

## UNBUNDLING THE STRUCTURE OF INERTIA: RESOURCE VERSUS ROUTINE RIGIDITY

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**I work to unbundle the structure of inertia into two distinct categories: resource rigidity (failure to change resource investment patterns) and routine rigidity (failure to change organizational processes that use those resources). Given discontinuous change, a researcher's failure to recognize these distinctions can generate conflicting findings regarding effects of threat perception on inertia. Using field data on the response of newspaper organizations to the rise of digital media, I show that a strong perception of threat helps overcome resource rigidity but simultaneously amplifies routine rigidity. I develop an interpretive model exploring mechanisms for overcoming these divergent behaviors.**

The inability of incumbent firms to overcome organizational inertia when threatened with discontinuous technological change has been a topic of repeated scholarly inquiry (Hannan & Freeman, 1977; Henderson & Clark, 1990; Levinthal, 1992; Tushman & O'Reilly, 1996). One of the reasons this topic receives so much attention is that incumbent failure is extremely prevalent (Christensen & Rosenbloom, 1995; Tushman & Anderson, 1986). Perhaps even more intriguing is that failure often occurs even when managers are aware of the need to change (Johnson, 1988). I propose that some of the difficulty observed (both in management practice and scholarly research) occurs because of a failure to differentiate between two very distinct forms of inertia. Previous definitions of incumbent inertia describe it as the inability to enact internal change in the face of significant external change (Miller & Friesen, 1980; Tushman & Romanelli, 1985). I divide this general phenomenon into two

distinct categories (1) failure to change resource investment patterns (Christensen & Bower, 1996; Henderson, 1993) and (2) failure to change the organizational processes that use those resource investments (Leonard-Barton, 1992; Nelson & Winter, 1982). The first category is referred to here as *resource rigidity*. The second is referred to here as *routine rigidity*.

This article will show that the failure to differentiate the aspects of inertia is an oversight in the literature, partly because it leaves the underlying phenomenon inadequately described. But the lack of specificity can also lead to conflicting, even contradictory, findings. I will show how differentiating between resource and routine rigidity can be particularly important when exploring the role of threat perception under conditions of discontinuous change. Whereas some scholars suggest that threat perception enables response, others argue that it constrains response. For example, studies show that threat can unlock inertia by motivating change (Huff, Huff, & Thomas, 1992; Lant, Milliken, & Batra, 1992). And yet, threat perception has also been shown to increase inertia by narrowing alternatives and focusing response on previously learned routines (Dutton & Jackson, 1987; Staw, Sandelands, & Dutton, 1981). I show here how reconceptualizing inertia as having two distinct forms can help explain this seeming contradiction. Using longitudinal field data, I compare perceptions in eight newspaper organizations of the emergence of digital publishing. Findings show that the way managers perceive the threat of discontinuous change creates paradoxical links between resource and routine rigidity. This article also examines mechanisms for overcoming both types of rigidity simultaneously.

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## THEORETICAL BACKGROUND

### The Problem of Incumbent Inertia

In this section, I first specify how resource and routine rigidity represent different types of inertia. I then explore how interpretation might have a different effect on each type, looking specifically at conditions of discontinuous change. For this article, discontinuous change refers to *external* changes that require *internal* adaptation along a path that is nonlinear relative to a firm's traditional innovation trajectory (Christensen & Bower, 1996; Tushman, Smith, Wood, Westerman, & O'Reilly, 2003).

**Resource rigidity.** Of the many reasons that firms might underinvest in discontinuous change, resource dependency and incumbent reinvestment incentives are two important ones. The theory of resource dependency originated with the work of Pfeffer and Salancik (1978), which showed that a firm's external resource providers shape and constrain its internal strategic choices. Resource providers can include both capital markets and customer markets. For example, Noda and Bower (1996) demonstrated how public equity markets place performance requirements that constrain changes in business models and product architectures to conform to positions that originated at the time of their initial funding. Christensen and Bower (1996) demonstrated how customers can penetrate a firm's internal resource allocation systems (Bower, 1970). "When the initial price/performance characteristics of emerging technologies render them competitive only in emerging market segments, and not with current customers, resource allocation mechanisms typically deny resources to such technologies" (Christensen & Bower, 1996: 198). In these studies, resources were both financial and attention-based (Ocasio, 1997).

