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THE ANATOMY AND CAUSAL STRUCTURE OF A CORPORATE MYTH: NOKIA BY THE BOOK*; **

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The anatomy and causal structure of a corporate myth: Nokia by the book*

Abstract

In this paper we conceptualise explanations of company-specific commercial performance as corporate myths. To improve our understanding of anatomy and causal structure of corporate myths, we analyse publications that deal with Nokia's historical transformation from a loss-making 1980s conglomerate to a focused and successful telecommunications company in the early 1990s. From a corpus of related literature, 89 causal arguments are identified and analysed in terms of the logic of the arguments employed. The analysis shows that (1) most existing analyses offer either a specific or a biased explanation for Nokia's success; (2) very few explanations are either plausible or logical; (3) it is most unlikely that another company would achieve the same outcomes even if exactly the same decisions were made. Even though combining and comparing different explanations does not enhance the validity of any specific historical interpretation of Nokia's evolution or commercial success, it does offer an improved conceptual understanding of the ingredients found in corporate myths.

Keywords: corporate myth; popular management literature; history; causality; Nokia; strategy

The extent to which management and organizational studies affect business practice has remained largely unresolved (Gulati, 2007). What we do know is that managers do not read *Administrative Science Quarterly* or the *Academy of Management Journal* (or indeed any ‘scientific’ management-focused journals). Instead, managers engage in ‘management discourse’ through which academic scholars, consultants, business school teachers, journalists, and practicing business people generate manifestations of how (and why) both organizations and management function (Furusten, 1999: 15-17). A quick glance at the books which are most popular on amazon.com, for example, reveals that popular management books are an important part of this particular sector. Add in executive biographies, a variety of history books and business magazines and it is easy to achieve an understanding of the *de facto* sources of managerial knowledge in modern organizations.

Earlier research into popular sources of knowledge regarding management techniques has primarily focused on the structural patterns and evolution of management fashions and ‘popular management books’ (for recent reviews see Engwall and Kipping, 2004; ten Bos and Heusinkveld, 2007)¹. The approach we adopt complements this research tradition but diverges from it by focusing on the explanations for company-specific business processes offered by many authors. In other words, we examine the topic of corporate myths (compare Delahaye et al. 2009 that focus on corporate history). Currently, an increasing number of stories about the successes, failures and transformations of several celebrity companies (Apple, GM, GE etc.) are appearing. These stories build images and reflections that to some extent feed the genre of popular management literature. Stories of this type also affect how the corporations concerned engage in

¹ In this context, ‘popular’ refers to the accessibility of the published texts among business actors. For example, a regression analysis published in the *Academy of Management Journal* does not count as popular but a company history does as understanding it does not require additional knowledge in scientific methodology.

sense-making, how they interact with their public image, and thus generate further material for myth building (Boje, Fedor and Rowland 1982; Foster et al. 2011).

From this motivational starting point, we examine case-based and/or historical explanations for Nokia's turnaround in the early 1990s, together with the company's subsequent market dominance and success that lasted for more than a decade. The case is relevant for our research objective because Nokia's rise to a position of market leadership in the mid-1990s has been characterized as a mythical journey in a large number of publications. There is of course no doubt that the company's metamorphosis from a northern-European conglomerate manufacturing paper, rubber boots, tyres and televisions to a modern global telecommunications concern can seem peculiar and thus demands some form of explanation. Our research question deals with the anatomy and causal structure of such explanations by examining two questions: (1) To what extent do these explanations follow causal logic as it is understood in the social sciences? (2) What are the elements of a corporate myth? We do not directly analyse the extent to which such texts have affected business communities but rather the nature of the claims about success which, by and large, employ and play with causal rhetoric (e.g. 'CEO X created a positive attitude in the organization').

We collected most, possibly all, relevant writing (journalistic texts excluded) on the subject of Nokia that has been published in Finland and internationally. From these texts we identified 89 causal arguments and coded the material in terms of the logic of the arguments employed. Our analysis revealed that: (1) most analyses offer some specific explanation for Nokia's success; (2) very few of the explanations offered are plausible or logical; and (3) it is very unlikely that another company would achieve the same outcome even if it made the same decisions.

Literature review

The anatomy of popular management literature and corporate myths

Popular management literature has emerged as an important research topic in organizational studies. As well as enriching our understanding of the evolution of management research, it also enhances comprehension of the ways in which management practice seeks out and consumes knowledge. Research findings include the distinction between academic research and popular management knowledge (Kieser 1997), the importance of societal context in the promotion of certain types of management models (Barley and Kunda 1992), the fashion-like nature of popular management knowledge (Abrahamson and Fairchild 1999), and the diffusion of popular management knowledge into managerial practise (Doorewaard and van Bijsterveld 2001; Scarbrough and Swan 2001).

In connection with our research agenda, the distinction between popular management literature and academic business research is elemental because corporate myths – our specific research topic – are built using both traditions and all three follow systems of logic which are inherently different (Kieser and Leiner 2009; Ponzoni and Boersma 2011). Brief sketches of the attributes of these three knowledge-generation systems can be found in Table 1:

Table 1: Three Knowledge-Generation Systems

	<i>Popular management literature</i>	<i>Corporate myth</i>	<i>Academic business research</i>
Purpose	A sector in the business knowledge industry in which the aim is to sell books and consulting services to companies and organizations.	A mixture of literatures in which the focus is on offering narrative analytical accounts of successful large companies such as Apple, GM, GE etc.	A social sciences discipline which includes the study of all possible topics connected with organizations, management, finance and other business issues.

