

Visions, Competences and Rational Strategizing: Some theory and evidence

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Abstract

The concept of vision has appeared with increasing frequency in management theory and practice. This paper attempts to consolidate and clarify the idea of vision as it is presented in the management and innovation literatures. It also shows actual instances of visions in use in a variety of different organisational settings. It is shown that vision can be distinguished from plan or scenario as it is informally derived, and possesses motivating qualities that are lacking in the more formal procedures of strategic planning. Through its energising qualities vision is argued to support formal strategic planning, making it work better.

The technology and innovation studies literature concurs with the informal characterisation of vision but links it more explicitly to the organisation's knowledge bases and strategic actions. Following a suggested framework, the paper presents four case studies showing how visions are used to serve various corporate objectives. Firstly, vision is shown as an internal tactic to close debates about strategic direction. Secondly, vision is used as an external tactic to signal to customers and deter competitors. Third, vision is used as an internal long-term strategy to reorganise the firm around a new technological architecture. Fourthly, vision is used as a long-term strategy to attract investment and publicity. The paper also includes cases of "no vision", showing that despite its uses, the absence of vision may also be advantageous. The paper tries to show what visions are, what they are not, and how they are limited.

1. Introduction

The concept of vision has appeared with increasing frequency in management theory and practice. The term is familiar in everyday usage, while scholars theorise about visions in various fields. Despite this familiarity it is still not clear what vision is, and how it's meaning is different to established terms like strategy, forecasting or planning. Moreover, the claims about the function and power of visions are not always substantiated through empirical observation. The visions attributed to organisations are not always clearly linked to competences, or to observed strategic decisions and actions. This paper attempts to consolidate and clarify the idea of vision as it is presented in the management and innovation literatures. It also shows actual instances of visions in use in a variety of different organisational settings. The paper tries to show what visions are, what they are not, and how they are limited.

The management literature on visions is reviewed in Section Two, it shows how vision is distinguished from terms like strategy, plan and forecast. Section Three reviews the technology and innovation studies literature, which links visions to knowledge bases and strategic actions of organisations. Section Four describes the method for the case studies. The case studies in Sections Five to Eight illustrate four tactical and strategic uses of vision by firms entering the uncertain area of digital media in the 1990s. Section Nine shows cases where there is "no vision" and attempts to explain its absence. Section Ten discusses and concludes the paper's findings, with some thoughts on managerial implications and the scope for future research.

2. Visions in Management

The first question that might be asked of the vision concept is how does it differ from the outputs of traditional strategic planning? In what way is a vision distinguished from a plan? A future-facing statement is central to strategic planning, as observed by Mintzberg: "Planning is a formalised procedure to produce an articulated result, in the form of an integrated system of decisions." (1994: 12).

For Mintzberg, the compulsion for an explicit statement of intent engages the firm's resources in meaningless and wasteful behaviour. Instead of explicit strategic plans, Mintzberg recommends the adoption of a *visionary* approach. Visions set the broad outlines of a strategy, leaving details to be worked out at a later stage. If the broad vision proves insufficiently robust in the light of unforeseen occurrences, it may be dropped in favour of a learning strategy. According to Mintzberg then, a visionary strategy provides some general direction, but it differs from planning because it is not formal and procedural, it is *informally devised* and flexible. For these reasons it is opposed to rational strategic planning.

The informal aspect of vision appears to be a key criterion that distinguishes vision from strategic plan, or forecast, or scenario. These latter items are usually produced through formal processes of 'rationalist' strategizing, meaning strategy that is produced through a linear process of appraise-determine-act (Tidd *et al.*, 2001). Under rational strategy-making, strategic decision is a prior and distinct phase to strategic action, and is normally performed by different people to those in operations who implement the strategy. It is roughly equivalent to the 'design' school (Mintzberg, 1990) or the 'classical' approach to strategy making (Whittington, 1993). The term

“rational” is used here to signify the traditional logic and reason favoured by this approach, notwithstanding the debates about social rationality and cognitive inference (Reddy, 1996; Chase et al., 1998).

Indeed, the self-interested economic man of rational choice theory in economics is quite at odds with the function of vision as characterised in much of the management literature. Visions are inclusive and involving, they enlist commitment to change (Kanter, 1984). They provide inspirational leadership that the probability calculations and procedure of strategic planning cannot. For an idea to qualify as an organisational vision, it must be communicated with the broader organisation, empowering and motivating (Westley and Mintzberg, 1989). This is not simple ‘top-down’ communication, the vision is constructed through a dialogue where sense-giving and sense-making roles alternate between the leader and led (Gioia and Chittipeddi, 1991). Vision effects a collective leap of faith or imagination beyond forecasts and figures.

Oswald *et al.* (1994; 1997) research the relations between managers’ psychological attachment to their organisation as a result of involvement in strategy as well as the “salience” of vision. As regards the relationship between formal planning and vision, the authors argue that strategic planning should support and inform the vision, but in turn planning should be guided by vision. The two processes are mutually dependent but are separate processes. Managers who perceived vision as salient had a strong positive association between involvement in strategy and their organisational commitment. Oswald *et al.* argue that vision, by virtue of its motivating quality, can make planning work better. In this sense the emergence of the vision concept may be interpreted as an adjunct to the planning process, a reaction to the asserted failure of planning in the 1970s and ‘80s (Mintzberg, 1994). It is a strategic device that has emerged as a means to direct the direction.

