



ESSAYS

Bursting Bubbles

What the Internet Could Have Meant to Strategic Management Academia

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This article explains that the Internet bubble was a unique and unfortunately missed opportunity for strategic management academia to vastly increase the field's perceived legitimacy. This author challenges strategic management scholars to acknowledge this failure, understand it, and reconsider their responsibilities to the public and to the field.

Keywords: *Internet; scientific legitimacy; responsibility*

The burst of the Internet bubble in April 2000 led to the exposure of a number of failures—for example, of certain business models, of certain forms of venture capital, and of certain initial public offerings (IPO)-related securities regulations. One of the most significant failures, however, did not earn its deserved attention—the failure of strategic management (SM) academia.

SM academics failed in two ways, the most significant way through errors of omission. SM academics failed to meet their collective responsibility, as public servants, to expose the problems in the overvaluation of Internet-related firms during the bubble. In addition, SM academics failed to meet their responsibility to the discipline by not critiquing the countertheoretical valuations of Internet firms—an exercise that would have demonstrated the scientific

legitimacy of their field. Instead, SM academia acted in a manner consistent with popular opinion pre- and postbubble—an error of commission—by effectively supporting the hype, and then the myth, of the new Internet-based strategic imperative. Furthermore, they have still not chosen to even acknowledge these failures.

In this article, we expose these failures. We argue that SM should be indicted for these failures because (a) the field produced no literature pre-bubble burst that critically analyzed the overvaluations of the Internet-related firms; (b) the field had the tools to carry out such analyses; and (c) the opportunity to critically analyze the overvaluations was very important to the field's various constituents.

We follow the indictment with a description of what the field actually did—that is, support rather

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than critique preburst. We offer several possible explanations for this behavior. We conclude with a recommendation for what actions need to be taken now and a challenge to readers to partake in the analysis of the field's failures. This article does not make any case regarding the field's ability to learn from the Internet bubble itself (e.g., about business models, venture capital, etc.) nor does the article focus on the applied value of the Internet on firms; this article focuses solely on the failures of SM.

The Lack of Preburst Critical Assessments of Internet Firm Valuations

There are several preburst articles in economics and finance that question the overvaluation of Internet stocks (e.g., Hirschey, 1998; Krugman, 1997; Perkins & Perkins, 1999; Schwartz & Moon, 2000; Shiller, 2000). There are no articles in the top management, strategy, or entrepreneurship journals up to April 2000 that critically examine and question the market value of Internet-related and e-commerce firms. We used a number of literature search engines, including Business Source Premier and ABI-Inform, to search for pieces (i.e., journal papers, proceedings, book chapters, and working papers) using various criteria (e.g., keywords *Internet OR e-commerce AND [pric? OR valu? OR stock OR market* in the abstract) and found no SM pieces that provided any critical analyses. We extended the search to SM conference program papers, to search engines devoted to working papers, and to tracking down the citations of papers written pre- and postbubble to find evidence of any SM pieces that provided the critical analyses. None was found.¹ By contrast, a few pieces were found in other literatures (see Table 1 for selected pieces found).

In economics, scholars such as Krugman (1997) could use the violations of macro-economic rules to spot the bubble: "it was hard to see how profits could possibly grow fast enough to justify the level of stock prices . . . there was no way to regard the great stock market boom as anything other than a bubble" (pp. 32-33). In finance, scholars could use market inconsistencies to question valuations, as when the market valued Palm preburst more than 3Com, the firm that almost wholly owned Palm² (e.g., Useem, 2000).

Economics focuses on the macro-, multi-industry mechanics of productivity, growth, wealth, policy, supply, and demand. Finance focuses on market efficiencies and instrument valuations based on cash flows, risk profiles, and investor behavior. Strategic

management focuses on what each of these disciplines is based on—the source of the cash flows, the risk, and the variation of intra- and interindustry performance. If the Internet bubble's inconsistencies preburst could be exposed at the higher levels of study—in economics and finance (see above)—then such inconsistencies should have also been apparent to SM at the more fundamental levels—at the levels of causation that the symptoms exposed. The questionable profit growth across Internet-related firms in aggregate caught by Krugman should have been caught by SM scholars at the firm level. The market inconsistencies in carve-outs caught by finance scholars at the market level should have been caught by SM scholars in corporate strategy at the analysis level of divisional synergies and efficient governance. In sum, SM failed to critically analyze the overvaluations preburst even though other fields did; it is even a greater failure because the focus of the discipline is supposed to be on what gives a firm competitive advantage—which is the basis for firm valuation.

SM Had the Tools

There are four arguments for assuming that SM academia had the tools to critically examine the overvaluations preburst: (a) that other disciplines critically examined those overvaluations using tools also available to SM academia (see above) preburst; (b) that the theoretical approaches used by SM scholars postburst did not differ significantly from those approaches used preburst to describe the Internet's impacts on business; (c) that the empirical studies done postburst on preburst data, using preburst analysis concepts, significantly explained variance in interfirm performance; and (d) that postburst it appears straightforward to use preburst tools to critique at least some then prominent overvaluations.

