

The selfish signifier: meaning, virulence and transmissibility in a management fashion

PRICE, Ilfryn

Available from Sheffield Hallam University Research Archive (SHURA) at:

<http://shura.shu.ac.uk/4255/>

This document is the author deposited version. You are advised to consult the publisher's version if you wish to cite from it.

Published version

PRICE, Ilfryn (2012). The selfish signifier: meaning, virulence and transmissibility in a management fashion. *International Journal of Organizational Analysis*, 20 (3), 337-348.

Copyright and re-use policy

See <http://shura.shu.ac.uk/information.html>

The Selfish Signifier: Meaning, virulence and transmissibility in a management fashion

Abstract:

Purpose. Management fashions can be, and have been, conceptualized as narrative elements competing for replication and resources in the wider managerial discourse. Most wax and wane through a life cycle. Some achieve an extended place and even a transition to quasi permanent institutions. Facilities / Facility Management (FM) is one such example.

Design/methodology/approach. The case draws FM's history since 1968 and asks whether it is compatible with recent and classic (Darwin 1871) thoughts on cultural evolution as a selection process between competing discourses.

Findings. Several properties of that history are argued as compatible with the theoretical stance taken particularly the mutation of the syntactic content to suit local circumstances and the dilution of the term's intent. Success attributes in the selective competition include contingency, securing an organizational home and mutability (what was represented became, more operational, less virulent but in the process more transmissible). In spreading globally the signifier / meme FM also proved mutable to local managerial discourses.

Originality/value The study supports a developing paradigm that it is possible to view organizations as ecologies of variously, memes, signifiers, narratives, representations or discourses. All five terms are shown to have been used to make similar significations by different authors. It shows how a natural history of narrative memes can be constructed.

Keywords. Meme, organizational memetics, narrative, management fashion, cultural evolution

The Selfish Signifier: Meaning, virulence and transmissibility in a management fashion

1 Introduction

Management fashions (Abrahamson, 1996) frequently display cycles in which they wax then wane, often to the point of near extinction (Abrahamson and Fairchild, 1999) or replacement by a partly synonymous alternative (Scarborough and Swann, 2001). More recently, as memetics has come to slightly greater prominence in organizational research, management fashions have been considered as possible examples of linguistic memes (Price and Shaw, 1996, 1998; Williams, 2000, 2004; Heath and Seidel, 2005) spreading in business discourse (O'Mahoney, 2007). More recently, and without considering an evolutionary perspective, Røvik (2011) suggested a viral perspective as an alternative metaphor to fashion for studying organizations' handling of what he terms, 'management ideas'. Røvik is seemingly writing from a relativist perspective but there is an obvious parallel with the original Dawkins suggestion of fashions as an example of memes.

Here I extend such arguments, in the context of earlier work on organizational memes, by examining the global diffusion of one such 'fashion' that has apparently escaped Abrahamson's cycle and enabled the emergence of a world-wide network of associations, academic departments, business divisions and businesses which ultimately facilitate the term's, fashion's, or meme's, replication. In the process it seems to have passed from being a horizontally transmitted fashion to a vertically transmitted institution (Powell and DiMaggio, 1991). I argue that what should be considered the replicator is the term itself. Arguably, and ironically, Darwin (1871) may have anticipated memetics when he argued, as part of a general theory of the development of societies, that "*the survival or preservation of certain favoured words in the struggle for existence is natural selection*".

2 Conceptual selection theories

Evolutionary explanations of social and economic phenomena do not require the meme 'meme' as is witnessed by the considerable body of evolutionary organizational scholarship which has ignored, or criticized memetics (Sammut-Bonnici and Wensley, 2002). A recent, compelling, account of *Cultural Evolution* (Distin, 2010) develops a theory of selection acting on representations transmitted via natural or artifactual languages. She explains a choice to avoid the m-word because of the different shades of meaning it has acquired and the reactions it engenders in certain scholastic fields (c.f. Price, 2009). Many early proponents of meme theory may also have concentrated on 'thought contagions', the viral like spread of ideas or fashions through society, without paying attention to existing evolutionary accounts in social science (Murmann in Murmann et al., 2003). Perhaps also taking memes seriously

... means that if we truly focused on routines, competencies, practices, and so on, we would NOT follow people anymore in our research. Instead, we would follow how competencies spread, replicate, and insinuate themselves into organizations. People would disappear from our equations. (Aldrich in Murmann et al., 2003; emphasis in the original).