This view is also seen in Nutt and Backoff (1997: 308) who state that “visions are used to develop a strategy...” Vision supports strategy development; it is directing, yet compelling, energising and inspiring, rather than instrumental like mission or strategy. “Vision taps people’s emotion and energy. Properly articulated, a vision creates the enthusiasm that people have for sporting events and other leisure-time activities, bringing this energy and commitment to the workplace. Other means of directing human action seem to lack these qualities.” (1997: 309).

The literature then, suggests that visions are not just corporate directives. They require the commitment and enrolment of the employees to be realised and according to Nutt and Backoff, to have a positive impact on organisational performance. Vision for most writers is a good thing, with some qualifications. Harris and Ogbonna (1999) show a “hangover” effect in family-owned firms, where the founders’ vision and strategy locks-in subsequent management. Collins and Porras’ (1995; 1996) work on “visionary companies” warns of the importance of sustainable organisational design rather than businesses built around a “great idea”.

We have seen that the management literature characterises vision as informally and collectively devised, motivating, and compelling. It is different therefore to rational strategizing and planning, but through its energising qualities may facilitate and support the implementation of plans. Yet for a vision to be a researchable

phenomenon, it needs to be made explicit, otherwise how to research or even recognise it? And if it involves large numbers of people presumably some formality is required in its process of construction? There is some empirical work using large data sets of vision statements. For example, Larwood *et al.*'s (1995) cluster analysis shows variance over the degree of formality and systematic planning involved in visions, as well as a cluster showing executives' visions to be individualistic and less widely accepted throughout their organisations. In another large-scale empirical study, Baum *et al* (1998) also found that communication of vision varies, but suggest that there are non-verbal means by which the vision is diffused through the organisation. The authors claim this effects venture growth performance positively, but the control variables in the study seem rather sparse. There is no controlling for supply-side factors such as product or capability, nor demand-side factors such as access to major customers or distribution channels. In spite of the empirical work the vision concept has an intangible and elusive quality in much of the management theory. The questions remain how is vision related to the competences and knowledge bases of the firm, and how does it influence strategic decision and action. For insights on these issues we shall turn to the technology and innovation studies literature.

3. Visions in Technology and Innovation

Discussion on visions in the technology and innovation studies field centres on competences and challenges that field's orthodoxy of technological path-dependence. This holds that technical change proceeds along stable trajectories, and the firm's technological knowledge bases cannot stray too far, too quickly from its preceding direction (Dosi, 1982; Pavitt, 1986; Patel and Pavitt, 1994). Some innovation scholars use the vision concept to suggest that managerial agency can relax the constraints of technological path-dependency.

Martin Fransman's definition of vision is "the set of beliefs regarding the firm's circumstances. It is these beliefs (rather than the firm's 'objective' circumstances) which shape the leaders' views regarding the activities and knowledge which the firm should have to compete in the future." (1995b: 3). He argues this enables an *ex ante* analysis of firm competences. Vision-construction provides the opportunity for 'competence-creating moments'. These junctures in the evolution of the firm are where decisions are made about competences the firm will prospectively compete on. This is a contrasting idea to path-dependency, where future competences are dependent on the competences of the past.

Strategies and tactics are shaped by the broad outline of the vision. Fransman's vision concurs with the management literature in that it is not an explicit plan derived from rational planning processes. It is based on beliefs of decision-makers that are intuitive and influenced by perceptions of the environment and of future developments. For Fransman, such beliefs cannot be rationally processed, because of two complicating conditions: bounded rationality and interpretive ambiguity. Herbert Simon's (1955) bounded rationality notion contends that the decision-maker is dealing with a limited information set firstly, because all relevant information cannot be known, and secondly because of the constraints on the cognitive processing ability of the decision-maker.

Fransman's notion of interpretive ambiguity concerns the *content* of the information set when it is processed and presents contradictory signals regarding alternative courses of action and their consequences. Inferences are disjunctive and calculations about outcomes are not possible. The world appears "fuzzy" and rational choice breaks down. Under such circumstances of interpretive ambiguity, Fransman argues, beliefs, rather than information, influence the construction of visions and consequent strategy (Fransman, 1995a).

Fransman insists that knowledge and belief are in fact synonymous, because both are open-ended and change over time. The know-how and the know-why types of knowledge contained in technological competence are continually being revised. They are no more or less than the beliefs about how to produce a product, and why the effects of certain processes are caused. In this sense Fransman equates belief with knowledge, beliefs embodied in visions are of the same nature as knowledge embodied in competences (Fransman, 1995b).

Vision however, is described as 'bounded' by experience (1992; 1994), 'vision failure' occurs with an inability of decision-makers to break free of prior beliefs and to make leaps of imagination. Fransman's explanation of strategic failure, is therefore rooted in the construction of visions. Beliefs based on past experience are implicated in the strategic errors made. Visions represents the opportunity for breaking free of the constraints of path-dependency (1995a).

By contrast, Swann and Gill's (1993) concept of vision is not so dependent on beliefs as Fransman's. On the contrary, these authors argue that in many cases visions are not believed at all and serve merely as a competitive tactic. For example, Fransman stresses the fact that IBM was aware of the potential of microprocessors and yet continued to focus their business on mainframes. The intransigent belief in the smallness of the microprocessor market resulted in a mistaken vision.

Swann and Gill argue instead that IBM were fully aware of the threat but were seeking to play it down and defend their position: "For 'no need for computers other than large mainframes' read 'there is undoubtedly a potential market for small computers, but we desperately hope it doesn't take off'." (1993: 25). While the announced vision was destined to turn out wrong, it was the circumspect statement of strategy for an established mainframe company to declare. Visions for Swann and Gill are strategic and tactical devices for internal organisational purposes or external public relations, for example to attract investors. Table One shows Swann and Gill's functions of corporate vision.