The second general argument concerning resource rigidity relates to market power. A debate persists in the economics literature as to whether incumbent firms, strongly positioned with a given technology, will invest sufficient resources in discontinuous change (Arrow, 1962). Gilbert and Newberry (1982) found that if entry to a new technology is blocked, incumbent firms have strong incentives to reinvest in their current market positions and not in the new technology. Reinganum (1983) argued that if incumbent investment increases the probability of market adoption in a way that alters a firm's otherwise dominant position, the firm has strategic incentives not to invest. Thus, whether constraints stem from a desire to preserve market power or from blinders created by resource dependence, they represent powerful inertial

forces blocking incumbent investment in discontinuous change.

**Routine rigidity.** Even when incumbent firms invest, there is a second inertial problem. The literature has repeatedly revealed the persistence and inflexibility of firm routines. Routines are defined here as repeated patterns of response involving interdependent activities that become reinforced through structural embeddedness and repeated use (Feldman & Pentland, 2003; Nelson & Winter, 1982). Part of the explanation for routine rigidity is that organizational processes that are tightly aligned with one environment can be difficult to change, because they are self-reinforcing and are not built to adapt to discontinuities (Miller & Friesen, 1980; Siggelkow, 2001; Teece, Pisano, & Shuen, 1997; Tushman & Anderson, 1986). Further, exploitation processes can drive out exploration processes, making it difficult to develop new capabilities (Benner & Tushman, 2001; Burgelman, 1994; March, 1991). Another part of the explanation is that the original motivation for designing an organizational routine can be separated from the people executing the routine (Nelson & Winter, 1982). The underlying logic pervades the thinking of the organization, often manifesting as deeply ingrained cognition (Prahalad & Bettis, 1986; Tripsas & Gavetti, 2000). The challenge is increased because this cognition also becomes tacit (Schein, 1985), making it even more difficult to recognize the sources within the routines that are creating the difficulties. Thus, managers often rely on a learned pattern of response that is structurally and cognitively reinforced, instead of employing new search efforts (March & Simon, 1958).

### The Effect of Threat Perception on Inertia

Although the literature yields considerable insight into the sources of both resource and routine rigidity, less attention has been paid to their differences and possible interactions (Henderson, 1993). Awareness of these differences is particularly important when exploring potential contradictions regarding the role of threat perception in discontinuous change—specifically, whether the perception of a threat increases or decreases inertia. Threat perception is defined as a deep sense of vulnerability that is assumed to be negative, likely to result in loss, and largely out of one's control (Dutton & Jackson, 1987; Jackson & Dutton, 1988). A well-developed literature on strategic change suggests threat perception is a response catalyst. Huff and his colleagues (1992) showed how threat-related stress could overcome inertia. Lant and her colleagues (1992) found that companies threatened

with performance decline were more willing to commit to strategic change. Barr and Huff (1997) showed that managers must view external changes as having a negative impact on performance before internal changes are possible.

But although the strategic management literature suggests that threat is a catalyst in reducing inertia, other research shows that threat can actually increase inertia. Management scholars who apply social-psychology ideas to threat-motivated response discuss three intermediate behaviors that can increase inertia. These are contraction of authority, reduced experimentation, and focus on existing resources. For example, Staw, Sandelands, and Dutton found threat led to "increased centralization of authority, more extensive formalization, and standardization of procedures" (1981: 513). Hermann (1963) noted a contraction of authority in crisis situations. Other research shows that threat narrows the number of alternatives firm leaders are willing to consider and reduces the level of experimentation in firm response (Ross & Staw, 1993; Staw et al., 1981). Finally, because threat-induced behavior is concerned with averting loss, it is directed toward preserving current resources rather than toward creating new opportunities (Dutton, 1992; Hartman & Nelson, 1996; Mittal & Ross, 1998).