Others question the role of people without consideration of ideas. Csikszentmihalyi (1988) proposed that what is considered creative is subject to the prevailing mental models of what he termed the field (the influential individuals) and domain (the symbol system influenced) that contextualizes an individual's creative insight. He specifically linked memes to the symbol system; a proposition which parallels Waddington's (1977) suggestion that social evolution selects for COWDUNG; the "conventional wisdom of the dominant group". In more restrained language Hull (1988) made the same case arguing for science as a conceptual selection process between competing paradigms and citing ample empirical evidence for the emergence and maintenance of competing epistemic

communities; a term conveniently reviewed by Morrell (2007). In such works there was a move away from imitated fashions, or indeed replicated routines (sensu Nelson and Winter, 1988) towards an emphasis on selection between paradigms, conventional wisdoms, mental models or even strategies, Lloyd's (1990) 'stremes'. Waddington and Hull were both taking the approach rooted in biology and evolution as a historical science. They observed modern behaviours and sought an explanation in largely observable or known processes much as Darwin (1859) himself had done generalizing from selection under domestication to natural selection through the preservation of favoured characteristics in the struggle for reproductive success. Through, especially, the second half of the twentieth century the historical sciences came to see evolution, and indeed geological history in general as less of a steady state, gradual process hence the argument (Gersick, 1991; Price, 1995; Price and Shaw, 1998) that organizational dynamics, notably innovation in smaller groups akin to Mayr's peripheral isolates, and a tendency to stability punctuated by episodes of change, supported the case for a selection process operating in organizations. Price, in particular, drew the parallel between organizational dynamics and the punctuated, Kuhnian, model of paradigm change. Here I might correct that slightly and see paradigms as an example of a dominant narrative.

The population ecologists have tended to see the organization, or firm, as the interactor, the vehicle upon which selection pressures operate. Advocates of conceptual selection have tended to fall into the same trap, despite Hull's (op. cit.) empirical work on professional communities or Csikszentmihalyi's (op. cit) reference to a field of influential individuals. In contrast, in what perhaps deserves to become a seminal paper, Weeks and Galunic (2003) sought to draw an older literature on organizational evolution into a view of firms as an intra-organizational ecology of 'modes of thought'; termed memes by prior convention rather than argued as memes from first principles hence (p. 1323)

Why use a new term, 'meme', instead of 'assumption' or 'value' or 'belief' or 'interpretative scheme' or 'know-how'? The answer is that there are important differences between, for example, assumptions and values. Likewise, between beliefs and know-how. To consider culture only in terms of values or as being completely assumed, or to consider it as being only about sense-making and not about practice, would be to exclude essential elements from analysis. What is needed is an umbrella term for the category containing all cultural modes of thought. 'Meme' is that term, and with the advantage that there is a burgeoning interdisciplinary literature (admittedly of uneven quality) about memes, including works in philosophy (Dennett, 1995), psychology (Blackmore, 1999), social psychology (Heath et al., 1998), anthropology (Aunger, 2002), and even law (Balkin, 1998).

Weeks and Galunic's most important contribution might be to have identified the firm as a memetic ecology rather than, necessarily, a single entity. In an ecosystem the vehicles (organisms) of many replicators (genomes) interact collaboratively or competitively (Rothschild, 1992; Moores, 1996). Just because a firm or an organization is an apparently bounded entity it need not be considered a precise analogue of a single organism or an individual species. To their list of evidence could be added Ian McCarthy's empirical studies of the various clades to be found in manufacturing technology and organizations (McCarthy et al., 1997) and Lord's reconstruction of religious clades from memetic phylogeny (Lord and Price, 2001; Lord, 2004) also the suggestion, returned to below, that management fashions might be good candidates as early memes (Price and Shaw, 1996, 1998).

Langrish (2004) independently developed a line of reasoning not dissimilar to Csikszentmihalyi's (op cit.) with memes being selected according to prevailing aesthetic fashions in design. In so doing he appears to have been the first writer on memes to note that the concept, albeit not the term, had been anticipated, again, by Charles Darwin, not in *The Origin of Species* but in his later (Darwin, 1871) work *The Descent of Man*; a volume that arguably usurps social construction and post modernism by a century and gives them, ironically for social scientists of a certain disposition, a 'Darwinian' twist. Darwin's thesis began with humans', innate capacity to learn language

As Horne Tooke, one of the founders of the noble science of philology, observes, language is an art, like brewing or baking; but writing would have been a better simile. It certainly is not a true instinct, for every language has to be learnt. It differs, however, widely from all ordinary arts, for man has an instinctive tendency to speak, as we see in the babble of our young children; whilst no child has an instinctive tendency to brew, bake, or write. (p. 58)

From this perspective it was the evolution of language that enabled the capacity to ontically dump (Feldman, 1987), the capacity to make what Distin (op cit.) would term representations or Saussure signs and symbols, viz.