There is a consistency in the approaches that SM authors used, pre- and postburst. Analyses were based on established economic concepts such as business models, value-chain analysis, industrial organization, information asymmetries, externalities, transaction costs, economies of scale and scope, and used associated tools including the tools to analyze network externalities and positive feedback systems (e.g., Arthur, 1989); the tools to deal with near-zero marginal production costs; the tools to handle a bits-based (e.g., information) versus an atoms-based (e.g., tangible) type good; the tools to price or otherwise appraise the value that Internet-based goods confer to

Table 1
Internet-Related Activity in Initial Public Offerings and in Academic Interests

<i>Paper</i>	<i>Contribution</i>
Hamel & Sampler (1998)	Does not question the valuations of Internet commerce firms. Rather, hypes the Internet as "the foundation for a new industrial order," and the source of "the hottest and most dangerous new business models." Ironically also acknowledges the incredibly thin margins that firms with commodity products will likely have on the Web (i.e., most retailers, such as Amazon) and that in the Web's potential frictionless capitalism nobody can make any money.
Oliver (1999)	Does not question the valuations of Internet commerce firms. Rather, explains (and somewhat supports) the continued losses (lack of profits) of these firms as investments in growth during an inexpensive time to do so, taking a risk on the future.
Higson & Briginshaw (2000)	Argues that the old rules still apply to valuing stocks in the new economy. Calculates various fair market values under sets of assumptions regarding margins, revenue growth, cost of capital, etc. Concludes that "if there is a bubble in Internet stock prices, or in technology stocks more generally, does this matter?" Apparently not much.
Lee (2001) (received July, 2000)	Does not question the valuations of Internet commerce firms. Event study methodology to find positive stock market reactions to Internet-related corporate name changes.
<i>Conference</i>	<i>Paper, Author</i>
1997 Strategic Management Society	Converging Business Models of Emerging World Class Internet Success Stories, B. Subirana; Strategic Competition in Web-Based Economies, J. Hagel
1998 Strategic Management Society	Exploiting the Opportunities of e-Commerce, D. Pecaut, A. Blackburn, D. Ritter
1999 Babson / Frontiers of Entrepreneurship Research	Key Drivers of Stock Performance of Internet Firms: Identification of Key Drivers, K. Seiders & E. G. Riley
1999 International Conference on Information Systems	The Dot Com Effect: The Impact of E-Commerce Announcements on the Market Value of Firms, M. Subramani & E. Walden
<i>Non-Strategic Management Paper and/or Book</i>	<i>Contribution</i>
Jagle (1999)	Uses the options-based approach to value technology-intensive firms. Growth opportunities for Internet firms amount to more than 100% of their market value in 1998.
Perkins & Perkins (1999)	Overvaluation of Amazon. Open letter to Internet Firm Investors - Sell Now! [p. 231]; Disconnect between underlying fundamentals and stock prices [p. 159].
Cooper, Dimitrov, & Rau (1999)	Evidence of large positive market reaction to firm name change—the "dotcom" effect.
Shiller (2000)	Uses behavioral finance to analyze the factors in the irrational exuberance of the Internet bubble. Provides evidence that it is a (nonsustainable) bubble preburst. Includes logical arguments and some empirical evidence.
Schwartz & Moon (2000)	Uses real options theory to see if Internet firm's valuations are justified (in a 20-parameter model). Amazon example shows the requirement for very high growth rates in revenues for valuation to be rational.

users and customers; and the tools to comprehend old industries converging and new industries emerging. Even some articles written postburst that are quite critical of preburst hype (e.g., Eisenhardt, 2002; Porter,

2001) used preburst concepts to question some of the Internet-related influence on firm performance. We conclude that if the tools have not changed but postburst can be used to deflate the preburst valua-

tion, then those tools were also available to deflate such valuations preburst.

There are also numerous empirical articles done postburst that indicated that significant preburst variance across Internet-related firm valuations was correlated with old economy concepts (e.g., regarding firm governance, location, and business model basis—see Amit & Zott, 2001; Arend, 2003; Sanders & Boivie, 2004). We suggest that if the preburst concepts can be used postburst help explain performance, then they could have also been used preburst to question overinflated valuations.

We now argue through an example below that approaches and concepts available preburst could be applied in a straightforward manner to question some of the preburst assumptions underlying the overvaluations. We first apply the approach of proof by contradiction to show that several of the assumptions about the Internet that at first appear beneficial to a firm, in fact, may be detrimental when considered in greater depth. We then apply several standard management concepts to show that deeper considerations of these additional issues in the Internet context can also have a deflating effect on preburst firm value.

