Hols, 1985). In the 1988 book by Ho and Fox on *Evolutionary Process and Metaphor* they recognised that evolutionary metaphors have a particularly powerful influence on our humanistic perspectives that underpin all social and political action. More recently, Morgan's 1997 *Images of Organization* provides a comprehensive review of the strengths and limitations of organismic metaphors, and the challenge of metaphor in organization theory.

The use of metaphors often causes both irritation and excitement. Maasen, Mendelsohn, and Weingart suggested there is some judgment as these metaphors are assimilated "as long as the perceived difference in meaning is slight, it serves the purpose to create additional insights, metaphors are judged to be good. As soon as the use of metaphors implies change of meaning, even change of the disciplinary identity, they are judged to be bad" (1995: 2). Others would disagree; Lakoff and Johnson suggested that what is at issue is not a judgment issue of truth or falsity. It is more useful to examine the perceptions and inferences derived from the metaphor, in order to better understand the subsequent actions (Lakoff & Johnson, 1980: 158). The attraction lies in the capacity of metaphors to not only highlight and coherently organize our experience, but also to create realities and provide a predictive model for the future; in a sense, self-fulfilling prophecies (ibid: 156).

It is the objective of this review to identify how one particular metaphor, that of Darwinism, is invoked in IT-related businesses. This documents the change in the use of the Darwinian metaphor in business studies from its usage by Veblen and Stamp, as an exemplar of the scientific method, to synonymy with the "struggle for existence". It is suggested that the use of this metaphor in IT businesses carries with it a reassurance which can endanger consumer requirements for performance and accountability.

## **THE METAPHOR OF DARWINISM**

In research on the use of metaphor, evolutionary metaphors have attracted much attention. The indiscriminate use of evolutionary and biological metaphors has been found in every political persuasion, and with a diverse range of ideological affiliations (Bowler, 1995: 111). Maasen suggests the idea of a struggle for survival might not only have a hypothesis-generating interdisciplinary effect but may function as a slogan in political/social jargon (1995: 28). An example of such a use in New Zealand last November occurred when a journalist described: "Telecom appropriated Charles Darwin's theory of evolution, while Clear adopted the slogan of a popular athletic footwear brand in rival speeches at a telecommunications conference in Wellington. . . Bruce Parkes, the telco's manager for government and industry relations, compared the development of telecommunications services to Charles Darwin's theory of evolution, arguing that excessive regulation would distort the process". (Janes, 2000: 7). The widespread and casual use of the evolutionary metaphor deserves to be better understood, as it may camouflage institutional or structural

weaknesses in the industry, or in particular firms, or be used to justify *laissez faire* government policies.

Biologists do not control the use of the metaphor of Darwinism; once the term left biology it leads a life of its own by way of use and interpretation in new contexts. Although the precise rules of this process are unknown, Maasen, Mendelsohn, and Weingart suggested we could assume an underlying mechanism that accounts for the ongoing translation of meaning between different discourses (1995: 8). An example of the changing meaning is provided later in this paper in discussion of the meaning of the Darwinism invoked by Thorstein Veblen and Edward Stamp. In this case, it was a metaphor for the scientific method, rather than the struggle for existence. Thus the translation of meaning can occur even within the area of business studies.

To further focus your attention, and to show the Telecom invocation cannot be viewed as an isolated example, permit me to illustrate with a series of IT-related headlines:

Darwinism On Wall Street. (electronic communications networks in securities industry) *Neil Weinberg. Forbes Nov 13, 2000*

Dotcom Darwinism. (It's survival of the financed as the shakeout accelerates) *Ken Kerschbaumer. Broadcasting & Cable July 17, 2000 130 (30) p.68*

In this, the age of Digital Darwinism, those who would survive seek their predators. *Bob Tedeschi. The New York Times June 26, 2000 C10*

Computer Darwinism? *John Breeden II, Carlos A. Soto. Government Computer News June 12, 2000 19 (15) p 24*

A digital Darwinism thins the numbers of online toy and craft stores. *The New York Times May 29, 2000*

Profits, Darwinism, and the Internet *Justin Fox. Fortune March 6, 2000 141 (5) pF-40*

Silicon Darwinism claims another victim. *Brian Dipert EDN Dec 23, 1999 44 (26) p20*

*Digital Darwinism: Seven Breakthrough Business Strategies for Surviving in the Cut throat Web Economy* by E. Schwartz.