The mental powers in some early progenitor of man must have been more highly developed than in any existing ape, before even the most imperfect form of speech could have come into use; but we may confidently believe that the continued use and advancement of this power would have reacted on the mind itself, by enabling and encouraging it to carry on long trains of thought. A complex train of thought can no more be carried on without the aid of words, whether spoken or silent, than a long calculation without the use of figures or algebra (p. 60)

Hence

We see variability in every tongue, and new words are continually cropping up; but as there is a limit to the powers of the memory, single words, like whole languages, gradually become extinct. As Max Muller (69. 'Nature,' January 6th, 1870, p. 257.) has well remarked:--"A struggle for life is constantly going on amongst the words and grammatical forms in each language. The better, the shorter, the easier forms are constantly gaining the upper hand, and they owe their success to their own inherent virtue." To these more important causes of the survival of certain words, mere novelty and fashion may be added; for there is in the mind of man a strong love for slight changes in all things. The survival or preservation of certain favoured words in the struggle for existence is natural selection. (p 62)

and, effectively arguing that unwritten rules and conventional wisdoms become embedded in language:

The wishes and opinions of the members of the same community, expressed at first orally, but later by writing also, either form the sole guides of our conduct, or greatly reinforce the social instincts; such opinions, however, have sometimes a tendency directly opposed to these instincts. This latter fact is well exemplified by the LAW OF HONOUR, that is, the law of the opinion of our equals, and not of all our countrymen. The breach of this law, even when the breach is known to be strictly accordant with true morality, has caused many a man more agony than a real crime. We recognise the same influence in the burning sense of shame which most of us have felt, even after the interval of years, when calling to mind some accidental breach of a trifling, though fixed, rule of etiquette. (p 82 Darwin's emphasis)

There, in a nutshell, is the theoretical position I am proposing. Shared representations (Distin, 2010), signifiers, discourses or narratives replicate in communities who share socially constructed ‘modes of thought’ and hence accepted routines or unwritten rules of the game (Scott-Morgan, 1994). The discourse is the replicator. The community is the interactor while the modes of thought and the routines are what we might call the convertors, cultural evolution’s equivalent of the complex processes by which genetically coded information becomes a phenotype. Without intending a specific isomorphism I am suggesting (qua Darwin) narratives as cultural DNA and modes of thought, routines and unwritten rules, as in some way the equivalent of RNA, proteins and epigenetic rules: the complex conversion process. Such a perspective opens a window for further study (Price, 2012). Management fashions, as a class of constructs, seem amenable to analysis in this way.

3 Management fashions

3.1 Introduction

Fashions come into existence when one, or several, individuals coin a term to describe a new action or process that they have found useful, or want to persuade others of. Benchmarking began to claim a place in business discourse when operational researchers with Rank Xerox ontically dumped (Feldman, 1987; Pratchett et al., 2002), onto an older word from surveying, the concept of openly comparing business processes with another firm (Price, 2000). The concept thus labelled found a ready niche and spread through the actions of various companies, consultancies, and academic groups. It became as Williams (2000, 2004) puts it a meme in "the ecology of consultobabble" peaking, at least in book titles, in the late 1990s (Price, *ibid*) and acquiring a range of subtle differences in meaning. The signifier ‘benchmarking’ came to signify various different levels of comparison and

even, in policy circles, the setting of target benchmarks. Benchmarking has arguably survived longer than many fashions. Some would argue it has achieved a permanent niche in business discourse, albeit with various shades of meaning from the original comparison to something more akin to standard setting (Walgenbach and Hegele, 2001).

Facility or Facilities Management (FM) offers another example discussed in detail by Price (2003). The term Facilities Management was originally coined in the late 1960's to market to banks the outsourcing of processing credit-card transactions. In December 1978 a group of corporate workspace managers, meeting in the research center of furniture supplier Herman-Miller hit on the term Facility Management to describe the process of designing and managing workspace. In May 1980, one participant hosted a meeting in Houston to establish a formal organizational base for a facility management association. By the end of that meeting, a new organization known as the National Facility Management Association (NFMA) had a constitution and bylaws, temporary officers and plans to expand nationally. It became the International FM Association (IFMA) when a Canadian Chapter was incorporated. IFMA now has 126 chapters in 78 different countries many of which also have national associations and institutes. In the process the term itself has developed two variants. Some countries refer to Facility Management, others to Facilities. Both show various adaptations which have helped FM as a representation to spread.