Genre development	Two specific modes of genre development. One involves management fashions emerging and evolving in repeated cycles with each fashion being followed by another. The other involves a broad range of literature which recycles and revamps existing and established management concepts.	Corporate myth narratives fall into a number of academic and popular management genres, all the way from business histories to "airport-shop books". One easily-identifiable genre is critical accounts of companies such as Enron that have failed for specific reasons (unethical behaviour, economic losses, quality problems etc.)	Genre development takes the form of scientific discourse in which (a) paradigms follow natural evolutionary life-cycles including variation, selection and retention; and (b) paradigms compete with each other and changes in dominance are the result.
Generalizability	Popular management knowledge is based on the concept of universality, i.e. that the lessons, models and suggestions offered can help in managing all types of companies.	Corporate myth narratives typically adopt a specific attitude to success and argue for the superiority of one specific cause or more specific causes.	In terms of phenomenology, a heterogeneous area.
Target audience	Practicing managers, HR people, the business press, business school students, undergraduates at business schools, teachers etc.	Practicing managers, HR people, company-specific educational programs, employees of topical corporations, the business press, financial institutions and financial experts etc.	Primarily other academic scholars, but also other professionals interested in business-related phenomena.
Material	Usually a heterogeneous sample of case examples and selected statistical material which supports a pre-determined proposition regarding formulae for success.	Depending on the mandate that may (or may not) have been given by the target corporation, archive material, interviews, public material and other material which typically features in historical case studies.	All types of material and methods are used.
Authors	Business professors, management 'gurus' and other competent writers whose reputations have not been spoiled by being considered too academic.	Academic scholars, business historians, journalists and writers operating in the popular management book genre.	Mainly professional researchers affiliated to universities or research institutes.
Academic groups with research interest.	Scholars of popular management literature, researchers into management fashions and management 'gurus', institutional theorists.	Historians, critical scholars, narrative researchers.	

As the entries in Table 1 illustrate, at least three different knowledge systems with an interest in business organizations and management exist. Popular management literature is primarily a

business segment closely related to management consulting, executive education and other fields of service provision which target companies and practicing managers. Popular management genre follows business logic with actors aiming to produce new marketable items for the largest possible audiences. As Alfred Kieser (Bort and Kieser 2011; Kieser and Nicolai 2005) and others have demonstrated, the interest shown in knowledge is not intended to extract reliable or valid information, but to feed developments in the management “industry”.

Academic business research studies corporate activity by following techniques similar to those employed in other social sciences and - to some extent - by imitating techniques used in scientific investigations. While the results obtained from academic business research cannot be fed directly into managerial practise, many of the research results can be translated into business activity. On the other hand, the logic for expanding knowledge is primarily scientific and includes expectations regarding criticism, transparency, reliability and validity. Even though the line between ‘academic’ and ‘popular’ is sometimes thin, they are two separate systems.

Corporate myth is an interesting topic because of its partial membership in both of the knowledge systems already described. The most obvious feature of corporate myth literature is its focus on specific companies. Books such as *Inside Apple: How America's Most Admired--and Secretive--Company Really Works* (Lashinsky 2012) or *At Any Cost: Jack Welch, General Electric, and the Pursuit of Profit* (O'Boyle 1998) are written by journalists and the rhetoric employed is similar to that in popular management literature. There are however historical works written by professional historians such as *Renewing Unilever: Transformation and Tradition* by Harvard professor Geoffrey Jones (2005) which are academic by nature although focusing on one company. A specific case is books and articles which adopt a critical approach to scandals and misbehaviour by individual managers in specific companies such as *The Smartest Guys in the*

Room: The Amazing Rise and Scandalous Fall of Enron (McLean and Elkind 2003), or David M. Boje's (1995), a classic account of Disney as a story-telling organization.

Boje's study is of particular interest as it touches directly on Disney's role as an active producer of myths concerning its own identity. In the same genre, Hegele and Kieser (2001) articulate how legends involving GE's Jack Welch are used to frame both his life and his career as an example of successful leadership. The important message in Hegele's and Kieser's work is the understanding that legend-building requires a communicative relationship between the author(s) and the audience:

"The audience, the business community, has chosen to let Welch shine as a good hero. Legends are not falsifiable, either by O'Boyle or by historians who collect evidence in a more scientific fashion. They live as long as the believers want them to live, or they die if more attractive heroes come along."(pp. 308)

Although Hegele and Kieser draw a distinction between myth and legend, the Jack Welch case reflects the importance of stories as sense-making devices (Gioia and Thomas 1996; Weick, Sutcliffe and Obstfeld 2005) used in rhetorical contests involving corporate reputations (Suddaby and Greenwood 2005). In terms of rhetorical persuasion (Sillince 2002), simplicity is a virtue. Corporate myth expositions typically adopt only a single angle when explaining either success or failure. In some cases this is a well-known leadership figure, but specific strategic moves (as in the case of Southwest Airlines) can also be proposed as arguments for a company's success. The number of possible explanations can also be assumed to be high, reflecting the heterogeneity of the management sector when compared to the many types of reader who consume corporate myth narratives. Finally, the precise motivations which encourage authors to produce corporate myth stories are unknown. Initially, it would appear that companies allocate resources (i.e. money and access) to some authors while rejecting others, but the exact role played by corporations in myth

building is unclear (for a functional use of history see Rowlinson and Hassard 1993). More importantly, knowledge regarding the causal structure of corporate myths is either scattered or non-existent.

Causality and corporate myths

In broad terms, causality describes the relationship between two or more variables through which causes (inputs) are transformed into one or more effects (outputs). The application of causal methods has moved in an increasingly mathematical and theoretical direction, with causal inferences being drawn by collecting large quantities of data and analysing this using tools such as probability theory, graphs, and counterfactuals (Morgan & Winship 2007; Pearl 2000). The strengths of causality approaches lie in their ability to formulate logically-valid conclusions from data which is complex and often difficult to observe. The predominate use of causal methodology has been in the fields of medicine, political science and social science, as the effects of interventions such as pharmaceutical compounds or governmental policies easily lend themselves to causal investigations (e.g. Thompson et al. 2003). In our research context, we assume that (a) popular management books are not usually interested in strict causality; and (b) academic research, by definition, takes causality as an important issue in research activity and related reporting.

Causal arguments imply that x happened *because* of y, and this often involves x doing something to y. On the other hand, if x is merely a catalyst for the occurrence of y, a causal link cannot be claimed because x is only a condition which allowed y to happen with the real cause lying elsewhere. As an example, it can be said that oxygen is a required condition for wood to burn, but intense heat is the real cause of the burning (Pearl 2000). Extending this line of thinking

to corporate myths, factors presented as essential requirements for a company's success which are actually no more than conditions can be deemed to be implausible - or at least weak - arguments for such success.