Amazon.com is the example for the thought experiment³ and then the concept application. It had a peak market value of U.S. \$39 billion (bn) in 1999 (about 2 times that of Apple and about one eighth that of Walmart at the time). To simplify matters for our example, we focus only on its book-selling business. In the Internet world—the world where we all order products on the Web from trusted and established firms—Amazon, as a strong first mover, looks in good shape. Now extend that world to where we are all fully wired: We all have high-speed Internet access, at home, at work, and on person (using our digital phone or personal digital assistant or WiFi'd computer). We assume that if we all have these information devices, then we would want to read digital information rather than paper books, given that e-books are convenient to the user, very cheap to publish and distribute, and never wear out. The first problem is that such digitized information would be misappropriated like other digital media, such as music (e.g., think Napster), so Amazon would not capture all the value it expects. The second problem is that this e-product would eliminate the need for Amazon's sophisticated warehousing and distribution—one of its major advantages. The third problem is that the authors of those e-books would want to sell their wares directly, rather than through publishers and distributors, given

the new ease of publishing and distribution. This mental exercise provides three major problems for Amazon by simply drilling down through the positive assumptions about general Internet benefits to expose the lack of control and value added for Amazon that is actually related to such assumptions.

We now apply standard management concepts to provide further insight into the preburst Amazon case. These standard management issues should have some traction in the preburst world because we, as SM academics, know from experience that few technologies change everything, let alone quickly or in an orderly manner. Few technologies completely eliminate the threat of incumbent reaction. Few technologies solve their own value-chain problems (e.g., problems in transitioning distribution, and supply of direct inputs and complementary outputs). No technologies completely change all the cost implications of motivating workers, making strategic commitments, locating in attractive contexts, and efficiently financing growth.

For the Amazon case we now consider, as an example subset of the standard management issues, the impacts of rivals and of common input factors. Both issues put a drag on the profitability of growing firms, such as Amazon. First, consider the reactions of incumbent firms to the attacks of the new Internet ventures. Although some Internet ventures created new industries or acted to consolidate fragmented ones, and hence did not have instant rival reaction worries, others, such as Amazon, attacked established rivals head on. These rivals often responded with an Internet offering of their own (e.g., barnesandnoble.com, now bn.com, went public in May 1999, with a war chest of \$0.5bn and partners in Bertelsmann and Microsoft) causing increased price competition, foreclosure of lucrative niches, and the bidding up of the prices of input resources. Second, consider the impact of the limited pool of human resources (e.g., programmers, Web masters, and communications infrastructure experts) and other important inputs for growing Internet firms such as Amazon, especially given rising demand for such inputs in the short term. These inputs would be bid up in price, decreasing the cash flow of firms already burning funds at incredibly high levels, as well as limiting firm growth.

Understanding impacts of competitive and input forces are issues at the heart of SM, as is the understanding of the validity of the assumptions underlying a firm's business proposition. The fact that this exercise has exposed problems for one prominent val-

uation using preburst ideas reiterates the point that the field had the tools to do other critical analyses at the time it should have—preburst.

Why Was This Opportunity so Significant?

The Internet bubble-related opportunity was significant because of the money, the media, and the rarity involved. More than one trillion dollars was tied up in Internet-related investments between 1996 and 2000—that is roughly the amount of money for all National Aeronautics and Space Administration (NASA) programs involved in getting a man to the moon. Vast media attention focused on the growth of the Internet-related economy—the tech-heavy NASDAQ alone fueled the rise of financial news-focused cable networks (e.g., CNBC and Bloomberg).⁴ The Internet bubble was a rare event—there have been only 11 bubble bursts between 1928 and 2000, only two of which saw peak-to-trough declines of 25% or more.

The Internet bubble was a rare event where the public was so wrong, the monetary stakes were so high, the media attention and outlets were so obtainable, the core issues were at the heart of the field, the field had the tools and ability to use those tools, and the field was in need of a boost in legitimacy. The conflagration of such characteristics related to the Internet bubble is unlikely to occur again, at least for a generation. Strategic management academics missed a powerful way of making the case for the scientific legitimacy of the field. The case could have been made by countering then-current public perception of the high value of Internet-related businesses (i.e., the case could have been made by predicting the bubble burst, or at least by forcing an explicit revelation of the strategic and economic assumptions required to support the market values, and the inconsistencies among those assumptions). The field could have established its scientific legitimacy on this case alone because such scientific legitimacy has often been gained in other fields when scholars made accurate predictions that countered existing opinion or ignorance (e.g., Gieryn, 1983; Popper, 1965).

WHAT SM DID DO

We have argued for what SM should have done (i.e., provide a critique of the overvaluations of Internet-related firms preburst) and why (i.e., to

improve the scientific legitimacy of the field); we now describe what the field did do—as individuals and as collections of individuals within business schools. We follow that description with several possible explanations why the field acted as it did.