3.2 FM Mutations

Diversity of meaning. What is signified by FM has expanded and varied. In its second guise it originally concerned the design and management of corporate offices with some emphasis on performance and more on cost. This was the academic perspective adopted and advocated notably in the School of Human Ecology at Cornell (e.g. Becker,

1990) and by early proponents in the UK who chanced to spread the Facilities variant when one of them, Frank Duffy, founded a publication of that name in 1983.

The older 'Facilities Management' as IT outsourcing faded out of managerial discourse in the USA in the early 1980s. However, especially in the UK, Facilities Management became a label attached to the outsourcing of building services of all kinds. The trend was especially prevalent in technology firms and initially the National Health Service where government policy under Margaret Thatcher demanded market-testing of such services. As I am grateful to a reviewer for suggesting this might be considered an example of cultural niche construction (Odling-smee, 2003) as one narrative created a new niche in which another could flourish [1]. Both would be providers and the in-house departments being market tested started labelling themselves Facilities. The trend has continued, aided by developments in private finance and the FM industry now assesses its collective size in billions of whatever currency is being used. The outsourced variant of FM is now effectively global and the use of the term in house has spread to virtually every sector of activity which occupies buildings.

Conceptual communities. Two FM bodies were founded in the UK in the 1980s. The Institute of FM saw itself as strategic and cerebral. The much larger Association of FM claimed to represent the practical doers. The disputes, recorded in contemporary accounts were every bit as outspoken as those between Hull's (op cit) schools of taxonomy. In 1993 the two agreed to merge but, in a small instance of selection between competing words (Darwin op cit.) the membership, mainly from the Association, voted for the title Institute, hence the birth of the British Institute of Facilities Management (BIFM). The debate survives to this day.

Persistent routines. Many firms entered the new market in the early 1990s, or took to describing their offering using “*the wonderful new buzzword of FM*” (a marketing director cited by Price, 2003). What they actually sold changed less and Lunn et al. (2002) were able to group entrants from different sectors according to markets by service and modus operandi.

Education. FM was “*not lost as an opportunity for cash-strapped universities*” (Leaman, 1992). In the USA the trend manifested itself in undergraduate courses. Six were accredited by IFMA in 1996 and their emphasis has tended, until recently, to be on the design and planning of the workplace. In the UK (where undergraduate funding was state funded) the emphasis was on part-time, master’s level, programmes for those in employment and to whom fees could be charged. Most have emphasized building service allied to construction and engineering. In Asia the same trend has developed but with undergraduate programmes. In most of Europe there is greater emphasis on FM as a service discipline, taught at undergraduate level but often allied to hospitality.

Professional status. FM was often claimed, by office holders in IFMA and BIFM, and by academic proponents to be a new profession. Providers of FM services saw professional status as unimportant (Green and Price, 2000). The debate rumbles on with a recent flurry of social media comments on BIFM proposing to reconsider an application for chartered status. Regardless of such claims FM, which started as a horizontally transmitted fashion, has survived with associations / institutes, companies, internal departments, professional and academic journals, academic courses, conferences and books all contributing to replication of the term even while there is no full consensus as to what it is and there are various epistemic communities preserving different varieties. In the process rather than being spread in the classic, ‘horizontal’ or viral manner it is spread

vertically with FM institutions surviving even as members come and go. Rival terms such as Infrastructure Management have been launched in attempts to capture the more strategic dimension but their existence proved ephemeral. Globally the term dominates its niche.

4 Discussion

The foregoing was intended as an overview. The history is consistent with an evolutionary interpretation of a representation (sensu Distin, 2005, 2010) spreading and replicating via various institutions it enables. The process was emergent rather than designed. The resultant web of intra- but also inter-organizational relationships can be interpreted as an ecosystem (sensu Weeks and Galunic, 2003) of provider companies, advisors, academic departments, professional, or would be professional, associations, and publications. Unlike many other management fashions which came and went in the same period FM has survived and diversified, even as argument about its meaning and status continues. Why, in retrospect, did one narrative representation, one signifier or one meme survive and multiply as it did where others such as the Learning Organization (Scarborough and Swann, *op. cit.*) or even Business Process Reengineering (O'Mahoney, *op. cit.*) did not.