Darwinism determines technological survivors. *Frank Bevc, Samuel Harkness. Power Engineering Oct 1996 100 (11) p.47*

Such examples suggest that the manner in which the IT domain accounts for its experience of success and failure, and survival and extinction with the metaphor of "Darwinism" reflects Lakoff and Johnson's view that metaphors not only highlight but also make coherent certain aspects of our experience (1980: 156). The experience in this situation is undoubtedly competition, resulting in differential and selective survival. It suggests that those firms most attuned to their environment will survive. This can be summarised by the term: the "struggle for existence". However, the

notion of a struggle for existence was not confined to Darwinism. This metaphor reflects widespread confusion between the meaning of Darwinism, Lamarckism and Social Darwinism, which should be elaborated at this point.

## **DARWINISM, LAMARCKISM, AND SOCIAL DARWINISM**

There has been much scholarship concerning the distinction between Darwinist, Lamarckian, and Social Darwinist theories. When Darwinism is applied to human endeavour it is more correct to title the descriptor as Social Darwinism or Lamarckism.

### *Social Darwinism*

Social Darwinism was the theory of social evolution developed by Herbert Spencer before Darwin's scholarship. The evolution of societies, the creation of wealth and the production of species were all considered by Spencer to obey similar laws (Desmond & Moore, 1991: 420). It was Spencer who termed the phrase: "survival of the fittest". Darwin borrowed this phrase in the fifth edition of *The Origin of Species*; in turn, Spencer seized on Darwin's syntheses to bolster his philosophy (Graham, 1999: 23). It has a poor reputation now compared with Darwinism, and Bowler expressed concerns that the oversimplified notion of Social Darwinism has stood in the way of efforts to develop a better understanding of changes in society (Bowler, 1995: 111). Although Darwin's theory reflected an ideology of *laissez-faire* individualism, the same can be said of Spencer's Social Darwinism, which Bowler prefers to call Spencerian Lamarckism.

### *Lamarckism*

Jean-Baptiste Lamarck's contributions were developed in the first two decades of the nineteenth century; his last major exposition was in 1815, long before Spencer or Darwin. His theory advocated two factors in the process of organic change:

- (1) the natural progress of organic development; and
- (2) the modification of such progress by constraining circumstances (Burkhardt, 1977: 154).

It is also of note that the inheritance of acquired characteristics did not originate with Jean-Baptiste Lamarck, and initially he did not advocate such a mechanism. However, as his ideas developed it became a fundamental tenet of "Lamarckian" theories of organic change. Lamarckism can be summarised as *the inheritance of acquired characters*; in a changing environment, a set of habits could be a spur to adaptation, based on the doctrine of use and disuse (Gould, 1999: 20). Lamarckism came to be understood as a theory of directed evolution: variation originates preferentially in adaptive directions. Although much scholarship has identified that evolution in human society has all the hallmarks of Lamarckism, rather than Darwinian evolution, the debate on the correct evolutionary mechanism is not so significant in the context of this research. Both Darwinism and Lamarckism embrace the belief that progress is achieved as a result of the "struggle for existence" and this metaphor transcends the debate concerning the correct invocation of an evolutionary mechanism for cultural and social evolution (Bowler, 1995: 110).

So by whatever name, this metaphor invokes the struggle for existence. Earlier references to Darwinism, however, were used as a metaphor for the scientific method.

## **DARWINISM: A METAPHOR FOR THE SCIENTIFIC METHOD**

It is of particular interest that Darwin was invoked much earlier by two key figures in business studies: Stamp in accounting and Veblen in economics. In this context, the appeal was for both disciplines to claim and utilize a scientific method similar to Darwin. Thorstein Veblen was an early advocate of the Darwinian approach, as to him, Darwin's method of scientific inquiry was an exemplar for economic studies. Veblen had considered at length the quality of inquiry by economic scholars at the turn of the century. In his 1898 essay on "Why is economics not an evolutionary science" Veblen argued for the development of a close-knit body of theory, based on evaluation of facts with a scientific impartiality.