The nature of the relationship between causes and effects can be revealed by considering what is sufficient and what is necessary (Pearl 2000). Sufficient causes “measure the capacity of x to *produce* y” (Pearl 2000, emphasis in original), whereas necessary causes measure the possibility that y can occur without x. In other words, if x is a *sufficient* cause, it is enough to produce outcome y when acting alone, while a *necessary* cause is needed to achieve outcome y but may not be able to produce the desired outcome on its own. As their definitions make clear, sufficient and (especially) necessary causality are closely related to counterfactual arguments. Consistent with arguments proposed by Durand and Vaara (2009) and the “counterfactual history” method, testing for causality between a specific claim and a company's success requires that alternative scenarios in which the claimed cause had *not happened* be imagined, together with an evaluation of whether the company would have become successful in such circumstances (cf. Booth et al. 2009)

Singular causation and *general causation* are two different levels of causal claim that also require a short introduction. *Singular causes* are particular and scenario-specific, which means that they contain more information and are difficult to generalize unless they can be reduced to general causes (Pearl 2000). *General causes*, on the other hand, are less bound to any context and, as such, resemble umbrellas that can accommodate many singular causes of the same type. Pearl (2000, 309-310) employs the claims that “a car accident was the cause of Joe's death” and “car accidents cause deaths” as examples of singular and general causes, respectively. For management research, singular and general causes have a number of key implications. The

idiosyncrasies and importance of context in case studies and narratives mean that their causal inferences are usually singular by nature. As the majority of academic research is aimed at making discoveries and contributions that can be generalized for other applications, most studies have to make the transition from singular to general causation and an on-going debate on the relationship between them exists in philosophical literature (Hitchcock 1995). It is however clear that the process of conversion, i.e. generalization from the results of case studies, often lacks credibility. In the study of management cases, especially those which investigate aspects of company performance, it is important to decide whether the factor or factors being proposed as causal are peculiar to the organization in question or if they can be found in all companies. As the fundamental difference that exists between singular and general causation also affects the credibility of any claim related to company success, the causal nature of each argument must be characterized as either singular – company-specific – or general (Pearl 2000). By operating in this manner, false generalizations can be distinguished from sound ones and, conversely, general claims which are not justifiable can be determined and excluded.

To summarize, having discussed corporate myths and especially their potential causal structure, two questions can be asked: (1) What constitutes an adequate number of explanations in the context of a single corporate myth; and (2) Do all corporate myths require a specific causal structure?

Method

We decided to study Finland-based Nokia as it is a company whose success in the early 1990s has attracted a large number of explanations (for detailed information on Nokia's history see Häikiö 2001a, 2001b, and 2001c). We began by assembling a comprehensive corpus of Nokia-related literature. All available texts on the company were identified using several reference and

academic databases as well as local libraries and normal internet searches. A set of exclusion criteria was then established to reduce any bias related to subjective exclusion (Glass 1976). The criteria used in selecting items for inclusion in this study were:

- 1) texts had to deal in some way with Nokia's success in the early 1990s (cf. Aspara, Lamberg, Laukia and Tikkanen, 2011), and
- 2) articles published in newspapers and business magazines were excluded.

A total of 59 pertinent publications were identified, read and carefully examined for references to factors which were claimed to have had an influence on Nokia's success. The resulting 432 claims were coded and assembled into a table together with details of their respective authors and publication dates. We also coded the time phase of each claim with the aim of obtaining an accurate representation of how explanations for Nokia's success evolved over time. The set of success factors gradually became saturated, and each of the 432 claims was allocated to one of a set of 89 distinct claims for Nokia's success. In accordance with the methods of meta-synthesis (Dixon-Woods et al. 2004; Jensen and Allen 1996), the 89 claims were then sorted into 12 broad themes which represent domains for the sources of Nokia's competitive advantage. These included both firm endogenous factors (organizational architecture, leadership, superior products etc.) and firm exogenous factors (government policy, demand patterns, coincidence etc.). These domains and the claims attributed to them enabled us to formulate a system dynamics model for Nokia's success, while the coded time phases attached to each claim revealed important causal relationships and interdependences between the different claims.

Even though we attempted to compile a comprehensive list of publications, the possibility that some important texts could have been overlooked is an acknowledged, but minor, limitation on the results obtained from this study. It was however noticed that most of the claims made, if

not all, were presented by at least two authors, which in turn suggests that the most likely result of including material from additional, as-yet-undiscovered items of literature would be to only increase the overall quantity of claims, not the number of distinct claims and/or their quality. Another limitation in this study is the potential for overlooking one or more proposed success factors as a result of reader subjectivity. In addition, the allocation of each suggested success factor to one of 89 distinct claims may have resulted in some of the depth or detail associated with individual proposals being lost. On the other hand, even with these limitations, it is fair to assume that the meta-analysis presented in this study is a comprehensive representation of the factors which have been proposed by a wide range of parties for Nokia's success.

After identifying the 12 broader domains, the causal properties of each of the 89 distinct claims for Nokia's success were analysed. In practical terms, this meant examining the underlying logic of the explanations provided and testing the validity of any causal statements made. To ensure the maximum possible degree of objectivity, a panel of four external experts was employed to examine the causal logic in each individual claim. These experts were chosen on the strength of their formal knowledge of: (a) the philosophy of science and causality; (b) causal modelling in management science; and (c) the historical analysis of business phenomena. Each expert was given a list of the success-related claims that had been identified and requested to rate the soundness of each claim using the causality tests introduced above. In their deliberations, the experts were asked to ignore any background knowledge they might have about Nokia and focus purely on the logic employed and the plausibility of each claim proposition at the level of specific sentences. The objective was to isolate causal arguments which, when examined in the most objective manner possible, would still appear to be beneficial to Nokia even if the company had performed in a way or ways that were less successful.

Table 2 is a presentation of the assessments made by the four external experts. The evaluation was performed in a rudimentary set theoretical manner, with the “Rating” column indicating the degree of agreement and the remainder of the columns indicating how many claims corresponded to each degree of agreement. For example, for eight of the 89 claims, all four experts agreed that the claim under consideration implied causality, while 21 of the 89 claims were deemed by all four experts to not imply any degree of causality. A total of 534 evaluations were made by each member of the panel, and all four experts agreed upon a claim belonging to a specific set in 122 instances.