As Individuals

Individual SM academics did not take the opportunity to question the valuations preburst in any observed outlet. However, SM academics not ignore all of the opportunities afforded by the Internet phenomenon. There are many articles that prescribe how to exploit the Internet through strategy and tactics, often focused on business planning or specific business functions (e.g., Ghosh, 1998; Hamel & Sampler, 1998; Oliver, 1999). There were many articles that sought to explain, with a confirming demeanor, the market values observed, some even based on new measures such as “eyeballs” (e.g., Trueman, Wong, & Zhang, 2000).

The transparency of the discipline’s attitude toward the bubble is apparent in the contrast of work written (but not necessarily published) pre- versus postburst. Preburst, there is tacit support of the bubble through the hyping of the Internet’s potential value. Postburst, there is a belittling of the Internet’s actual effects on business through a heavy-handed application of some fundamental SM frameworks. Such a flip-flop, especially one that has yet to be explained, should be upsetting for a discipline desiring respect: Written preburst: Burns’s (2000) *entrepreneurship.com*: “To use a basketball term for the perfect shot, today’s economy appears to be nothing but Net. . . . No corporate strategy is complete without an e-business blueprint” (p. 1). Afuah and Tucci’s (2001) *Internet Business Models and Strategies*: “The impact of the Internet on industries, businesses, and firms’ competitive advantage has been phenomenal” (p. xv).

Written postburst: Porter (2001) in *Harvard Business Review*: “Many have argued that the Internet renders strategy obsolete. In reality, the opposite is true” (p. 63). Eisenhardt (2002) in *MIT Sloan Management Review*: “Has strategy changed in the wake of recent economic frenzy and subsequent downturn? The answer is no” (p. 88).

Even if one makes the case that the preburst pieces were only hyping the Internet’s impact itself and not explicitly in support of the Internet-related firm valuations, the lack of any explicit separation of those two issues and the lack of any critical analysis of those

overvaluations are tantamount to tacit support of the overvaluations preburst.

Another striking contrast that indicates the discipline's focus through the burst is apparent in a comparison of the volume of top journal articles versus practitioner-related articles. Although the number of top academic articles never rose to double digits in any year, the number of cases, notes, books and publications, written in some significant part by the discipline's academics, offers a stunning contrast (see Table 2). Unfortunately, such a contrast supports a common accusation against SM that the field cashes in on fads through endorsement—through related publishing, teaching, and consulting (Grey, 2001).

As Business Schools

Another way to understand how the discipline reacted is to consider what the business schools and their SM departments did with the opportunity. Business schools created, and many continue to operate, MBA concentrations and research centers in e-commerce (see Table 2). Where none existed pre-1994, there were at least 66 American Assembly of Collegiate Schools of Business (AACSB)-accredited MBA e-commerce concentrations in 2001 alone. More than one half of the top-30 *BusinessWeek* MBA programs in 2000 continued to have e-commerce MBA programs and e-commerce research centers in 2004; and Harvard Business School Press cites an astonishing 89 business cases written in 2000 alone on e-commerce, up from 3 in 1997. Where there is demand, business schools are willing to supply, given the increasing pressure to be customer oriented in an increasingly competitive marketplace, regardless if the customer is actually right.⁵ However, even excluding the customer orientation, business schools appeared to put their money where their beliefs lay during the bubble—the likes of Harvard, Stanford, and MIT all significantly invested in Kleiner Perkins Internet-related funds in 1998 to 1999 (Perkins & Perkins, 1999).

WHY WAS THE OPPORTUNITY MISSED?

There are a number of possible explanations for why SM academia behaved as they did and missed out on a significant opportunity. We consider three possible explanations below: (a) that this bubble had special characteristics that made it difficult to address, (b) that missing such opportunities lies within a pat-

tern of behavior observed in the SM field, and (c) that the opportunity was not actually missed because exploiting it was not part of the role of the field.

This Bubble's Idiosyncrasies

Hyped as a basis for business revolution at the time, the Internet promised immense value and opportunity to those entrepreneurs, incumbents, and investors prepared for the challenge. Similar to many high-return endeavors, there were also high risks. Significant uncertainties existed in technology, in demand, in competition, and in regulation reactions. In addition, there were pressures for investing big and early because of beliefs that first-mover advantages would sustain, that network externalities were likely to be significant, that the scale would be global, that there would be few ultimate big winners, and that non-Internet incumbents would lose out. In short, the Internet bubble was set to make precedent in its potential impact (although not change everything). As such, it may have been difficult for the SM field to get their collective heads around these precedents quickly. Perhaps the Internet phenomenon constituted a kind of disruptive information (akin to disruptive technologies—e.g., Christensen, Raynor, & Verlinden, 2001) where the pace of information and related technical progress outstripped the ability of many academics to absorb it, causing an overshoot of the valuation of that progress. Or, perhaps the phenomenon was seen as another round of computer-based productivity gains that analysts again overvalued (similar to the overvaluation of the gains expected in the 1980s based on the personal computer revolution). However, this time the overvaluation was greater because of beliefs that this new information technology (IT) could produce gains over and above simply automating processes—gains related to a full transformation of organizations and industries (Dedrick, Gurbaxani, & Kraemer, 2003).