Table 1: Functions of Corporate Vision (Swann and Gill, 1993: 26)

	Tactical (pre-announcements)	Strategic (long-term visions)
Internal	Commit warring factions to a particular product	Used in reorganising firm for future technical change
External	User: encourage buyer to wait for new product Rival: signal, or entry deterrent	Encourage user to plan and produce around this vision of future technology

These uses of visions for what are essentially propaganda purposes are reminiscent of prior work on explicit strategy. While some strategy writers argue that the articulated plan gives coherence and direction to a firm's growth, serving as a steering mechanism (Ansoff, 1984; Kanter, 1984). Mintzberg (1993) argues instead that the primary value of an explicit strategy is often merely public relations. Explicit strategies and plans are required to influence external interests, perhaps to justify investment or reassure stakeholders. For example, "an organisation that is failing can announce a plan to succeed" (Cohen and March, cited by Mintzberg, 1993: 41).

Empirical work supports this view. Fiol (1995) shows that corporate statements on the future that are targeted externally are typically more positive in their categorisations than internal communications. Similarly Galbraith and Merrill (1996)'s study of the political motivations in forecasting exercises finds that senior management frequently intervene in the forecasting process to adjust revenue, cost or profit projections to a level more favourable to the firm. The integrity and validity of strategic plans, and forecasting statements would appear to be open to question, and if the same is true of visions then this perhaps is of no great surprise.

Questions are raised by this brief review of the technology and innovation literature on visions. Firstly, can we find evidence of the tactical and strategic functions of vision as suggested by Swann and Gill, or is vision based on beliefs in the Fransman sense? Secondly, to what extent can visions absolve the firm from technological path-dependence? Can the firm jump from its historical trajectory of accumulated capability into unfamiliar fields and succeed? The next section describes the method used to research these issues.

4. Method

The following sections report on exploratory research on the strategies and visions of firms entering the area of new digital media in the 1990s. Each is entering from a different segment, such as content, software, service provision, equipment or infrastructure. New digital media encompasses various unproven technologies and markets that are not yet established and may never be. The entrant firms therefore face a bundle of opportunities that is characterised by high degrees of uncertainty. The conditions under which firms may construct and deploy visions are less predictable and perilous than in other, more stable industries. The case studies were selected because of these shared conditions of uncertainty.

A second criterion was to have a range of different entry modes represented. The research shows a variety of firms entering this inchoate area of opportunity from a different direction, for example, large firms in established media acquiring a new media company; telecoms operator experimenting with new interactive multimedia technologies through alliances, as well as start-up firms. With this selection of cases the functions of visions can be compared across a variety of entry modes and approaches. The selected cases are drawn from the United States, specifically the Silicon Valley and San Francisco Bay Area and from innovating UK companies. The case studies were focused on the strategic decision-making in the firms and the strategic actions that were taken, with a view to analysing the role, if any, of vision.

Primary sources of evidence were semi-structured interviews with senior managers and engineers. To triangulate this data, internal and independent documentation was used, such as internal publicity and communications, technical specifications, annual reports, the trade press, the mainstream press and numerous online industry news sources. Triangulation was also achieved through cross-checking data between respondents from different parts of the same organisation, as well as other organisations including competitors. Independent analysts were also consulted to validate the data. Not all cases are discussed in depth here (see Sapsed, forthcoming for a full analysis), instead sections 5 to 8 report on cases that illustrate the strategic and tactical uses of vision as suggested by Swann and Gill in Table One. By contrast, section 9 discusses cases where there was 'no vision', and suggests strategic reasons for the absence of vision.

5. Internal Tactical Uses of Vision: Pearson's move into new media

The first quadrant in the Swann and Gill matrix, internal tactical uses of vision, can be illustrated by the case of Pearson plc, the international media and publishing group. Historically Pearson had been a highly diverse conglomerate, but by the 1990s focused on its media and publishing assets, which included strong brands in print media such as the Financial Times, The Economist, Penguin Books and Addison Wesley Longman, as well as various television broadcasters, such as Thames and Grundy.

Senior managers within the group observed developments in digital technologies and in the 1980s began to express the need to develop their screen-based media resources. This conclusion was drawn from formal rationalist strategizing exercises, including a SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) in which managers identified gaps in digital technologies within the group portfolio. It was felt that the strong brands and intellectual property in content owned by the various divisions could be exploited through the new media.

However, the rational plan was not sufficient to persuade the managers of the individual divisions. Over a period of around eight years the Executive Director of Development of the group became an evangelist figure, arguing the case for moving into new technologies. There was some resistance from the newspaper and literary publishers, both of whom saw their role as protecting the interests of the traditional media. The Director's arguments and vision were based on the belief that the printed word is an unnatural means of communication: "when people directly interact there are various sensory communications to do with body language, perspiration, gesticulations as well as words, whereas reading is bloody hard work"¹. He pointed to the substantial market shares taken by audio-visual media from traditional publishing and argued the trend would continue in future².

Various figures within the group were persuaded to varying degrees of enthusiasm, as their individual markets were affected to different extents by new media, "The newspaper people said the newspaper is king in terms of provision of information; the

¹ Author's interview.