Table 2. Results of causal evaluation by four external experts

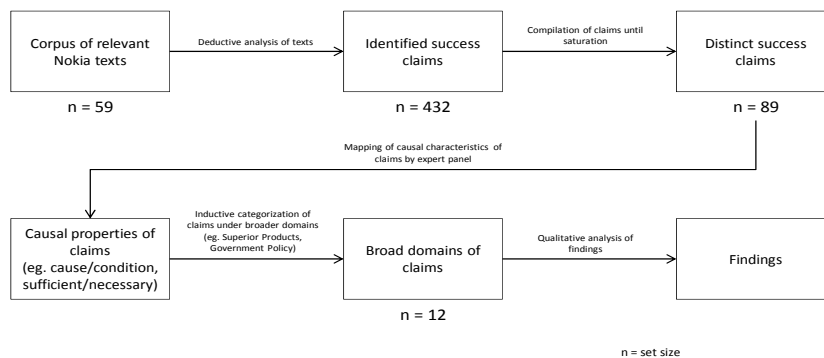
Rating	Cause	Condition	Necessary	Sufficient	Singular	General	Total
0	21	10	9	28	11	14	93
1	26	19	33	34	27	45	184
2	16	24	28	19	30	30	147
3	18	23	19	5	16	0	81
4	8	13	0	3	5	0	29
Total	89	89	89	89	89	89	534

The analysis process was continued by examining each of the tests for causality separately and concluded with an overall discussion of their adequacy or inadequacy. In this evaluation, a claim was deemed to belong to a specific set if it had been allocated to that set by at least three of the four experts on the panel. Using this procedure, 26 of the 89 claims were determined to be evident causes – which in turn means that more than two-thirds of the claims do not imply any significant degree of causality - while 36 of the 89 claims belong to the condition set.

To improve our understanding of the composition of corporate myths, the causal properties associated with each of the 89 claims were then examined in the context of the 12 domains. Using a weighted average of ratings by the four experts, each domain was awarded a score based on the causal properties of the claims allocated to it. This provided an indication of

the general tendencies in corporate myth constructs by labelling each domain as predominantly causal or conditional, as either sufficient or necessary and as either singular or general. Figure 1 synthesizes our research process.

Figure 1: Research Process



Analysis

The heterogeneity of the 89 claims for Nokia’s success reflects the dissonance that often exists in accounts of successful company performance. Even though they can be broadly categorized into 12 domains, the claims differ significantly in their plausibility, generality, nature, temporality and context. In order to illustrate the dissonance that exists in explaining Nokia’s success, a brief overview of the multitude of different claims extracted from Nokia-related literature is presented in Table 3 below. The 12 thematic domains are listed in the left-hand column headed “Genre of explanation”.

Table 2. Main Genres of Nokia Explanations

Genre of explanation	Typical claim	Illustrative quote	Other representative citations
Great Leader	Management's faith and patience with critical business areas such as radio telephones was, in retrospect, necessary for their later success.	"Nokia's current strong position in the telecommunications industry can be attributed to...Björn Westerlund. He had faith in the future of electronics and allowed the continuously unprofitable unit to continue operations for years." (Mäenpää & Luukkainen, 1994)	Mäkinen (1995), Häikiö (2001a), Bruun & Wallén (1999), Saari (2000), Häikiö (2001b), Steinbock (2002), Steinbock (2001), Moen & Lijja (2004), Steinbock (1998), Sokala (2002)
Government Policies	The government's decision to distribute business opportunities in the telecom market evenly was critical to Nokia's telecom business.	"...the active role of the Finnish PTT in disseminating business opportunities throughout the industry was pivotal, already during the NMT era." (Palmberg & Martikainen, 2003)	Palmberg (2002), Mäkinen (1995), Berggren & Laestadius (2003), Sokala (2002), Väänänen in Lemola & Lovio (1996), Ali-Yrkkö & Hermans (2002), Hemesniemi et al. (1995), Palmberg (1998), Häikiö (2001c)
National Environment	Finland's high mobile phone penetration formed an essential component of the national environment that allowed Nokia to succeed globally.	"...the high density rate and direct connection between manufacturers and end users in the Nordic countries enabled Nokia to be a first-mover in developing and offering cellular phones featuring customer friendliness coupled with attractive design." (Pulkkinen, 1997)	Bruun & Wallén (1999), Ali-Yrkkö & Hermans (2002), Lemola in Lemola & Lovio (1996), Gooderham & Nordhaug (2003), Pulkkinen in Lemola & Lovio (1996), Steinbock (2001), Richards in Bresnahan & Gambardella (2004)
Technological Capabilities	Nokia's mobile phone business would not have succeeded without the gamble to focus on the GSM standard.	"For all practical purposes, the story of GSM commercialization chronicles Nokia's success... Nokia has been one of the main developers of GSM technology." (Steinbock, 2001)	Palmberg (1998), Häikiö (2001a), Pulkkinen in Lemola & Lovio (1996), Palmberg (2002), Pulkkinen (1997), Steinbock (2001), Ylä-Anttila in Lemola & Lovio (1996), Pulkkinen (1997)
Process Management	Nokia gained significant competitive advantages from its well-developed upstream and downstream network management.	"At present, Nokia is extending its supplier co-operation to R&D activities... Compared to other leading manufacturers, Nokia has led the way in developing supplier relationships, which has contributed to its superior performance." (Paija, 2001a)	Steinbock (2001), Laitinen & Leppänen (2001), Häikiö (2001c), Laaksonen et al. (1998), Steinbock (1998), Ali-Yrkkö et al. (2003)
Organization	Nokia was able to grow rapidly due to its flat and flexible corporate culture.	"...the atmosphere at Nokia Mobile Phones resembles that of a small company. This has been the key to growth." (Hokkanen & Kivikko, 1996)	Häikiö (2001a), Routtu (1996), Ali-Yrkkö et al. (2003), Castells & Himanen (2002), Koivusalo (1995), Steinbock (2001), Häikiö (2001b), Bruun & Wallén (1999)
Superior Products	The success of Nokia's products was based on the company's focus on design.	"Rapid product innovation, coupled with design flair and control over system design, became the core part of Nokia strategy... Nokia's close customer focus paid particular dividends..." (Richards, 2004)	Mäkinen (1995), Paija (2001a)
Strategy	Nokia's determination to succeed arose from its use of strategic intent.	"True strategic intent implies a sizeable stretch for an organization... Nokia purposefully used strategic intent to define its fundamental challenge, which stretched the organization into a focused cellular leader." (Steinbock, 2001)	Hokkanen & Kivikko (1996), Steinbock (2002), Lagus (2001), Pulkkinen (1997), Berggren & Laestadius (2003), Häikiö (2001c), Rugman & D'Cruz (2000), Tainio & Lijja (2003)
International Business Environment	Telecommunications deregulation allowed Nokia to grow rapidly.	"Deregulation has already increased Nokia's markets rapidly. Rapid and extensive telecommunications deregulation is beneficial for both Finland and Nokia." (Ylä-Anttila, 1996)	Paija (2001a)
Demand Patterns	Sluggish growth in global mobile phone markets outside Scandinavia led to Nokia's strong global position.	"Mobira held a leading position in the European markets [in the summer of 1983] and was one of the top manufacturers at a global level... [The position] was attributable to the slow start of cellular systems in the other Western European countries." (Pulkkinen, 1996)	Lemola in Lemola & Lovio (1996), Pulkkinen (1997), Steinbock (2001)
International Orientation	Rapid internationalization gave Nokia first-mover advantages and allowed it to succeed better than its larger rivals.	"The other central [success] factor has been internationalization. Being a small country, it has been clear from an early stage that the domestic market is not large enough to support the development of a high-tech industry like telecommunications." (Blomström & Kokko, 2002)	Pulkkinen (1997), Gooderham & Nordhaug (2003), Castells & Himanen (2002)
Coincidence	Nokia's success would not have been possible without coincidence.	"Coincidence has, luckily, had its part in Nokia's success as well." (Lemola, 1996)	Owen (2004), Bruun & Wallén (1999)