The Internet phenomenon did entail some unique and confounding issues. The Internet did defy some common assumptions of standard economics. There was the appearance of being just another technological advance in that the potential value created by the Internet could be estimated by standard economics. The big problem occurred with the appropriation of that value. Appropriability differed in a significant way, in many circumstances, between the Internet world and the old economy world. However, existing reporting techniques (e.g., the IPO prospectus) gave the appearance that everything was standard. And

Table 2
Internet-Related Activity in Initial Public Offerings and in Academic Interests

Year	Internet-Related IPOs	Publication	Peer-Reviewed Publication	Books	SMJ, JoM, AMR, AMJ, ASQ, MS Articles	AACSB-Accredited MBA Concentrations in e-Commerce	HBSP-Affiliated Books	HBSP-Affiliated MBA Cases	HBSP-Affiliated Articles and Notes
1996	29	81	0	7	0		2	2	2
1997	39	395	6	12	0		6	3	1
1998	71	895	24	19	0		2	30	7
1999	404	2742	133	103	3		3	28	14
2000	262	5483	308	356	2	48	5	89	38
2001	24	3305	422	509	7	66	3	46	26
2002	7	1457	414	293	3	55	3	30	5
2003	2	1183	389	151	8		1	11	4

Note: IPOs = initial public offerings; SMJ = *Strategic Management Journal*; JoM = *Journal of Management*; AMR = *Academy of Management Review*; AMJ = *Academy of Management Journal*; ASQ = *Administrative Science Quarterly*; MS = *Management Science*; AACSB = American Assembly of Collegiate Schools of Business; HBSP = Harvard Business School Press; MBA = masters of business administration.
Source: Internet-Related IPOs—EDGAR's IPOExpress Supersearch: IPOs attached to a university (at least one major shareholder affiliated with university): 1998 (1 - Harvard), 1999 (2 - Harvard, Stanford); Publications—Business Source Premier: search on terms: e-commerce or Internet related business in default field, or Internet in abstract; Peer-reviewed—same as publications, but with peer-reviewed constraint; Books—Amazon.com: search on term e-commerce; Articles—Business Source Premier: search on terms e-commerce or Internet-related business, restrict to journal titles: *Strategic Management Journal*, *Journal of Management*, *Academy of Management Review*, *Academy of Management Journal*, *Administrative Science Quarterly*, *Management Science*; MBA concentrations—AACSB: only schools reporting to AACSB; Harvard Business School Press: search on term e-commerce.

investors acted in a manner consistent with that misunderstanding prior to April 2000. Investors assessed a firm, adjusting for the value created through the firm's use of the Internet. In so doing, investors perceived the rules affecting firm performance—the firm's ability to create value and capture it—were the regular rules. In effect, investors were implicitly assuming that the Internet-related firms would capture the value they created in a similar way and to a similar extent that non-Internet firms did. That is not surprising because every technological shift prior to the Internet did not alter the ability of a firm to eventually capture a significant proportion of the value it created. Investors may have misunderstood this, as may have entrepreneurs and academics. The potential benefits of the Internet to firms were to a great extent characterized by an increased utility for consumers that was not necessarily appropriable and a cost saving to the firm that was only realized in profits when prices were not simultaneously driven down proportionally by competition. Thus, many of the benefits created were not captured.

Strategic management was at fault for not separating the two types of value—created and appropriated. By not critically analyzing the overvaluations but instead describing the potential cost savings and consumer value generated by firms exploiting the Internet, the field was giving tacit support of the overvaluations to a public that did not see the subtle difference between the created and appropriated value. Given the historic proinnovation bias of academic literature—where innovation is assumed to bestow realized benefits to firms (e.g., Abrahamson, 1991)—we can understand why the public and fellow academics could have been led astray.

Patterns of Behavior of SM Academia

The actions of the SM field toward the Internet bubble may be explained by several behavioral theory concepts, including fad adoption. Behavioral theory may explain the cognitive dissonance (e.g., Gilad, Kaish, & Loeb, 1987) involved that led SM academics to believe that the event was not a bubble. Alternatively, the behavior regarding the bubble may have been pluralistic ignorance, or the belief that initial parties had better information about IPO values than scholars had (Camerer, 2002), or it may have been Asch's (1951) cascading with hindsight bias that made academics believe that the bubble was more real and substantiated than it was. Certainly, the positive

media spin, the progress of the markets, and the inside information of venture capitalists could have helped fulfill many of the requirements of such theories.