Darwin was later invoked in the accounting discipline. This was part of an advocacy of the scientific method for a young discipline, in a manner parallel to Veblen's references. This occurred as part of a debate in the 1940's and 1950's concerning the adoption of scientific methodology for accounting, not only in research but in accounting practice, typified by Edward Stamp's essay "Why can accounting not become a science like physics?" (1981). Earlier Stamp had noted: "I do believe that it will be possible to achieve uniformity of theoretical and conceptual foundations in much the same way that Darwin and his successors have been able to bring order out of chaos in the life sciences. We must bear in mind however, that accountancy and economics deal with states of mind as well as states of nature, and this makes it harder for the accountants to find common ground between different points in time and space than it is for the biologist, let alone the physicist" (1972: 64).

In these two disciplines, there was a dominating metaphor of a mechanistic explanation for their subject matter. Economics, business organisations, and capital markets were considered to operate as machines: inputs and outputs, controls and regulators. There was no Darwinist metaphor of a struggle for survival in the writings of Veblen or Stamp. It was only later in these disciplines that the mechanistic metaphor was replaced by a biological one (Hodgson, 1995: 315). As noted by the reviewer for this paper, there is allure in this conflation, as it reflects "an outgrowth of public knowledge about Darwin's work...let that conflation stand as evidence of the power of metaphor to alter concepts".

Moving on from this example of the power of metaphor, it remains to return to the original examples of the invocation of Darwinism in IT and suggest why such headlines provide such a powerful frame, apparently providing assurance from the sense of natural order and the struggle for existence.

## **A BIOLOGICAL METAPHOR IN AN UNNATURAL DOMAIN?**

We suggest that this metaphor can be viewed simultaneously as a unique source of reassurance and of danger. This resonates with Gareth Morgan's view that there are dangers in holding up a mirror which appears to reflect the laws of nature, because we fail to see that humans have a large measure and influence over the construction of their world (Morgan, 1997: 71). When industries and markets are unsettled, it is not because of natural forces, but due to human activities.

However, it is inevitable that the attraction of "natural causes" will be persist, because such metaphors can provide reassurance to the public and to government that natural

selection will ensure that the most fit are those that survive market forces. Margaret Morgan illustrates this by dividing the operations of such metaphors down into three different levels: they may be “laws of nature” explanations; they may also be “institutional” descriptions (Morgan, 1995: 315). A third level at which metaphors might operate is to explain economic competition, the selective process that decides which firms are going to survive. These different levels remind us of the difficulty in locating the exact effect of the metaphor. The metaphor may operate at all three levels, perhaps simultaneously or at different levels at different times.

At the individual level, the metaphor may serve to explain why individual firms survive while others perish. Not all firms are the same, and with a “laws of nature” explanation not all will survive. Failure in the market would be a manifestation of the natural order of things. In both cases, individuals such as investors and customers are reassured and regulators need not intervene. What is taking place in the market place can be accounted for, and therefore no further investigation need be undertaken and no further accountability is required. Closer scrutiny may in fact reveal that it is not the laws of nature that are contributing to a weakening of performance; firms may have made poor decisions about the types of technology they employ and/or the manner in which they employ it. At this level, the use of the Darwinian metaphor may serve to shift scrutiny from the IT industry itself, and lessen accountability requirements.