Table 3 presents all aspects of the repertoire that writers have employed when attempting to explain Nokia's success in the 1990s. The first impression derived from the contents of the table is that it effectively mirrors the contents of a primer in business management – adding Management Accounting and removing Coincidence, Government Policies and National Environment would turn the list of domains into the contents of an MBA course. *It is therefore reasonable to assume that a successful celebrity company will usually attract a large number of writers who produce a heterogeneous group of explanations.* Secondly, explanations associated with each of the 12 domains are clearly not equal in terms of their popularity. For example,

domains (i.e. broad themes) involving strategy and leadership are popular while others such as ‘Superior Products’ or ‘Coincidence’ win relatively few citations. The feature which distinguishes the more-popular and less-popular themes appears to be that the former reflect currently popular academic discourses in the management and strategy fields while the latter are not academic in nature. *It can thus be asserted that although the explanations put forward are said to be inductive, they generally reflect current themes in academic discourse.* Thirdly, it is also clear that some explanations are very positive towards Nokia, as are some writers (e.g. Steinbock 2010), while other explanations assign a lower value to Nokia’s strategic decisions in situations dominated by larger contextual factors. Although there is no unequivocal evidence of commercial relationships between Nokia and specific authors we may logically assume that such relationships may exist. It therefore seems that *the more closely an author is involved with the focal company, the more positive the interpretations related to that company’s management.* Ultimately, creating your own myth or using ghost-writers makes more sense than allowing academic individuals to enter the company environment (cf. Hegele and Kieser 2001).

To identify larger trends in corporate myths, an analysis of the causal structures implicit in the 12 domains was also required. Table 4 shows the strength of each success factor’s membership in the different groups of causal properties. As is typical in set analysis (Pajunen 2008), a value of 1 indicates full membership (i.e. a strong consensus among members of the test panel), 0 indicates no membership, and 0.25, 0.50 and 0.75 indicate degrees of partial membership. The values in the table are derived from ratings by the expert panel which have been normalised to a scale of 0 to 1, then approximated to the nearest partial membership value (e.g. 0.30 would be rounded down to 0.25).

Table 4. Success Factor Memberships by Causal Property

Domain	Cause	Condition	Sufficient	Necessary	Singular	General
Great Leader	0,50	0,50	0,50	0,25	1,00	0,50
Government Policies	0,50	0,50	0,50	0,50	0,75	0,50
National Environment	0,50	0,50	0,50	0,25	0,75	0,75
Technological Capabilities	0,75	0,25	0,50	0,50	0,75	0,50
Process Management	0,75	0,50	0,50	0,50	0,50	0,75
Organizational factors	0,25	0,75	0,50	0,25	0,50	0,50
Superior Products	1,00	0,25	0,50	1,00	0,50	0,75
Strategy-related explanations	0,50	0,50	0,75	0,50	0,25	0,75
International Business Environment	0,00	1,00	1,00	0,00	0,25	0,75
Demand Patterns	0,50	0,75	0,50	0,25	0,50	0,75
International Orientation	0,75	0,25	0,25	0,75	0,75	0,50
Coincidence	0,75	0,75	0,75	0,25	0,50	1,00

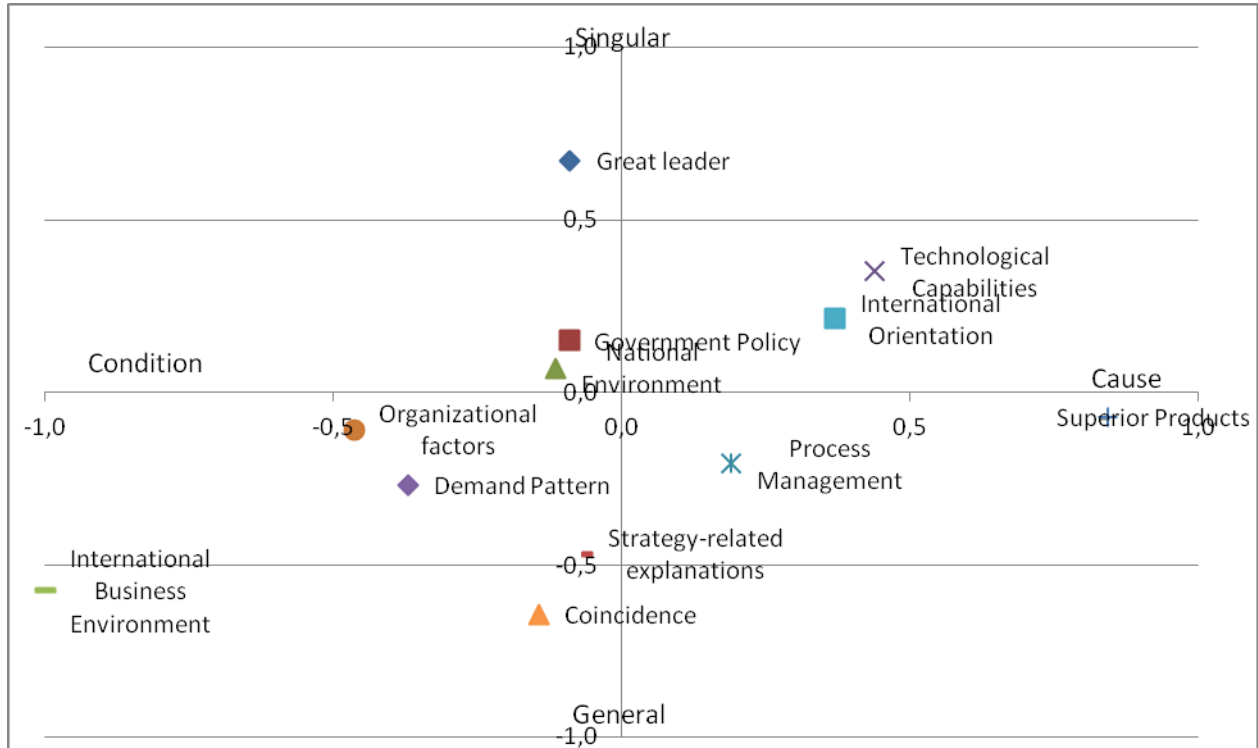
Examining each causal property in isolation to determine when membership is 0.75 or more, i.e. strongly-significant, five themes can be interpreted as causes, four can be interpreted as conditions, three as sufficient explanations, two as necessary, four as specific to Nokia (i.e. singular) and seven as general explanations for success. In overall terms, examining success factors in this logical manner does not result in any clear pattern or a specific “formula for success”. The next step in the analysis was to map combinations of causal properties in two dimensions: Cause/Condition against Singular/General (Figure 2) and Cause/Condition against Sufficient/ Necessary (Figure 3).