² This is supported by data on media consumption, Shew's (1994) study suggests the average UK adult spends 40 hours a week consuming media- of which 24 hours are spent watching TV, 11 hours listening to radio, and four hours reading newspapers (cited in Hooper, 1996).

publishers considered themselves the high priests and guardians of English literature, safeguarding the classics...". Here we can see the Fransman view of vision in evidence: visions based on beliefs of top management vying against intransigent conservatism. The rational strategy-making early on was insufficient to mobilise a decisive strategic action. Eventually in the mid 1990s, the corporate centre took a strategic action on the basis of the vision.

The action taken was an acquisition of an apparently 'hot' multimedia start-up from California, Software Toolworks, later renamed Mindscape, for the extravagant cost of £310m. The vision was of Mindscape as a strategic 'new technology' division that would exploit the content and brands owned by the group in new media. This vision did not occur, as it turned out that much of the intellectual property was already tied up in deals with third parties, or else the divisions were developing new media themselves.

It also turned out that Mindscape itself was not well-positioned either in the market, or in terms of its own internal processes and capabilities. The division performed badly and was sold four years later at a loss of £212m. Pearson's managers did not understand enough about the idiosyncrasies of the digital multimedia industry. For example, Mindscape's apparently strong market position was based on sales of CD-ROM products 'bundled' with new PCs. Mindscape's sales 'off-the-shelf' were much less, which is a better indicator as these reflect consumers choice directly³. One senior manager involved commented: "The idea was right but it was the wrong company".⁴

Pearson, typically of a conglomerate, sought to fill gaps in its corporate portfolio with an acquisition, rather than building digital media capability internally. The classical rationalist strategizing exacerbated the problems of the distance from the corporate centre from the divisions. The strategy was flawed because of the emphasis on detached reasoning *a priori* to action, as is prescribed by the rationalist school. The function of vision does appear to concur with what is suggested in the literature: informally derived projections of the future based on beliefs of top management, yet its diffusion throughout the organisation was problematic.

The Pearson case illustrates the first quadrant of Swann and Gill's matrix, vision serving for internal advocacy and awareness raising. Its success was not complete, it mobilised the senior management but because of their distance from the divisions they were unaware of the new media activities already ongoing. The vision and strategy were ultimately frustrated. Another important factor was that Pearson was buying into a new and unfamiliar market it did not understand. The strategy was therefore path-independent and unsuccessful, in spite of the vision.

6. External Tactical Uses of Vision: BT and Acorn's Interactive TV Trials

The second quadrant of the matrix, external tactical uses of vision, can be illustrated from British Telecom (BT) and Acorn Computers' experiments with interactive television in the mid 1990s. At the time envisioning in the UK's popular media and in politicians' speeches was focused on the potential of interactive services into the

³ Details and data on this can be found in Sapsed (forthcoming).

⁴ Author's interview.

home, the 'information superhighway' or 'Infobahn'. The idea was for a broadband infrastructure that would connect businesses, public agencies and institutions like schools and libraries with homes. A primary uncertainty was who was going to pay for it, as although the government were warming to the theme it was clearly not a matter for public investment.

Many commentators expected that the provision of interactive entertainment services would provide a sufficient incentive for cable operators to invest in broadband infrastructure. Alternatively the telecommunications operators might see sufficient opportunity to invest if they were granted the deregulation to broadcast entertainment services. The rationale of this argument was that a "killer application" was to be video-on-demand: consumers would pay a premium for instant transmission of programming content to their living rooms, thus diverting the revenues of the videocassette rental industry. This would provide the stimulus for further investments in other, perhaps more "worthy" interactive television services, which would better exploit the capabilities of the new technology.

During this period of the mid to late 1990s, a large number of experimental trials were announced which were to test the technologies enabling interactive TV, as well as the extent and nature of demand for such services. BT, the UK's dominant telecommunications operator announced a large-scale trial of interactive television to 2000 homes in the region of its central laboratories. This was testing the then unproven technology ADSL (Asymmetric Digital Subscriber Line), a modem-base system that greatly expands the bandwidth of standard twisted pair telephone lines. There was substantial publicity deployed by BT, presenting a vision of consumers dialling up full-length, full motion movies on their telephones, with their choices instantly transmitted via the copperwire line, and played back to VHS quality on their televisions.

More formal strategy making accompanied the vision, as the marketing function devised various scenarios of interactive TV usage in the future. These scenarios set the heuristics that the trial was to test, for example, middle income households could be expected to pay £5 for a premium movie, or a £4 charge for interactive shopping. These scenarios however, were for *internal* consumption and were not released externally. Similarly the data that was produced from the experiment was not published, with press releases merely reporting the successful take-up of the services.

At the same time as the BT trial however, a rival trial was announced and implemented in nearby Cambridge. This was organised by Acorn, one of the first microcomputers manufacturers who were moving into the production of Set-Top Boxes (STBs) for interactive television. This trial however, was using a CATV⁵ cable network operated by Cambridge Cable, and would deploy ATM (Asynchronous Transfer Mode) technology. This was then a leading edge communications technology that splits digital data into small packets, enabling a fast, stable service with a great potential for interactivity. The Cambridge Trial represented the antithetical vision to BT's. Rather than trying to squeeze more bandwidth out of the existing telephone network, this trial was cable TV based and promised more interactivity and a new media experience for consumers.

⁵ Community Antenna Television, popularly known as cable television.