There does not, of course have to be a single answer. FM may have simply represented a need and a business opportunity. Despite the promises of technological developments and virtual avatars organizations still, by and large, require buildings in which to create workplaces. Those buildings and spaces need protecting, maintaining, servicing, and cleaning. There was perhaps a niche in general managerial discourse for a term that captured the integration of, and search for efficiency in, the gamut of services needed to support a modern workplace especially as the nature of the work in that space changed from physical to conversational (Price, 2007). In this view FM was a term whose time had come; one that managed to express a need and provide a, so far, enduring answer.

Others would go further and argue, as Becker (1990) did, that the attention to the design and management of workplaces has enabled smarter environments more conducive to knowledge work fulfilling Peters' (1992) description of space as the most important and least appreciated tool of contemporary knowledge management. To the extent that it is true that contemporary organizations are intra-organizational ecologies of conversations (Price, 2007, 2009) Peters' observation may now be being realized (e.g. Kornberger and Clegg, 2004; Vischer, 2007). In the early 1900s, when electric power first offered the prospect of factory layouts not constrained by overhead shafts, it took some 20 years before newer designs appeared (Aronoff and Kaplan, 1995). Perhaps FM was in the fortunate position of existing through that transition. Perhaps also while the outsourcing of credit card processing did not stabilize as a business niche in the 1970s that for outsourcing of less business critical building services did endure.

Even so the FM meme, if that is what it is, has had to mutate to survive. Such multiplicity of meaning may be common in successful 'fads'. Benchmarking began its life as the specific practice of lateral comparison of performance with a view to improvement but is now used in different areas as a term for standards setting, quality assurance and the downwards measurement of performance (Jackson and Lund, 2000). 'Learning Organisation' had a similar range of meanings attached to it during its 1990's heyday (Price and Shaw, 1996) and knowledge management, its partial successor in popularity terms, (Scarborough and Swan, 1999) carries a range of meanings being variously seen as a question of information technology or organisational development. FM is no exception to what seems to be a widespread phenomenon. While confusing to users, as the history above demonstrates, the diversity appears to a good trick in meme replication space.

In the process FM has arguable demonstrated many of the qualities identified by Røvik (op. cit) as characteristic of viruses rather than passively imitated fashions. It proved

infectious. It proved immune to alternatives. It replicated and arguably incubated, between 1968 and ca 1980, spreading when the time was ripe. It mutated becoming in a sense less virulent, less intense, with fewer claims to strategic impact, but also becoming more infectious as it spread. A possible contemporary parallel is 'Lean'. Coined (Womack et al., 1990) to describe the Japanese alternative to North American 'mass' manufacturing the term has spread to service industries, to construction and to government policy. In the process of achieving greater transmissibility Lean too may have become less virulent.

Dawkins' coining of the meme 'meme' was set in the context of a general discussion of so called selfish replicators. He was at pains to clarify that there was no suggestion of teleology. Selfish replicators did not operate with intent, they merely operated as if they had intent and the measure of success was simply how many copies survived and reproduced. By that criteria FM appears to have been a successful 'meme'. It has though been more than simply viral in that it has become an established part of the narrative of various organizations. This is not to say that memes exist. What is replicating is (sensu Lissack, 2003) a semantic token. The fact that its syntactic expression differs and lacks fidelity contributes to its success. The fact, if fact it is, that the semantic token serves as an evolutionary replicator would entitle it, by conventional codes of priority, to be termed a meme

The same is arguably true of the meme meme itself. In replicating it has acquired several different strands of meaning. The signifier/ representation 'meme' has many 'signifieds'. The literature has been prone to discuss how a meme should be conceptualized rather than examine the utility of memetics as a concept; as, in a memorable metaphor coined by Lord (2004), an isthmus between the opposing continents of sociology and science. The authors involved in those debates are all arguing for culture as the product of a selection process. The meme meme provides a convenient representation on which they

can ontically dump the concept of a complicated mass of representations, narratives and symbols; replication of which underpins cultural evolution and is essential to the emergence and maintenance of 'organization' in the phase space of culture. I am taking that position here and arguing that a selfish replicator perspective does not necessarily require fidelity as to what is signified and further that such a conceptual view opens up in theory at least a potential for empirical testing. The rise and fall of management fashions may offer examples and a possibility of empirical testing.