Several authors outlined the drivers of fad adoption in management (e.g., Abrahamson, 1996; Abrahamson & Fairchild, 1999; Brindle & Stearns, 2001; Grint, 1997; Lynch, 2000; Swanson, 2003), most of which considered either the necessary characteristics of the fads themselves (e.g., apparent rationality and progressiveness, fitting with existing ideas, ease in transmitting, providing defenses against competing fads, addressing a performance gap or a growing anxiety, etc.) or the necessary contextual conditions required to support fad adoption (e.g., a growing performance gap with rivals, sources of additional competitive and environmental pressure, such as widening trade gaps, etc.). Internet-related value propositions (e.g., near-zero transactions costs, direct-to-customer interaction, immense scalability) and the high IPO valuations of its pioneer firms (e.g., of Netscape and Yahoo) provided the necessary characteristics and contextual conditions for fad adoption by the public, if not by SM scholars as well. The performance gap between Internet and non-Internet firms had to be explained, and SM academics could and did try to find progressive ways to do so that were easy to transmit and seemingly rational to the public and other academics. Such explanations, as is often the case at the upswing of a fad were more emotional, less rational, and more a search for a grail than in the downswing of the fad (Abrahamson & Fairchild, 1999; Birnbaum, 2001; Carson, Lanier, Carson, & Guidry, 2000).

One further pattern of behavior historically characterizing the SM field may have contributed to the pattern of behavior observed during the bubble. The discipline focuses on positive (i.e., the way things are) rather than normative (i.e., the way things should be) publication—more than 90% of the discipline's articles are empirical. Thus, SM focuses on explaining what is versus criticizing what is and describing what could and should be. Essentially, the discipline is often reduced to conveying ideas already current in business practice (Weick, 2001) that would explain a focus on supporting the overvaluations preburst.

A Question of Role

Our final possible explanation for why the opportunity was missed relates to the role of SM academia. On one hand, some SM academics believe that individually or collectively, the field's primary responsi-

bilities lie in providing explanations of business phenomena and in training others to react to those phenomena effectively (i.e., a sort of "charge of the Light Brigade" attitude—Tennyson, 1870). In other words, they believe that the field has little, if any, responsibility for questioning and critiquing those phenomena. Given such a role, there was no failure of SM. In addition, the focus of the field to be more practitioner relevant, consistent with such a role, may have impaired the field's ability to be at an objective distance from the industry—a condition necessary to engage in the criticism of the overvaluations (Grey, 2001).

On the other hand, we believe that the SM field has a role as critical analyzer of business phenomena. That larger role is supported by many scholars, such as Abrahamson and Eisenman (2001), and by many related institutions, such as the AACSB. In that role, SM needs to address a greater mission to its stakeholders—a mission that includes a responsibility to challenge and debunk potentially harmful management-related knowledge in a timely manner.

WHAT NOW?

Start with an Explicit Admission of Failure

To SM academics, *www* should stand for *what went wrong*? An admission of failure would be a good first step in learning from our mistakes rather than either ignoring the failure or blaming others for it. Strategic management academics should regret the harm done to the public and to the discipline by failing to counter to then-current beliefs in overexaggerated Internet-related firm values.

Curiously, SM academics still do not, in large part, take responsibility for the failure of the discipline. Although many articles have emerged post-April 2000, many critical of the Internet exuberance and the new rules of the game (e.g., Eisenhardt, 2002; Porter, 2001), none explains where they—those authors and others—were pre-April 2000, or why we in this field as a whole missed the opportunity to be critical at the right time.

Consider an Investigation

When a failure of this magnitude occurs in other domains (e.g., massive product failures, intelligence failures, etc.) an independent investigation is often

pursued to determine what went wrong so that the problems can be addressed. Here, SM academia not only appears to be incapable of investigating itself but also would not even confront its failure. Instead, the relevant literature generally blames hype, irrationality, and greed of various other parties and then moves on with its exploration and testing of theories predating, or independent of, the Internet phenomenon. Strategic management has had its failures in the past; however, we cannot afford to dismiss them (Lamb, 1983), or we will never improve.

We hope that this article spawns further investigation into this failure so that interested academics can determine acceptable truths about what caused it that can then be addressed so that the next opportunity is not missed. We challenge SM scholars to debate their individual and collective responsibilities to the field and to the public when such disruptive changes as the Internet affect how management is understood and practiced.

NOTES

1. Few scholars picked up on Alan Greenspan's comments in his December 5, 1996, speech on "Central Banking in a Democratic Society" when he posed the question of how to know when irrational exuberance has unduly escalated asset values? Examples of exceptions include an *Economist* article titled "Do They Have Anything in Common" (Anonymous, 1999) questioning the value of media companies spending money on the Internet; and a *Financial Analysis Journal* article (Hirschey, 1998) that questions the value of Internet firms, specifically AOL, comparing such valuations to those of the European "tulipmania" in 1635.