Many commentators had interpreted BT's trial as a spoiler to the UK's infant cable industry. Cable was not established in the UK and at the time the government was encouraging cable operators- mostly American in origin- to invest in laying infrastructure and to acquire franchises to broadcast. The cable operators were trying to finance this entry into Britain through floating the franchise companies on the stock market. BT's announcement of the ADSL trial was seen as a timely 'spoiler' to the cable operators attempts to attract investors and consumers to their vision.

The Cambridge trial was one response to BT's tactic, a Cambridge Cable executive of the time commented that the trial was intended "to tread on their toes a little".⁶ Throughout the parallel trials the two camps issued press releases casting doubts on the viability of the other's technological and market vision. This illustrates the tactical external functions of vision indicated by Swann and Gill. BT and the Cambridge consortium were both signalling to each other as competitors about their intent to engage in a new market, while simultaneously trying to deter consumers from adopting their rival's package. In real terms these packages were no more than visions. Despite the technical successes of the trials neither service was eventually introduced to the market, as the cost was still prohibitive. Both sides switched strategies: BT to an alliance with BSkyB the satellite TV broadcaster, which led to the Open interactive service, while Acorn switched from Set-Top Boxes to Oracle's Network Computer vision (see below).

The opportunism and frequency of change to the espoused visions suggests their nature was tactical. If they were based on beliefs then these beliefs were clearly not robust in the light of new opportunities and product fashions. However, in spite of the volatility of the vision, the underlying technological competences deployed within BT and Acorn were consistent and stable. Each new product was an application of accumulated knowledge from prior product and service offerings albeit with some incremental learning. Unlike the Pearson case, the technological strategies of these cases were path-dependent, but like Pearson, the visions did not occur.

7. Internal Strategic Use of Vision: Oracle's Network Computing Architecture

The third quadrant of Swann and Gill's matrix is on longer-term strategic uses of vision that are targeted internally. This can be illustrated by Oracle Systems' change of strategy to the Network Computing Architecture in the late 1990s. Oracle was the world's second largest software company (revenues for 2001, \$7.6 billion⁷) after Microsoft, having grown through its core product and market leading position in relational database management systems. By the later 1990s its products also included video server and web computing to support e-commerce, applications development, office automation, end-user accounting and manufacturing applications for client-server environments.

Oracle's high-profile CEO Larry Ellison, was renowned for his future-facing statements to the media. His vision at the time was network computing. Ellison's idea

⁶ Author's interview.

⁷ For the nine months ended 2/28/01 (<http://biz.yahoo.com/p/o/orcl.html>)

was that users would interface with a 'thin client' device. This would have no hard drive for local storage on the desktop, but with the preponderance of processing power and applications at the server end. Ellison's vision was that the device must be cheap and simple to use; running everyday tasks like email, word-processing, spreadsheets and web browsing. All maintenance and upgrading would be handled at the server end where documents and applications would all be stored. Operating systems would be etched onto ROM memory chips. Users would plug in portable smart cards to any machine and be routed to their allotted storage space via Internet connections.

The supporting Network Computing Architecture (NCA) was a three-tier system, replacing the traditional two-tier architecture of client-server computing. The client side component of the system was separated into two. This meant that only a very small operating system was needed at the user interface; the 'thin client' or network computer. Applications were to be stored and managed in an applications server, rather than in a hard disk in the client. Essentially the Network Computing vision was a challenge to the Windows- Intel dominance of computing markets. While Oracle did not compete directly with Microsoft in its existing markets, in the longer-term Microsoft was seen as the firm's chief rival⁸. Network computing was counterpoised to PC architecture.

This new architecture involved all Oracle's organisation, as the architectures of all products were adapted to network computing. The new developments of electronic commerce on the Web, and the video server product were incorporated in the NC architecture. The key new development in the new version was the applications server which enabled the 'thin client' to function. Importantly, however, the system continued to support 'fat clients'; PCs and workstations⁹. So while Ellison's vision was enabled and indulged by the new generation product, the stable revenues from its customary usage were not endangered. This strategy shows a willingness to enter uncertain areas of opportunity based on an explicit vision, while managing the inherent risks.

Internally, the NCA strategy was announced was very much 'top-down' in its implementation. However, rather than simply announcing the vision and consequent reorganisation, dedicated strategizing was used to explain its implications to all 25,000 employees. The strategy was "rolled out" throughout the company in a number of seminars. These were 1/2-day off-site strategy retreat meetings. Following this massive strategizing process, all divisions knew where their products and activities fitted into the new strategy.

Interestingly, eighteen months previously, a similar scale exercise was implemented to educate employees about the prior strategy, the 'Universal Server' concept. This shows that while strategies are changed and adjusted in reaction to the trends in a turbulent market, every effort is made to ensure that the organisation will implement the strategy accordingly. This concurs with the literature on internal uses of visions and explicit strategies (Kanter, 1984; Swann and Gill, 1993). These strategy exercises were in effect closing the internal discussion about technology strategy, while the

⁸ Author's interviews.

⁹ Author's interview, 25.4.97; 'Ray Lane on Network Computing', *Software Magazine*, Jan.97.

vision supported its implementation. Although senior management had devised the strategy in an exclusive way, the vision and roll-out exercises effected a reunification around the new direction.

While all Oracle products were made compatible with network computing, an autonomous organisation was set up to develop the new products and market, called Network Computing, Inc. The rationale for this independent spin-off, were that firstly, so that other companies would invest in the business¹⁰. Secondly, the business could act more rapidly and would be freer from the routines of the Oracle bureaucracy¹¹. A third possible reason implied by interviews but not stated, was that should the NC business fail, the ongoing mainstream business of Oracle would not be affected. This shows that Oracle was “hedging its bets” on the proposed network computing vision.