In an effort to understand the conflicting conclusions regarding the impact of threat on inertia, I propose two related research questions: (1) How does threat perception affect incumbent inertia in the face of discontinuous change? and (2) Is the effect of threat perception different for resource rigidity and routine rigidity? After describing this study's research methods, I articulate a set of formal observations (propositions) based on comparative data from eight field sites. These observations yield an interpretive model of response to discontinuous change that addresses the varying im-

part of threat perception on resource and routine rigidity.

## METHODS

The present research might best be described as *theory elaboration* (Lee, 1999; Lee, Mitchell, & Sablynski, 1999) in that it elaborates theoretical links not previously addressed in the literature. For example, previous studies on the role of interpretation have not distinguished between resource and routine rigidity, resulting in the apparent contradictions described in the previous section. Thus, I attempt here to "simplify, reconnect, and redirect theory" (Lee et al., 1999: 166) on the role of interpretation in response to discontinuous change in a way that differentiates between these two sources of inertia.

### Research Setting

The research employed a multicase design that supports a "replication logic," whereby a set of cases is treated as a series of experiments, each serving to confirm or disconfirm a set of observations (Yin, 1994). The primary unit of analysis was an online venture of a newspaper organization responding to digital media; the embedded units were the sponsoring newspapers and their corporate managements. Table 1 describes the four companies and eight newspapers studied. Each company owned two of the sampled newspapers, though each newspaper operated with significant autonomy. Print circulation across the sample ranged from 200,000 to more than 500,000 average daily readers. All of the newspapers but one were locally distributed only. The competitive dynamics across markets were similar; each paper was the largest competitor in a low-rivalry market. Internet penetration across each market varied, but not by

**TABLE 1**  
**Description of the Eight Newspapers Studied**

Newspaper	Parent Organization	Daily Print Circulation	Circulation Range	Online Launch Date	Number of Online Employees in 2000
<i>Beacon A</i>	The Beacon Company	250,000	Local	1994	45
<i>Beacon B</i>	The Beacon Company	200,000	Local	1995	20
<i>Press A</i>	The Press Company	>500,000	Local/regional	1994	~100
<i>Press B</i>	The Press Company	400,000	Local/regional	1995	60
<i>Expositor A</i>	The Expositor Company	>500,000	Local/regional	1995	~100
<i>Expositor B</i>	The Expositor Company	200,000	Local	1996	32
<i>Morning News A</i>	The Morning News Company	>500,000	National	1994	~100
<i>Morning News B</i>	The Morning News Company	300,000	Local	1996	41

more than 10 percentage points from highest to lowest. Each of the newspapers launched a Web site between 1994 and 1996. Because of the sensitivity of the data, the names of the organizations and the newspapers are disguised.

I chose to examine the response of newspaper firms to digital publishing for two reasons. First, the effect of electronic publishing on the newspaper industry generally matched the research questions. Online publishing was a discontinuous change in that it presented external changes that required nonlinear internal adaptations. For example, the features of the Internet that early online users valued—access to breaking news, searchable databases, live weather and traffic—differed considerably from the features that were available in print. Similarly, the online business model was also considerably different, because it was driven by an altered cost structure, new categories of revenue, and different customer requirements. And yet, this discontinuity threatened to supplant both print readership and advertising over time, despite the lack of initial customer overlap. The second reason for selecting the newspaper industry is that singling out one industry helps control for extraneous variation (Eisenhardt, 1989a). The selection of case sites was based on theoretical sampling (Glaser

& Strauss, 1967) along a series of polar types that were likely to extend the emerging theory (Eisenhardt, 1989a). Thus, I targeted four innovative ventures and four rigid ventures for examination.

### Data Sources

Data were collected from three main sources: open-ended interviews, archival documents, and direct observations. Table 2 summarizes these sources. I also collected over 150 public documents, including press releases, annual reports, analyst reports, and industry articles.