As Dennett (1995) argued we should ask *cui bono*? For a 'selfish meme' fidelity of meaning may limit replicative fitness; limit the niches into which a particular meme can expand. If we conceive of the meme as a 'selfish-signifier' (using selfish in the sense qualified and explained by Dawkins an entity with an inherent tendency to replicate) then having many 'signifieds' is, (sensu Dennett) a 'good-trick' in replication space. If we conceive of memes or one class of memes as replicating discourses we can perhaps widen Lord's isthmus and provide a scientific explanation of the phenomena of social constructionism (c.f. Darwin, 1871; Gatherer, 1997). Methods from the historical and biological sciences can open new means of researching organizations as ecologies of narratives. Without intending a pun geology could be thought of and was traditionally taught as if it was rooted in grounded inquiry. Theories and classifications emerged from interpretation empirical observations rather than hypotheses and deductions. The same is true of the observations used by Darwin, and Wallace with paleogeography, to argue the original case for natural selection. In the terms of current methodological paradigms of organizational studies these 'natural sciences' are perhaps closer to the qualitative than the formal quantitative. Ontologically realistic accounts of constructed phenomena open new empirical vistas for evolutionary organizational studies such as are reported by Breslin (2012), Macdonald (2012) and Flowers and Ellison (2012).

Acknowledgements

Down the years many people of contributed to my fascination with the potential dynamics of organisational evolution. In particular for this paper, Dermot Breslin, Kate Distin, Ian Ellison, John Flowers, Jameson Gill, Brian Lawson, Andrew Lord, Rachel Macdonald, Geetha Narayan and two anonymous reviewers. Keith Alexander and Tony Thompson were a valuable guide to FM's early narratives.

5 Notes

More general attention to any parallels between extinction and faunal mixing events in geological and cultural history. Modern earth science accepts catastrophic process such as impacts causing extinction and opportunity also feedback via climate change bringing demise to particular ecologies. Likewise plate tectonics can also open new niches. I have alluded to parallels (Price, 1995, 1998, 2009) but the topic would benefit from more empirical study.

References

- Abrahamson, E. (1996), "Management fashion", *Academy of Management Review*, Vol. 21 No.1, pp. 254-285.
- Abrahamson, E. and Fairchild, G. (1999), "Management Fashions: Lifecycles, Triggers and Collective Learning Processes", *Administrative Science Quarterly* Vol. 44 Dec. pp.708-740
- Aronoff S. and Kaplan A. (1995), *Total Workplace Performance: Rethinking The Office Environment*, WDL Publications, Ottawa.
- Aunger, R. (2002), *The electric meme: A new theory of how we think*, Free Press, New York.
- Balkin, J. M. (1998), *Cultural software: A theory of ideology*, Yale University Press, New Haven, CT:

Becker, F. (1990), *The Total Workplace: Facilities Management and Elastic Organization*, Praeger Press, New York.

Blackmore, S. (1999), *The Meme Machine*, Oxford University Press, Oxford,

Breslin, D. (2012), “Spaces and the co-evolution of practices within a UK metallurgical equipment supplier”, in Alexander, K. and Price, I. (Eds.), *Managing organizational ecologies: space, management and organization*, Routledge, New York, NY (in press).

Csikszentmihalyi, M. (1988), “Society, culture, and person: a systems view of creativity”, in Sternberg, R. J. (Ed.), *The nature of creativity: Contemporary psychological perspectives* Cambridge University Press, New York NY, pp. 325-39

Darwin, C. R. (1859), *On the origin of species by means of natural selection*, John Murray, London.

Darwin, C. R. (1871), *The Descent of Man, and Selection in Relation to Sex*, John Murray, London.

Dennet, D. C. (1995), *Darwin's Dangerous Idea: Evolution and the Meanings of Life*, Penguin Press, London.

Distin, K. (2005), *The Selfish Meme: A Critical Reassessment* Cambridge University Press, Cambridge.

Distin, K. (2010), *Cultural Evolution*, Cambridge University Press, Cambridge.

Ellison, I. and Flowers, J. (2012), “Ecologies in existence: boundaries, relationships and dominant narratives”, in Alexander, K. and Price, I. (Eds.), *Managing organizational ecologies: space, management and organization* Routledge, New York, NY, (in press)

Feldman, C. F. (1987), “Thought from Language: the linguistic construction of cognitive representations”, in Bruner J. and Haste, H. (Eds.), *Making Sense: The Child's Construction of the World*, Methuen, London pp. 131-146.

Gatherer, D. (1997), Macromemetics: Towards a Framework for the Re-unification of Philosophy *Journal of Memetics - Evolutionary Models of Information Transmission*, Vol. 1 No. 1 http://cfpm.org/jom-emit/1997/vol1/gatherer_dg.html (accessed 7 October 2011).