The entry to the new area of hardware products was discrepant with Oracle’s mainstream business and so an autonomous division was the chosen organisational mode of entry. This was an astute choice as at the time of writing, network computing is considered unfashionable in the trade press, much as interactive television was previously. Similarly to BT and Acorn, while the underlying technological competences in server software were path-dependent, the new products were unsuccessful, in spite of the radical vision. Again, the regular roll-out of a new vision and strategy undermines the view that the visions are based on strong beliefs.

8. External Strategic Use of Vision: New media start-ups

The fourth quadrant on external strategic uses of vision can be illustrated by several case studies of start-up companies set up to exploit opportunities in new digital media. These cases all used visions in their external publicity. These are briefly described in each case below.

Dimension X

Dimension X was a start-up founded in 1995 in the “Multimedia Gulch”; a cluster of small firms in the South of Market district of San Francisco. It developed multimedia software tools and content for web applications. The vision of its founder was based firstly on a belief in the Java language, because of its cross platform compatibility and rigorous coding requirements. Secondly the vision stressed artistic input into web tools development, influenced by the founder’s prior experience with mass movie markets. The belief was that the Internet would be driven by Java and artistic content to attract “eyeballs”. Publicity would include statements such as “It is not the bandwidth of the pipes that matters, it is the bandwidth between the screen and the brain.”. Dimension X was acquired by Microsoft in 1997.

First Virtual Corporation

FVC was founded in 1993 by one of the pioneers of the Local Area Network industry in his former companies. This start-up was created in the belief that speed is the most

¹⁰ Author’s interviews.

¹¹ Author’s interviews..

important factor in contemporary business. Rather than thinking about technologies and markets, the founder thought about the architecture of the company.

The two core competences for the firm were identified as: (1) engineering capability, and (2) the ability to build partnerships. FVC was to outsource everything else. The founder started with this virtual organisation model and believed that later all companies would outsource to a great extent. He then thought about tools to make possible this type of business and to make it work effectively. He thought about the need to control the requirement for travel in managing external communications, and so focused the company's engineering effort on video networking. The firm was therefore based upon the vision of virtual business organisation, in its own structure and practices, as well as the product markets it targeted.

Strategy making was "not formal at all"¹² instead strategy was based on the beliefs of the founder, arising from his experience of the early LAN industry: He explained:

There is no clear model for the video networking market. You can have very smart people and can think through all these issues and be wrong...Every analyst said the video conferencing market would take off, but now you have hundreds of thousands of units not tens of millions. So every analyst was wrong...It is no good sitting in rooms projecting what is going to happen. You should work out what *is* happening. Work out what the customer wants, learn how to recognise him, learn how to recognise a VAR [Value Added Reseller] and replicate. That's more important than market research and defining a product.

Nobody asked for a LAN. I employed a market research consultancy in 1979 to interview 100 IT Officers. They came back and said there would be zero market for LANs. But I knew there had to be a market. Computers had to talk, it didn't make sense for them to be stand-alone machines. (*Ibid.*)

Like Dimension X, conforms to the Fransman vision model: informally derived and based upon the beliefs and experience of the founding manager. The press statements made by its high-profile founder and CEO also support the view of long-term visions signalling to the external world that the firm is directed and attractive to investment. FVC was successful in subsequent rounds of fundraising.

@Home

@Home, a new venture funded by Kleiner Perkins and TCI aggressively publicised and proselytised its vision of fast Internet service over cable TV networks during the mid 1990s. This was an attempt to persuade prospective investors that its business model of partnerships with cable providers was superior to the rival broadband internet technologies. At the height of the 'dot.com' boom in Silicon Valley, this public relations campaign was rewarded by an initial stock market valuation of \$2 billion, with only 6000 customers and the company expecting only losses for years to come. This supports Swann and Gill's idea of visions serving as tools of public

¹² Author's interviews.

relations and signals to external investors. In the case of start-ups the use of vision is a powerful device to attract investments and interest from potential partners, often in the absence of a mature product or technical competence.

9. No Vision

The above case studies have all shown evidence of vision, as characterised by Swann & Gill. But is this always the case in new and emerging industries? Is there a tautology in that the selected cases all contain some evidence of the vision phenomenon? To answer these questions this section reports that the research has also revealed cases where no recognisable vision was present. The two cases are briefly described:

3Com

3Com is the second largest of the "big four" giant companies that dominate the data networking industry. They have grown large mainly through a series of acquisitions of other firms, some themselves large, which are later subsumed into the organisation. 3Com is quite systematic in its tracking of information regarding potential acquisition targets. Within the corporate centre a business development group maintains an exhaustive database of small companies who are "within 3Com's field of interest".

The database includes information such as each company's management team, the products, the technologies that are in the products or that make them, and financial data such as the firm's profitability. The data is arranged into quadrants of related fields, so that there is information on multiple companies in the same space. In this way 3Com can monitor rival firms in each product market. When a decision is made to diversify into a new area such as new media, or consolidate an existing one, the company can assess the best company for acquisition in that product space. If the best company is unavailable 3Com are able to identify alternatives. In all cases 3Com does some research on the best two or three firms to establish the leader in the field.