**Interviews.** Of a total 62 interviews, 51 were in-depth, one- to two-hour in-person interviews with the senior executives at the corporate, newspaper, and online venture levels of the sampled businesses. I used semistructured interview templates concerning what motivated a manager to commit to digital media, how that commitment evolved over time, the relation between print and online efforts, and so forth. Additionally, 11 30-minute follow-on telephone interviews were used to expand on the specific question of why a corporate management chose to separate its digital venture from its print business, or chose to keep the venture integrated with the print newspaper. I at-

**TABLE 2**  
Sources of Data

Newspaper	Interviews <sup>a</sup>				Archival Documents		Direct Observations	
	Corporate	Newspapers	Ventures	Total	Number	Examples	Number	Examples
<i>Beacon A</i>	4 (2)	2	3	9	7	Business plan, customer list, internal memo, strategic plan, sales collateral	5	Planning meeting, sales calls
<i>Beacon B</i>	2 (1)	2	2	6	5	Business plan, internal memo	n.a.	n.a.
<i>Press A</i>	3 (1)	2	3	8	5	Business plan, customer list, internal memo, sales collateral	5	Content development meetings, budgeting meetings
<i>Press B</i>	4 (2)	2	3	9	6	Business plan, customer list, strategic plan, sales collateral	4	Sales calls, newsroom planning meetings
<i>Expositor A</i>	3 (1)	2	3	8	2	Business plan, internal memo	n.a.	Budgeting meetings, planning meetings
<i>Expositor B</i>	3 (2)	2	3	8	6	Business plan, customer lists, internal memo	5	n.a.
<i>Morning News A</i>	3 (1)	2	3	8	2	Business plan, customer lists, internal memo	5	Budgeting meetings, planning meetings, sales calls
<i>Morning News B</i>	2 (1)	2	2	6	n.a.	n.a.	n.a.	n.a.
Total	24 (11)	16	22	62 (11)	33	n.a.	24	n.a.

<sup>a</sup> Data collection included 51 in-depth one- to two-hour open-ended, in-person interviews with personnel from the indicated areas and 11 telephone interviews that were 30-minute follow-up conversations with the corporate executives on their decisions to separate their online ventures from the parent newspapers or keep them integrated. The total figure includes both the extended in-person interviews and the shorter telephone interviews. The telephone interviews are also shown in parentheses.

tempted to triangulate by using multiple informants and cross-checking information against archival and public documents to avoid retrospective bias in the interviews. Strict case study protocol was followed. More than 90 percent of the interviews were transcribed and entered into a case study database.

**Archival documents.** The 33 internal archival documents that I collected at seven of the eight sites included online business plans, strategy proposals, internal memos, annual strategic planning documents, customer lists, and historical sales collateral material. These documents constituted a valuable primary source of data and offered a way to cross-check the interviews and to control for retrospective bias. I focused on documents that discussed whether or not to fund an online business. These included business plans starting as early as 1990.

**Direct observations.** Over a year and a half, from 2000 to 2001, I recorded meetings among online venture, newspaper, and corporate executives, attended planning meetings for the online ventures, observed story creation for the newspapers and the Web sites, monitored sales calls for both the newspapers and the online products, and visited planning meetings. In all, I observed 24 field events from five of the research sites and recorded them into the case study database.

### Research Process

My investigation was informed by three characteristics that have been observed as being associated with threat perception: *negative focus, emphasis on loss*, and *sense of a lack of control* (Dutton & Jackson, 1987; Jackson & Dutton, 1988). I grouped interview and archival data into time-sequenced arrays to see how threat perception evolved over time. I also tried to identify instances in which field observations did or did not fit these categorizations. For example, I coded the motivation to commit to the Internet as either a threat or an opportunity. When a business plan stated that “online revenue would cannibalize print revenue” (negative, loss) or “we can slow it down, but we can’t stop it” (lack of control), the motivation of the manager who had presented the plan was coded as a threat perception. In contrast, if a manager described online revenue as largely “additive to print revenue” (positive, gain) or as susceptible to “influence through involvement” (in control), I coded the manager’s motivation as opportunity perception. Although sample size and the varying characteristics of data sources at the different sites did not allow statistical comparison, a second reader, who

was blind to the original coding and purpose of the study, cross-checked my coding efforts for each site over all periods (Miles & Huberman, 1984). In no instance was there a conflict between the second reader’s coding and the original coding.