Gersick, C. J. (1991), "Punctuated Equilibria as a Model of Change", *Academy of Management Review*, Vol. 16 No. 1 pp. 10-23

Gell-Mann, M. (1996), "The Simple and the Complex", in Alberts, D.S. and Czerwinski, T. J. (Eds.), *Complexity, Global Politics, and National Security*, pp. 2-12 http://www.dodccrp.org/files/Alberts_Complexity_Global.pdf (accessed on 10 October 2011)

Green, A. and Price, I. (2000), "Whither FM? A Delphi study of the profession and the industry", *Facilities* Vol. 18 No. 7/8, pp. 281-292.

Heath, C., Larrick, R. P. and Klayman J. (1998), "Cognitive repairs", *Research in Organizational Behavior*, Vol. 20 No. 1, pp. 1–37.

Heath, C. and Siedel V. (2005), *Language as a Coordinating Mechanism: How Linguistic Memes Help Direct Appropriate Action*, <http://icos.groups.si.umich.edu/Linguisticmemes4.2.pdf> (accessed on 20 June 2011).

Hull, D. (1988), *Science as a Process*", University of Chicago Press, Chicago IL.

Jackson, N. and Lund H. (Eds.) (2000), *Benchmarking for Higher Education*, Open University Press, Milton Keynes, UK.

Kornberger, M. and Clegg, S.R. (2004), "Bringing Space Back In: Organizing the Generative Building", *Organization Studies*, Vol. 25 No.7, pp. 1095–1114.

Langrish, J. Z. (2004), "Darwinian Design: The Memetic Evolution of Design Ideas", *Design Issues*, Vol. 20 No. 4. pp 4-19

Leaman, A. (1992), "Is Facilities Management a Profession?", *Facilities*, Vol. 10 No. 10 pp. 18-20.

Lissack, M. (2003), "The redefinition of Memes: Ascribing Meaning to an Empty Cliché", *Emergence*, Vol. 5 No. 3, pp. 48-65.

Lloyd, T. (1990), *The nice company: why nice companies make more profits* Bloomsbury, London.

Lord, A.S. (2004), *Organisational Phylogenesis: Developing and Evaluating a Memetic Methodology*, PhD Thesis Sheffield UK., Sheffield Hallam University

Lord, A.S. and Price, I. (2001). "Reconstruction of organisational phylogeny from memetic similarity analysis: Proof of feasibility", *Journal of Memetics—Evolutionary Models of Information Transmission*, Vol. 5 No. 2.

Lunn, S., Lord, A.S., Price, I. and Stephenson, P. (2002), "Emergent Behaviour in a New Market: Facilities Management in the UK", In Frizelle, G. and Richards, H. (Eds.), *Tackling industrial complexity: the ideas that make a difference*, UK Institute of Manufacturing, Cambridge, pp.357-372.

Macdonald, R. (2012), "Dense networks and managed dialogue: the impact on the patient environment", in Alexander, K. and Price, I. (Eds.), *Managing organizational ecologies: space, management and organization*, Routledge, New York NY (in press)

McCarthy, I.P., Leseure, M., Ridgway, K. and Fieller, N. (1997), "Building manufacturing cladograms", *International Journal of Technology Management*, Vol. 13 No. 3, pp. 269-286.

Moore, J.F. (1993), "Predators and Prey: A New Ecology of Competition", *Harvard Business Review*, Vol. 71 No. 3, pp. 75-86.

Morrell, K. (2008), "The Narrative of 'Evidence Based' Management: A Polemic", *Journal of Management Studies*, Vol. 45 No. 3, pp. 613-635.

Murmann, J. P., Aldrich, H., Levinthal, D. and Winter, S. (2003), “Evolutionary Thought in Management and Organization Theory at the Beginning of the New Millennium”, *Journal of Management Inquiry*, Vol. 12 No. 1, pp. 1-19.

Nelson, R. R. and Winter, S. G. (1988). *An evolutionary theory of economic change*, Harvard University Press, Cambridge, MA.

Odling-Smee, F. J. (2003), *Niche Construction*, Princeton University Press, Princeton NJ.

O’Mahoney, J. (2007), “The Diffusion of Management Innovations: The Possibilities and Limitations of Memetics”, *Journal of Management Studies*, Vol. 44 No. 8, pp. 1324-1348.

Peters, T., (1992). *Liberation management: Necessary disorganization for the nanosecond nineties*, Macmillan, London.