Although when it was founded 3Com was promoted on a vision of ethernet technology, this envisioning disappeared as the company grew. There is no singular vision or expectation evident in 3Com's publicity or internal communications. Interviews with senior managers revealed a circumspect approach to emerging technologies and markets. While the firm will take stakeholdings and initiate partnerships with various start-ups, these are not seen as a commitment to a particular technological or market vision, but rather an option that may be increased at a later stage when uncertainty has reduced. This is consistent with the strategic management literature on 'real options' (e.g. Mitchell, 1988; Mitchell & Hamilton, 1988, Bowman & Hurry, 1993).

New Enterprise Associates (NEA)

New Enterprise Associates, as a venture capital fund copes with uncertainty on an everyday basis. Interviews with NEA revealed formalised thinking to guide the investments the fund would make in a pro active way. The firm identifies the sectors

in which it wants to invest, it then analyses the technological trends that are likely to impact those sectors, and commits to the strongest areas of opportunity. Similarly to 3Com, the firm has no identifiable vision of what will occur in each sector, but 'hedges its bets' by investing in companies with rival technological solutions. The firm recruits partners with technical knowledge to better monitor and understand the various technological trends. These processes of strategy formation help NEA and its funded companies to cope with the uncertainties of emerging high-tech markets.

3Com and NEA take an incremental and pragmatic approach to committing to new areas. Strategy is directed to relatively short time horizons without publicising the firm's view of the future. The fact that 3Com did have an identifiable vision at the start-up phase suggests that vision may be of less value as a firm matures, perhaps even self-defeating when a level of size and diversity has been achieved.

10. Discussion and Conclusions

In conclusion, the paper has tried to review and summarise the concept of vision as it is used in the management literature, and in the field of technology and innovation studies. It has also shown four examples of visions in use in observed practice, and cases where vision is not present. The paper has tried to show what visions are, what they are not, and how they are limited.

Vision in the management literature is broadly characterised as an image of how the organisation's world will look in the future. This may be an explicit statement but vision is distinguished from plan or scenario as it is informally derived. Vision possesses motivating qualities that are lacking in the more formal procedures of strategic planning. Vision is inspiring because it is inclusive and involving. Much of the literature stresses that envisioning is a process involving top management in negotiation with the broader organisation. Through its energising qualities vision is argued to support formal strategic planning, it make planning work better.

The concept of vision in the management literature still has an intangible and elusive nature. The technology and innovation studies literature concurs with the informal characterisation of vision but links it more explicitly to the organisation's knowledge bases and strategic actions. Fransman argues that visions are based on beliefs of decision-makers, they emerge in circumstances where rational choice breaks down. Visions represent the opportunity for "competence-creating moments", critical junctures where future trajectories of knowledge accumulation are conceived. This challenges the orthodoxy of technological path-dependency, where competences are stable and do not stray too far from the prior direction.

Swann and Gill, by contrast, characterise visions as tactical and strategic devices that serve various corporate objectives. They reflect not so much the beliefs of decision-makers but may be skulduggery or deliberate delusion of competitors. In this characterisation visions follow in an established thread of strategy research on explicit statements as public relations (Mintzberg, 1993; Fiol, 1995; Galbraith and Merrill, 1996).

The empirical case studies serve to illustrate the four function of vision as suggested by Swann and Gill's two-by-two matrix. These are shown in Table 2:

Table 2: Populating the Swann and Gill matrix: Case Studies of Visions in Use

	Tactical (pre-announcements)	Strategic (long-term)
Internal	Pearson attempting to close debate on new media within its group of companies	Oracle reorganising the entire company around the Network Computing Architecture.
External	BT and the Cambridge trial consortium, signalling to consumers to wait for their interactive TV services, and to detract from competitors alternative.	New digital media start-ups offering long-term visions that favour their technological solutions, so as to attract investors and publicity.

The cases therefore provide evidence for Swann and Gill's conception of visions as tactical and strategic devices. Internally, they serve to disseminate ideas and to close debate, while externally they delude and deter competitors or entice investors and customers. The cases where there was no vision showed the value of keeping options open, and not committing to a single vision of the future. Practitioners may observe that while vision can be a powerful tool to the strategy-maker, its absence may also be advantageous. A vision is not a 'must-have' business person's accessory. Like palmtop computers and executive toys, their usefulness depends on individual circumstances and preference.

There is some evidence that visions emerge from the informal beliefs of decision-makers, as Fransman argues. However, the frequency with which visions are dropped and replaced suggests a fickleness and opportunism rather than devout belief. This ephemeral quality of visions contrasts sharply with the underlying knowledge bases of the firms in the case studies. The technological competencies followed stable, predictable trajectories even while new products and services were developed through their application. Technological path-dependency appears still to be a key constraint, despite the presence of a guiding vision, however radical. The Pearson case reminds us of the hazards of leaping too far into the unknown. But as a senior manager of Pearson told this author: "Hindsight is not a good forecasting tool".

The concept of vision takes its place alongside strategy, plan, and forecast. It is useful in the context of analysing and devising corporate tactics and strategies, but is a difficult and slippery phenomenon to research. Large-scale quantitative studies are dependent on statements that on face value are so similar as to suggest blandness, and the value of content analysis is unproven. The work attempting to find causal effects of visions on corporate performance is still more dubious. Future research on visions is therefore likely to be most fruitful in the area of situated organisation studies, for example, analysing visions as organisational sense-making. The tenuous link to tangible knowledge bases and sustained strategy suggests it may be of limited interest independently.