Figure 2. Domains mapped by membership of Cause/Condition and Sufficient/Necessary



Examination of causal properties mapped using the Cause/Condition and Sufficient/Necessary dimensions reveals interesting and even dramatic insights into the causal nature of success factors. Only one, the possession of Technological Capabilities, emerges without doubt as a sufficient cause for success. Both Superior Products and International Orientation are causal factors in Nokia's success but they are not sufficient explanations. In contrast, the weighting given to International Business Environment indicates that it is sufficient for Nokia's success (the company's global achievements would have otherwise been rather difficult) but its positioning indicates that it is an essential condition for success rather than a cause. The remaining success factors are clustered around the origin, which means that they are more conditions than causes. Such weak membership in both categories indicates that most of the success factors plotted in the figure possess little or no explanatory power.

Figure 3. Domains mapped by membership of Cause/Condition and Singular/General



Examination of causal properties mapped using the Cause/Condition and Singular/General dimensions strengthens the comments made regarding Figure 2 above. Once again there are only two factors – Technological Capabilities and International Orientation - that can be seen as specific causes for Nokia’s success, while two factors that could be responsible for Nokia’s success – Superior Products and Process Management - are not exclusive to the. Almost all the other success factors either have low partial memberships in both dimensions or are very general in nature. Interestingly, the Great Leader explanation is located in ‘no-man’s’ land as neither a cause nor a condition for success, even though it is essentially a company-specific property.

Conclusion

The tendency to interpret historical processes from the perspective of successful outcomes in popular management literature has recently been criticised and labelled as the ‘halo effect’ (Rosenzweig 2007). In examining the claims made for Nokia’s success, we noticed that many of the causal claims are so vague that it is difficult for even a small panel of experts to agree on any of the claims’ causal attributes. These results may be indicative of a more general tendency to present causal arguments based on intuition, narrow theoretical constructs and subjective guesswork rather than on solid data. For example, an argument such as “Nokia was successful because it focused on phone designs” is not justifiable unless consumer-related data exists which demonstrates a clear preference for Nokia’s phone designs. We contribute to the critical study on popular management literature and corporate myths in three ways.

Firstly, we position corporate myths as a literature genre which exists in the space between academic business studies and popular management literature (cf. Kieser, 2007). Corporate myth literature is a hybrid form that focuses on specific companies. Of particular importance is the notion that corporate myth authors use management literature as a source of concepts and ideas when proposing explanations for the evolution of companies, a tendency that was clearly evident in the case of Nokia. The causal categories identified provided broad coverage of the issues studied and theorized in strategic management field as a whole. A speculative interpretation of the tendency to deductively reflect the content of management literature rather than provide externally-generated explanations for a specific company’s evolution would be that authors simply do not have sufficient data to offer inductive explanations of individual events. Likewise, company historians have to cover the entire life of a company by embedding individual events (such as company turnarounds) into the flow of historical processes.

Secondly, this study offers an enhanced understanding of the catalytic influence of corporate myths and the forms of research required to investigate these topics further. The first avenue for future research would be an examination of the motives and backgrounds of the authors who produce corporate myth literature. Important questions that have not yet been dealt with in a thorough manner include: What is the role of corporate communication functions in myth production (cf. Delahaye et al. 2009)?; To what extent do writers' demographic and other qualities affect the interpretations they offer?; and How does access to internal and external corporate material influence the resulting explanations? As corporate myths are widely used in education, public policymaking and other contexts as examples of processes leading to success, these questions are not trivial ones. For example, Nokia has been used as a benchmark case of good management in practically all fields of the Finnish society starting from start-up firms and ending to totally different contexts such as universities and military organizations. From that perspective, it is important to understand the antecedents, processes, and outcomes related to corporate myth genre.

Third, corporate myth writing is an important element of the discursive context in which corporations operate. The public image of any listed corporation importantly shapes of how it is perceived by external observers but also by employees and corporate owners. Thus, the structure and content of the corpus of literature focused on the specific corporation is not trivial for the focal organization. Instead of aiming to manipulate the discourse we propose corporations to allow researchers to access internal materials without governing the content of research agendas. That is, by allowing heterogeneous and critical accounts of its evolution corporations may engage in open end sense-making and allow the emergence of alternative histories and ultimately scenarios for further development (cf. Booth et al. 2009). To clarify our argument: we did not

find any critical account of Nokia's transformation. Instead, all publications were solely focused on explaining Nokia's evolution from hindsight instead of building counterfactual or critical interpretations. By compromising some of the corporation's polished outlook would certainly result in richer understanding of the success ingredients.