It appears that the metaphor of Darwinism evokes the picture of a normative world, or even a Panglossian one, where things are as they should be and there is a natural, continuing struggle for fitness and survival. This picture carries with it a suggestion of efficient competition where the survivors of each successive round of competition are better or more adapted than those of the earlier period, paralleled by the generations of models of the goods they sell. Is this how we ourselves have observed the operation of the IT industry? What IT has in common with biological change is that there are

- New organisations
- Rapid change stimulated by environmental changes
- Rapid change bringing uncertainty and difficulty in forecasts and projects

This rapid changes leads to the need for reassurance or even determinism; i.e. that in spite of rapid change, things adapt and change for the best - a Panglossian determinism. In order to provide for optimality in operations, accountants and business advisers often invoke benchmarking or best practice. It is implicit in the adoption of these that business believe they can best adapt and survive by pursuing optimality in their organisations; an implicit evolution to more advanced/adapted measurement systems. For example, ERP systems embody Best Practice. This may lead to stasis - another biological concept. After a period of rapid change/adaptation, an organism stays in a static level of development until further environmental changes. The notion of punctuated equilibrium is implicit in ERP. But such stasis is accompanied by rigidity and specialization. There is most often an absence of flexibility. It is also characteristic of advanced ERP systems that all organisations are using more or less the same package. How can an organisation be flexible enough and with enough distinctive differences from its competitors if they are all using the same package?

One issue remains: is this metaphor of Darwinism just a mindset, or does it reflect or correspond in some sense to the manner in which the IT industry itself is organized? IT itself is an industry constructed and based on the most rapid transmission of cultural inventions ever seen in the history of cultural evolution - a form of accelerated Lamarckism.

An evaluation of the invocation of Darwinism in IT has to be considered in its political and social context. Were the implicit competitive forces in the IT industry occurring simultaneously within an unregulated (almost *laissez-faire*) industry sector? Mary Morgan argues that in the late twentieth century economics, the two were different and incompatible, because

1. as competition got stronger the number of firms decreased. In the case of the IT industry, and the Microsoft anti-trust case, freedom of competition was deemed more important than retaining a *laissez-faire* policy. The laws of competition had led to destruction of competition, and were self-annihilating.
2. neither the actions nor outcomes of competition were benign, as monopolistic behaviour drove 'fit' firms out of the market, or consumed them in takeover activity (ibid: 312).

If the IT industry was to demonstrate to its customers and the government that it operated and succeeded in open competition, this provides the critically important reassurance to customers that the existence of the firm was itself proof of efficiency and optimality.

Public unease has been long accumulating due to two occurrences: firstly, repeated experience and evidence of failures of accountability or capacity to deliver in IT projects. Secondly, the Microsoft lawsuit had destroyed a belief that free competition would ensure efficient optimality of firms. Thus it is suggested that the appearance of Darwinism in such a strip of IT headlines reflects the need to reassure the consumer of free competition, of successful survivors, of natural drivers to success in an industry far removed from any natural processes.

In this case the metaphor of Darwinism has provided a frame wherein an assurance can be gained from a sense of natural order, and the struggle for existence. However, both IT and accounting activities are cultural, rather than biological, in nature. Institutions are human artefacts; and studies in accounting research are subject to assessment on the basis of referring to cultural, rather than biological, events, or processes.

## CONCLUSION

At the start of last century the metaphor of Darwinism was understood to be the hallmark of a scientific method. The idea that that business, human artefacts, and institutions should show adaptive behaviour in the manner of the earthworm or the barnacle was Social Darwinism or Lamarckism. At the end of the century the metaphor of Darwinism is the rubric of the struggle for existence, of cultural or social evolutionary processes far removed from the manner in which Darwinism was developed in the biological sciences. Based on differential survival of the most fit, it is observed that those cultures, human artefacts, or social processes that survive show essential characteristics of fitness.



Charles Darwin himself found optimism in the achievements of industry last century, but his theories of the mechanisms of biological evolution allowed no such optimism of purpose, progress or self-determination in organic evolution. It would be more correct to attribute to Lamarckism a source of hope for the survival of the human species, of each culture or society, and the survival of our knowledge and industry. As noted by Gould in his epilogue on human culture, the “uniquely and distinctively Lamarckian style of human cultural inheritance gives our technological history a directional and cumulative character that no natural Darwinian evolution can possess” (Gould, 1996: 222). Nevertheless, it is the metaphor of Darwinism that provides a commonly shared understanding and reassurance of ongoing survival of the fittest. Within this metaphor it promises hopes and a reassurance, albeit false, to the most unnatural of human creations, the hyped-up dot.com company successes and failures in the information technology industry.

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