End of paper

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References

- Ansoff, I.H. (1984) *Implanting Strategic Management*. New Jersey: Prentice/Hall.
- Baum, J.R., Locke, E.A., and Kirkpatrick, S.A. (1998) "A Longitudinal Study of the Relation of Vision and Vision Communication to Venture Growth in Entrepreneurial Firms". *Journal of Applied Psychology*. 83 (1), 43-54.
- Bowman, E.H. and Hurry, D. (1993) "Strategy Through the Option Lens: An Integrated View of Resource Investments and the Incremental-Choice Process". *Academy of Management Review*. 18 (4), 760-782.
- Chase, V.M., Hertwig, R., and Gigerenzer, G. (1998) "Visions of Rationality". *Trends in Cognitive Sciences*. 2 (6), 206-214.
- Collins, J.C., and Porras, J.I. (1995) "Building a Visionary Company". *California Management Review*. 37, (2),80-100.
- Collins, J.C., and Porras, J.I. (1996) "Building your Company's Vision". *Harvard Business Review*. September- October.
- Dosi, G. (1982) "Technological Paradigms and Technological Trajectories: A Suggested Interpretation of the Determinants and Directions of Technical Change". *Research Policy*. 11,147-162.
- Fiol, C.M. (1995) "Corporate Communications: Comparing Executives' Private and Public Statements", *Academy of Management Journal*, 38, (2), 522-536.
- Fransman, M. (1992) "AT&T, BT, and NTT: Vision, Strategy, Corporate Competence, Path-Dependence, and the Role of R&D". JETS Paper No.8, Institute for Japanese-European Technology Studies, University of Edinburgh.
- Fransman, M. (1994) "Information, Knowledge, Vision and Theories of the Firm". *Industrial and Corporate Change*. 3 (3), 713-757.
- Fransman, M. (1995a) "Interpretive Ambiguity, Theories of the Firm, and the Evolution of Industries". Paper presented at the European Management and Organisations in Transition Workshop, *Technology and the Theory of the Firm: Social and Economic Perspectives*, University of Reading, 14th-16th May.
- Fransman, M. (1995b) "Theory of the Firm and Explaining the Growth of 'Real' Firms: The Case of Japanese Information and Communications Companies". Paper presented at the conference, *Corporate Strategies in Electronics*, Centre for Economic Performance, London School of Economics, 25-26 September.
- Galbraith, C.S. and Merrill, G.B. (1996) "The Politics of Forecasting: Managing the Truth". *California Management Review*. 39 (2).*

- Gioia, D.A., and Chittipeddi, K. (1991) "Sensemaking and Sensegiving in Strategic Change Initiation." *Strategic Management Journal*. 12, 433-448.
- Harris, L.C. and Ogbonna, E. (1999) "The Strategic Legacy of Company Founders". *Long Range Planning*. 32 (3), 333-342.
- Kanter, R.M. (1984) *The Change Masters: Corporate Entrepreneurs at Work*. London: Unwin.
- Larwood, L., Falbe, C.M., Kriger, M.P., and Miesing, P. (1995) "Structure and Meaning of Organisational Vision." *Academy of Management Journal*. 38 (3), 740-769.
- Mintzberg, H. (1990) "The Design School: Reconsidering the Basic Premises of Strategic Management". *Strategic Management Journal*. 11, 171-195.
- Mintzberg, H. (1994) *The Rise and Fall of Strategic Planning*. Herts: Prentice-Hall.
- Mitchell, G.R. (1988) "Options for the Strategic Management of Technology". *International Journal of Technology Management*. 3 (3).*
- Mitchell, G.R. and Hamilton, W.F. (1988) "Managing R&D as a Strategic Option". *Research Technology Management*. 31, (3), 15-22
- Nutt, P.C. and Backoff, R.W. (1997) "Crafting Vision". *Journal of Management Inquiry*. 6 (4), 308-328.
- Oswald, S.L., Mossholder, K.W. and Harris, S.G. (1994) "Vision Salience and Strategic Involvement: Implications for Psychological Attachment to Organisation and Job". *Strategic Management Journal*. 15, 477-489.
- Oswald, S.L., Mossholder, K.W. and Harris, S.G. (1997) "Relations Between Strategic Involvement and Managers' Perceptions of Environment and Competitive Strengths". *Group and Organisation Management*. 22 (3), 343-365.
- Patel, P. and Pavitt, K. (1994) "Technological Competencies in the World's Largest Firms: Characteristics, constraints and scope for managerial choice". STEEP Discussion Paper No. 13, University of Sussex: SPRU.
- Pavitt, K. (1986) "Technology, Innovation and Strategic Management", In McGee, J. and Thomas, H. (eds.) *Strategic Management Research*. Chichester: John Wiley.
- Reddy, S.G. (1996) "Claims to Expert Knowledge and the Subversion of Democracy: The triumph of risk over uncertainty". *Economy and Society*. 25, 222-254.
- Sapsed, J. (forthcoming) *Restricted Vision: Strategizing under Uncertainty*. London: Imperial College Press.

- Simon, H.A. (1955) "A Behavioural Model of Rational Choice". *Quarterly Journal of Economics*. 69, 99-118.
- Swann, P and Gill, J. (1993) *Corporate Vision and Rapid Technological Change: The evolution of market structure*. London: Routledge.
- Tidd, J, Pavitt, K and Bessant, J. (2001) *Managing Innovation*. 2nd ed. Chichester: L John Wiley.
- Westley, F. and Mintzberg, H. (1989) "Visionary Leadership and Strategic Management". *Strategic Management Journal*. 10, 17-32.
- Whittington, R. (1993) *What Is Strategy- and Does It Matter?*. London: Routledge.