Powell, W. W. and DiMaggio, P. J. (1991), *The new institutionalism in organizational analysis*, University of Chicago Press, Chicago IL.

Pratchett, T., Stewart, I. and Cohen, J. (2002), *The Science of Discworld II: The Globe*, Ebury Press, London.

Prahalad, C.K., and Hamel, G. (1993), “The Core Competence of the Corporation” *Harvard Business Review*, Vol. 68 No. 3 pp.79-91.

Price, I. (1995), “Organisational memetics?: Organisational learning as a selection process”, *Management Learning*, Vol. 26 No. 3, pp. 299-318.

Price, I. (1999), “Images or Reality; Metaphors, Memes and Management”, In Lissack, M. R. and Gunz, H. P. (Eds.), *Managing Complexity in Organizations: A View in Many Directions*, Quorum Books, Westport CT, pp. 165-189.

Price, I. (2000), “Benchmarking Higher Education and UK Public Sector Facilities Management”, In Jackson, N. and Lund, H. (Eds.), *Benchmarking for Higher Education* Open University Press, Milton Keynes, pp. 139-150.

Price, I. (2003), “Chapter 3 Facility Management as an emerging discipline and Chapter 4 The development of facility management”, in Best, R., Langston, C and de Valence, G. (Eds.), *Workplace Strategies and Facilities Management*, Butterworth-Heinemann, Oxford, pp. 30-66

Price, I. (2007), “The Lean Asset: New language for new workplaces”, *California Management Review*, Vol. 49 No. 2, pp. 102-118.

Price, I. (2009), “Space to adapt: workplaces, creative behaviour and organizational memetics”, In: Rickards, T., Runco, M.A. and Moger, S. (Eds.) *The Routledge Companion to Creativity*, Routledge, London, pp. 46-57.

Price, I. (2012) “Organizational ecologies and declared realities”, in Alexander, K. and Price, I. (Eds.), *Managing organizational ecologies: space, management and organization*, Routledge, New York NY (in press)

Price, I. and Shaw, R. (1996), “Parrots, patterns and performance (The learning organisation meme: emergence of a new management replicator)”, In Campbell T.L. (Ed.) *Proceedings of the Third Conference of the European Consortium for the Learning Organisation*, Copenhagen.

Price, I. and Shaw, R. (1998), *Shifting the Patterns: Breaching the Memetic Codes of Corporate Performance*, Management Books 2000, Chalfont.

Rothschild, M. (1992), *Bionomics: The Inevitability of Capitalism*, Futura, London.

Røvik, K. A. (2011), “From Fashion to Virus: An Alternative Theory of Organizations’ Handling of Management Ideas”, *Organization Studies*, Vol. 32 No. 5, pp. 631–653.

Sammut-Bonnici, T. and Wensley, R. (2002), “Darwinism, probability and complexity: market-based organizational transformation and change explained through the theories of evolution”, *International Journal of Management Reviews*, Vol. 4 No. 3, pp. 291–315.

Scarborough, H. and Swann, J. (2001), “Explaining the Diffusion of Knowledge Management: The Role of Fashion”, *British Journal of Management*, Vol. 13 No. 1, pp. 3-12

Scott-Morgan, P. (1994), *The Unwritten Rules of the Game*, McGraw Hill, New York NY.

Vischer, J.C. (2007). “The concept of workplace performance and its value to managers”, *California Management Review*, Vol. 49 No. 2, pp. 62-79.

Waddington, C. H., (1977), *Tools for Thought: How To Understand and Apply the Latest Scientific Techniques of Problem Solving*, Basic Books, New York NY.

Walgenbach, P. and Hegele, C. (2001), “What can an Apple Learn from an Orange? Or: What do Companies Use Benchmarking for?”, *Organization*, Vol. 8 No. 1 pp. 121-144.

Weeks, J. and Galunic, C. (2003), “A Theory of the Cultural Evolution of the Firm: The Intra-Organizational Ecology of Memes,” *Organization Studies*, Vol. 24 No. 8 pp. 1309-1352.

Williams, R. (2000), “The business of memes: memetic possibilities for marketing and management”, *Management Decision*, Vol. 38 No. 4, pp. 272-279.

Williams, R. (2004), “Management fashions and fads: Understanding the role of consultants and managers in the evolution of ideas”, *Management Decision*, Vol. 42 No. 6 pp. 769 - 780

Womack, J.P., Jones, D.T. and Roos, D. (1990), *The Machine That Changed The World*, Rawson Associates, New York NY.