REFERENCES

- Abrahamson, E., and G. Fairchild. (1999). Management fashion: Lifecycles, triggers, and collective learning processes. *Administrative Science Quarterly* 44(4):708-40.
- Aspara, J., J. A. Lamberg, A. Laukia, and H. Tikkanen. (2011). Strategic management of business model transformation: lessons from Nokia. *Management Decision* 49(3-4):622-47.
- Barley, S. R., and G. Kunda. (1992). Design and devotion: Surges of rational and normative ideologies of control in managerial discourse. *Administrative Science Quarterly* 37(3):363-99.
- Boje, D. M. (1995). Stories of the storytelling organization – A postmodern analysis of Disney stories of the storytelling organization.: A postmodern analysis of Disney as Tamara-Land. *Academy of Management Journal* 38(4):997-1035.
- Boje, D. M., D. B. Fedor, and K. M. Rowland. (1982). Myth making: A qualitative step in OD interventions. *Journal of Applied Behavioral Science* 18(1):17-28.
- Booth, C. (2003). Does history matter in strategy? The possibilities and problems of counterfactual analysis. *Management Decision*. 41: 96-104.
- Booth, C., M. Rowlinson, P. Clark, A. Delahaye, and S. Procter. (2009). Scenarios and counterfactuals as modal narratives. *Futures* 41(2):87-95.
- Bort, S., and A. Kieser. (2011). Fashion in organization theory: An empirical analysis of the diffusion of theoretical concepts. *Organization Studies* 32(5):655-81.
- Delahaye, A., C. Booth, P. Clark, S. Procter, and M. Rowlinson. (2009). The genre of corporate history. *Journal of Organizational Change Management* 22(1):27-48.
- Dixon-Woods, M., Agarwal S., et al. (2004). *Integrative Approaches to Qualitative and Quantitative Evidence*. London, Health Development Agency.
- Doorewaard, H., and M. van Bijsterveld. (2001). The osmosis of ideas: An analysis of the integrated approach to IT management from a translation theory perspective. *Organization* 8(1):55-76.
- Durand, R. & Vaara, E. (2009). Causation, counterfactuals and competitive advantage. *Strategic Management Journal* 30: 1-19.
- Engwall, L; Kipping, M. (2004). Introduction - The dissemination of management knowledge. *Management Learning* 35: 243-253.

- Foster, William M., Roy Suddaby, Alison Minkus, and Elden Wiebe. (2011). History as social memory assets: The example of Tim Hortons. *Management & Organizational History* 6(1):101-20.
- Furusten, S. (1999). *Popular management books: how they are made and what they mean for organizations*. Routledge, London.
- Gioia, D. A., and J. B. Thomas. (1996). Identity, image, and issue interpretation: Sensemaking during strategic change in academia. *Administrative Science Quarterly* 41(3): 370-403.
- Gulati, R. (2007). Tent poles, tribalism, and boundary spanning: The rigor-relevance debate in management research. *Academy of Management Journal* 50: 775–782.
- Häikiö, M. (2001a) *Fuusio: Yhdistymisen kautta suomalaisiksi monialayritykseksi 1865-1982*. Edita.
- Häikiö, M. (2001b) *Sturm und Drang: Suurkaupoilla eurooppalaiseksi elektroniikkayritykseksi 1983-1991*. Edita.
- Häikiö, M. (2001c) *Globalisaatio: Telekommunikaation maailmanvalloitus 1992-2000*. Edita.
- Hegele, C., and A. Kieser. 2001. "Control the construction of your legend or someone else will - An analysis of texts on Jack Welch." *Journal of Management Inquiry* 10(4):298-309.
- Hitchcock, C. (1995). The mishap of Reichenbach's fall: singular vs. general causation. *Philosophical Studies* 78: 257-291.
- Jensen, L. & Allen M. (1996). Meta-synthesis of qualitative findings. *Qualitative Health Research* 6: 33-42.
- Jones, Geoffrey 2005. *Renewing Unilever: transformation and tradition*. Oxford, New York: Oxford University Press.
- Kieser, A. (1997). Rhetoric and myth in management fashion. *Organization* 4: 49-74.
- Kieser, A., and A. T. Nicolai. (2005). Success factor research - Overcoming the trade-off between rigor and relevance? *Journal of Management Inquiry* 14(3):275-79.
- Kieser, A., and L. Leiner. (2009). Why the rigour-relevance gap in management research is unbridgeable. *Journal of Management Studies* 46(3):516-33.
- Lashinsky, Adam (2012). *Inside Apple: How America's Most Admired—and Secretive—Company Really Works*. New York: Business Plus.
- McLean, Bethany , and Peter Elkind. (2003). *The smartest guys in the room : the amazing rise and scandalous fall of Enron*. New York: Portfolio.
- Morgan, S. & Winship, C. (2007). *Counterfactuals and Causal Inference: Methods and Principles for Social Research*. Cambridge University Press. New York, NY.
- O'Boyle, Thomas F. (1998). *At any cost : Jack Welch, General Electric, and the pursuit of profit*. New York: Alfred A. Knopf.
- Pajunen, K. (2005). Comparative causal analysis in processual strategy research: a study of causal mechanisms in organizational decline and turnarounds. *Advances in Strategic Management* 22 (4): 415-456.
- Pajunen, K. (2008). Institutions and inflows of foreign direct investment: a fuzzy-set analysis. *Journal of International Business Studies* 39(4):652-69.
- Pearl, J. (2000). *Causality: Models, Reasoning, and Inference*. Cambridge University Press. New York, NY.
- Ponzoni, Elena, and Kees Boersma. (2011). Writing history for business: The development of business history between 'old' and 'new' production of knowledge. *Management & Organizational History* 6(2):123-43.

- Rosenzweig, P. (2007). *The Halo Effect: ... and the Eight Other Business Delusions That Deceive Managers*. New York, Free Press.
- Rowlinson, M., and J. Hassard. (1993). The invention of corporate culture: A history of the histories of Cadbury. *Human Relations* 46(3):299-326.
- Scarbrough, H., and J. Swan. (2001). Explaining the diffusion of knowledge management: The role of fashion. *British Journal of Management* 12(1):3-12.
- Sillince, J. A. A. (2002). A model of the strength and appropriateness of argumentation in organizational contexts. *Journal of Management Studies* 39(5):585-618.
- Steinbock, D. (2010). *Winning Across Global Markets: How Nokia Creates Strategic Advantage in a Fast-changing World*. Jossey Bass, 2010
- Suddaby, R., and R. Greenwood. (2005). Rhetorical strategies of legitimacy. *Administrative Science Quarterly* 50(1):35-67.
- ten Bos, R; Heusinkveld, S. (2007). The guru's gusto: management fashion, performance and taste. *Journal of Organizational Change Management* 20: 304-325.
- Thompson, D et al. (2003). A full-likelihood method for the evaluation of causality of sequence variants from family data. *The American Journal of Human Genetics* 73: 652-655.
- Weick, K. E., K. M. Sutcliffe, and D. Obstfeld. (2005). Organizing and the process of sensemaking. *Organization Science* 16(4):409-21.