2. In fact, the Palm/3Com example is only one of a handful of Internet-subsidiary carve-outs where the value of the parent's holdings exceeded the total value of the parent—a phenomenon that defies the law of one price, excluding frictions (Schill & Zhou, 2001).

3. Of course, there were many studies done to quantify the various assumptions required to support Amazon's valuation as well. Estimated valuations as a fraction of actual market value varied: one sixth for Dreman (2002) and Schwartz and Moon (2000); one third for Perkins and Perkins (1999); one half for Higson and Briginshaw (2000); and reasonable for Desmet, Francis, Hu, Koller, and Riedel (2000). Most of the studies were based on very optimistic earnings growth: 50% short term, 30% medium term, 46% cumulative average growth rate (CAGR); and margins: 14% operating; 25% gross. Actual CAGR revenues, 1999 to 2003, were 34% with CAGR of cost of goods sold (COGS) at 31%. Other troubling signs included Schultz and Zaman (2001) pointing out that Amazon's market capitalization at the end of 1998 exceeded that of all traditional U.S. bookstores combined; Perkins and Perkins's (1999) observation that Ama-

zon's market cap exceeded that of JC Penney and KMart combined in January 1999, and that it would need to outpace the growth of Microsoft by a factor of 2 to justify its stock price at that time. Other frightening assumptions required to justify Amazon's stock price included the need for profit margin to increase from 6% to 30% (Schwartz & Moon, 2000); and a 5-year CAGR at 94% (Perkins & Perkins, 1999). Amazon's value persisted preburst in spite of massive investments by Barnes and Noble and others getting into e-tailing where margins were thinning, and questionable investments by Amazon in business ideas such as Pets.com, and the use of accounting loopholes in their acquisitions that allowed the realization of revenues immediately but with a delay in realizing the associated costs.

4. It is questionable whether the George Costanza and Jennifer Marlowe of cable finance—Ron Insana and Maria Bartiromo—could have effectively questioned the market bulls preburst. Strategic management scholars may have provided more entertainment value with a discipline-based critique of the bubble whereas the media pundits were predicting a NASDAQ 10,000.

5. We are not judging whether there are too many or too few e-commerce-oriented cases, courses, MBA concentrations, centers, and so on. The Internet does have a significant effect on firm performance in many contexts that needs to be understood. We are simply noting that the response of business schools looks like a "spike," a pattern that is often associated with an initial overreaction to a system disturbance.

REFERENCES

- Abrahamson, E. (1991). Managerial fads and fashions: The diffusion and rejection of innovations. *Academy of Management Review*, 16(3), 586-612.
- Abrahamson, E. (1996). Managerial fashion. *Academy of Management Review*, 21(1), 254-285.
- Abrahamson, E., & Eisenman, M. (2001). Why management scholars must intervene strategically in the management knowledge market. *Human Relations*, 54(1), 67-75.
- Abrahamson, E., & Fairchild, G. (1999). Management fashion: Lifecycles, triggers, and collective learning processes. *Administrative Science Quarterly*, 44, 708-740.
- Afuah, A., & Tucci, C. L. (2001). *Internet business models and strategies*. Boston: McGraw-Hill Irwin.
- Amit, R., & Zott, C. (2001). Value creation in e-business. *Strategic Management Journal*, 22(6), 493-520.
- Anonymous. (1999). Do they have anything in common? *The Economist*, 350(8106), 61-62.
- Arend, R. J. (2003). A dyad-based analysis of new venture success: Comparing recent Internet to non-Internet related IPOs. *Journal of Private Equity*, 7(1), 59-71.
- Arthur, W. B. (1989). Competing technologies, increasing returns, and lock-in by historical events. *Economic Journal*, 99(394), 116-131.
- Asch, S. E. (1951). Effects of group pressure upon the modification and distortion of judgments. In H. Guetzkow (Ed.), *Groups, leadership and men* (pp. 177-190). Pittsburgh, PA: Carnegie Press.
- Birnbaum, R. (2001). *Management fads in higher education: Where they come from, what they do, why they fail*. San Francisco: Jossey-Bass.
- Brindle, M. C., & Stearns, P. N. (2001). *Facing up to management faddism: A new look at an old force*. Westport, CT: Quorum Books.
- Burns, T. (2000). *Entrepreneurship.com*. Chicago: Dearborn Financial.
- Camerer, C. (2002). Market efficiency of bubbles. *Journal of Psychology and Financial Markets*, 3(1), 29-36.
- Carson, P. P., Lanier, P. A., Carson, K. D., & Guidry, B. N. (2000). Clearing a path through the management fashion jungle: Some preliminary trailblazing. *Academy of Management Journal*, 43(6), 1143-1158.
- Christensen, C. M., Raynor, M., & Verlinden, M. (2001). Skate to where the money will be. *Harvard Business Review*, 79(10), 72-80.
- Cooper, M., Dimitrov, O., & Rau, R. (1999). *A rose.com by any other name* [Working Paper]. West Lafayette, IN: Purdue University.
- Dedrick, J., Gurbaxani, V., & Kraemer, K. L. (2003). Information technology and economic performance: A critical review of the empirical evidence. *ACM Computing Surveys*, 35(1), 1-27.
- Desmet, D., Francis, T., Hu, A., Koller, T. M., & Riedel, G. A. (2000). Valuing dot-coms. *McKinsey Quarterly*, (1), 148-157.
- Dreman, D. (2002). Bubbles and the role of analysts' forecasts. *Journal of Psychology and Financial Markets*, 3(1), 4-14.
- Eisenhardt, K. M. (2002). Has strategy changed? *MIT Sloan Management Review*, 43(2), 88-91.
- Ghosh, S. (1998). Making business sense of the Internet. *Harvard Business Review*, 76(2), 126-135.
- Gieryn, T. F. (1983). Boundary-work and the demarcation of science from non-science: Strains and interests in professional ideologies of scientists. *American Sociological Review*, 48, 781-795.
- Gilad, B., Kaish, S., & Loeb, P. D. (1987). Cognitive dissonance and utility maximization: A general framework. *Journal of Economic Behavior and Organization*, 8(1), 61-73.
- Greenspan, A. (1996). *The challenge of central banking in a democratic society* [Remarks at the Annual Dinner and Francis Boyer Lecture of The American Enterprise Institute for Public Policy Research]. Available at www.federalreserve.gov/boarddocs/speeches/1996/19961205.html
- Grey, C. (2001). Re-imagining relevance: A response to Starkey and Madan. *British Journal of Management*, 12, S27-S32.
- Grint, K. (1997). *Fuzzy management: Contemporary ideas and practices at work*. London: Oxford University Press.
- Hamel, G., & Sampler, J. (1998). The e-corporation. *Fortune*, 138(11), 80-87.
- Higson, C., & Briginshaw, J. (2000). Valuing Internet businesses. *Business Strategy Review*, 11(1), 10-20.
- Hirschey, M. (1998). How much is a tulip worth? *Financial Analysis Journal*, 54(4), 11-17.