Appendix 1: Identified corpus of Nokia-specific literature

Author(s) / Year	Article / Book
Ala-Pietilä (1992)	Managing Concurrent Growth Processes. Case: Nokia Mobile Phones
Ali-Yrkkö et al. (2003)	Nokia: An Extended Company with Local and Global Operations
Ali-Yrkkö & Hermans (2002)	Nokia in the Finnish Innovation System
Ali-Yrkkö & Hermans (2004)	Nokia: A giant in the Finnish innovation system
Ali-Yrkkö (2001)	Nokia's Network: Gaining Competitiveness from Co-operation
Berggren & Laestadius (2003)	Co-development and composite clusters – the secular strength of Nordic telecommunications
Blau (1996)	Nokia pins its hopes on youthful R&D
Blomström & Kokko (2002)	From natural resources to high-tech production: the evolution of industrial competitiveness in Sweden and Finland
Bruun & Wallén (1999)	Nokian valttit: Taistelu tiedosta, tulevaisuudesta ja optioista
Castells & Himanen (2002)	The Information Society and the Welfare State: The Finnish Model
Day et al. (2001)	The innovative organization: Why new ventures need more than a room of their own
Gooderham & Nordhaug (2003)	International Management: Cross-Boundary Challenges
Hernesniemi et al. (1996)	Advantage Finland – The Future of Finnish Industries
Hokkanen & Kivikko (1996)	Nopean kasvun silmässä
Häikiö (2001a)	Fuusio: Yhdistymisen kautta suomalaisiksi monialayritykseksi 1865-1982
Häikiö (2001b)	Sturm und Drang: Suurkaupoilla eurooppalaiseksi elektroniikkayritykseksi 1983-1991
Häikiö (2001c)	Globalisaatio: Telekommunikaation maailmanvalloitus 1992-2000
Koivusalo (1995)	Kipinästä Tuli Syttyy: Suomalaisen radiopuhelinteollisuuden kehitys ja tulevaisuuden haasteet
Kosonen (1992)	Fast Responding Global Network Organization
Kuisma (1996)	Metsässä syntynyt, puusta pudottautunut
Laaksonen et al. (1998)	Process Management as a Tool in Managing Global Growth. Case Nokia: Mobile Phone Business
Lagus (2001)	Laatu luo pysyvyyttä
Laitinen & Leppänen (2001)	Global Success and the Role of Strategic Steering and Management Accounting Systems: Case Nokia Group
Lemola (1996)	Riittääkö kolme miljardia markkaa?
Lemola (2004)	Finnish science and technology policy
Lovio (1996)	Yhtymien muodonmuutokset ja liiketoimintojen kiertokulku
Melamies (2001)	Yritys tietoyhteiskunnassa: Nokian menestystarina
Michelsen (1996)	Kari Kairamon unelma: eurooppalainen Suomi
Moen & Lilja (2004)	Change in Coordinated Market Economies: The Case of Nokia and Finland
Mäenpää & Luukkainen (1994)	Teletekniikasta monimuotoiseen viestintään: Teleklusterin kilpailukyky
Mäkinen (1995)	Nokia Saga: Kertomus yrityksestä ja ihmisistä jotka muuttivat sen
Owen (2004)	Airbus and Nokia: a tale of two successes
Paija & Rouvinen (2004)	The evolution of the Finnish ICT cluster
Paija (2001a)	The ICT Cluster in Finland – Can We Explain It?

Paija (2001b)	What is Behind the Finnish 'ICT Miracle'?
Palmberg & Martikainen (2003)	Overcoming a technological discontinuity – The case of the Finnish telecom industry and the GSM
Palmberg & Lemola (1998)	Nokia as a related diversifier – Nokia's entry into mobile phone technologies and markets
Palmberg (1998)	Industrial transformation through public technology procurement? The case of the Finnish telecommunications industry
Palmberg (2002)	Technological systems and competent procurers – the transformation of Nokia and the Finnish telecom industry revisited?
Pantzar & Ainamo (2001)	Nokia – The Surprising Success of Textbook Wisdom
Pulkkinen (1996)	Miten jättiläisiä horjutetaan?
Pulkkinen (1997)	The Breakthrough of Nokia Mobile Phones
Rice & Shadur (2000)	The Mobile Telephone Cluster in the Nordic Countries: Policies to Foster Innovation and Success through Provider Competition and Knowledge Alliance Development
Richards (2004)	Clusters, Competition, and "Global Players" in ICT Markets: The Case of Scandinavia
Routtu (1996)	Suomalainen tv-näytelmä
Rouvinen & Ylä-Anttila (2003)	Case Study: Little Finland's Transformation to a Wireless Giant
Rugman & D'Cruz (2000)	Multinationals as Flagship Firms: Regional Business Networks
Saari (2000)	Kari Kairamo: Kohtalona Nokia
Sokala (2002)	
Steinbock (1998)	Maaailma taskussa: Kuinka matkapuhelimella tienattiin ja tuhottiin miljardeja
Steinbock (2001)	The Competitive Advantage of Finland: From Cartels to Competition
Steinbock (2002)	The Nokia Revolution: The Story of an Extraordinary Company That Transformed an Industry
Steinbock (2003)	Wireless Horizon
Tainio & Lilja (2003)	Globalization of wireless value system: from geographic to strategic advantages
Väänänen (1996)	The Finnish Business System in Transition: Outcomes, Actors and Their Influence
	Yhtymäjohtamisen ja kansallisen kehikon muutos
Wallis-Brown & von Hellens (2000)	The Secret of the Global Success of Nokia Mobile Phones and Ericsson Mobile Communications
Weckstrom-Nousiainen (2003)	Nokia Leads Change Through Continuous Learning
Ylä-Anttila (1996)	Teollisuuspolitiikan ikuisuusongelman ratkaisu?