- Jagle, A. J. (1999). Shareholder value, real options, and innovation in technology-intensive companies. *R&D Management*, 29(3), 271-287.
- Krugman, P. (1997). Requiem for the new economy. *Fortune*, 136(9), 32-33.
- Lamb, R. (1983). Is the attack on strategy valid? *Journal of Business Strategy*, 3(4), 68-69.
- Lee, P. M. (2001). What's in a name.com?: The effects of ".com" name changes on stock prices and trading activity. *Strategic Management Journal*, 22(8), 793-804.
- Lynch, A. (2000). Thought contagions in the stock market. *Journal of Psychology and Financial Markets*, 1(1), 10-23.
- Oliver, R. W. (1999, July/August). The secret formula. *Journal of Business Strategy*, 20(4), 7-8.
- Perkins, A. B., & Perkins, M. C. (1999). *The Internet bubble*. New York: HarperCollins.
- Popper, K. R. (1965). *The logic of scientific discovery*. New York: Harper & Row.
- Porter, M. E. (2001). Strategy and the Internet. *Harvard Business Review*, 79(3), 62-78.
- Sanders, W. G., & Boivie, S. (2004). Sorting things out: Valuation of new firms in uncertain markets. *Strategic Management Journal*, 25, 167-186.
- Schill, M. J., & Zhou, C. (2001, Autumn). Pricing an emerging industry: Evidence from Internet subsidiary carve-outs. *Financial Management*, 20(3), 5-33.
- Schultz, P., & Zaman, M. (2001). Do the individuals closest to Internet firms believe they are overvalued? *Journal of Financial Economics*, 59, 347-381.
- Schwartz, E. S., & Moon, M. (2000, May/June). Rational pricing of Internet companies. *Financial Analysts Journal*, 56(3), 62-75.
- Shiller, R. J. (2000). *Irrational exuberance*. Princeton, NJ: Princeton University Press.
- Swanson, E. B. (2003). Talking the IS innovation walk. In E. H. Wynn, E. A. Whitley, M. D. Myers, & J. I. DeGross (Eds.), *Global and organizational discourse about information technology* (pp. 15-31). Boston: Kluwer Academic.
- Tennyson, A. (1870). *Poems of Alfred Tennyson*. Boston: J. E. Tilton.
- Trueman, B., Wong, M. H. F., & Zhang, X. J. (2000). *Back to basics: Forecasting the revenue of Internet firms* (Working Paper). Berkeley: University of California.
- Useem, J. (2000). What have we learned? *Fortune*, 142(10), 82-94.
- Weick, K. E. (2001). Gapping the relevance bridge: Fashions meet fundamentals in management research. *British Journal of Management*, 12, S71-S75.

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