I then developed a set of formally stated observations that were based on early case analysis of a set of matched-pair, polar cases—one innovative and the other rigid. Below, these formal observations are presented as research propositions. I analyzed the case data and “enfolded” a set of relevant literatures, following methods for inductive theory development (Eisenhardt, 1989a; Glaser & Strauss, 1967). I then used analytical replication to determine whether the emerging relationships were confirmed or disconfirmed in the rest of the sample (Eisenhardt, 1989; Yin, 1994). To confirm or disconfirm the relationships identified in each observation, I arrayed the data following techniques for cross-case pattern sequencing (Eisenhardt, 1989b) and tabular displays (Miles & Huberman, 1984). As with deductive hypothesis testing, the formal observations fit a consistent pattern, though they did not always conform perfectly (Eisenhardt, 1989a; Sutton & Callahan, 1987). I used the individual observations to construct an interpretive model of response to discontinuous change that differentiated inertia into resource and routine rigidity.

## ANALYSIS OF DATA

### Response in the Absence of Threat: Resource Rigidity

The field analysis confirmed that without a perception of threat, there was considerable resource rigidity around discontinuous change. This was manifested in the data by the failure of established newspaper firms to invest financial and attention-based resources in digital publishing. I explored this occurrence of rigidity by examining the forces of resource dependence and position reinvestment incentives.

**Resource dependency.** Much of the initial resource rigidity stemmed from resource dependencies related to the demands of the established print newspaper customers—both advertisers and readers. These demands were difficult to reconcile with the requirements of an emerging set of online customers. The data in Table 3 show that business proposals for online often stalled for more than two years in review in these newspaper organizations. Even when money was provided, operating attention could be equally difficult to secure. An online sales representative at the *Beacon A* recalled this: “Print reps could sell the online product, but with

**TABLE 3**  
**Resource Rigidity**

Newspaper	Evidence	Years in Proposal	Initial Commitment	Date of Launch	Examples: Financial and Operational Constraints
<i>Beacon A</i>	Interviews, archival documents, public documents	2	Publisher sponsorship	1994	<i>Sales</i> : "Print reps could sell the online product, but with varying degrees of success. Their margins were higher on other products that were easier for them to sell. Online was really just a novelty to them." (sales representative)
<i>Beacon B</i>	Interviews, archival documents	2	Forecast profitability	1995	<i>Sales</i> : Staff provided training, but then dropped the program multiple times owing to lack of client interest.
<i>Press A</i>	Interviews, archival documents, public documents	2	Forecast profitability	1994	<i>Sales</i> : "I occasionally sell a bundled print and online package . . . it is hard to really know what print advertisers would want." (sales representative)
<i>Press B</i>	Interviews, archival documents, public documents	2	CEO sponsorship	1995	<i>Newsroom</i> : Editors call online staff "low-brow content" for using radio feeds for breaking news, personals, and unedited user-posted content and refuse to work together. (newspaper editor)
<i>Expositor A</i>	Interviews, archival documents, public documents	3	CEO sponsorship	1995	<i>Budgeting</i> : "And in the end, the only real value is cash and cash creation. You can't build a business just on potential or hope." (CEO)
<i>Expositor B</i>	Interviews, archival documents, public documents	2	Forecast profitability	1996	<i>Budgeting</i> : "Look, when we roll these up into our budgets we miss our targets." (vice president, product development)
<i>Morning News A</i>	Interviews, archival documents, public documents	1	Publisher sponsorship	1994	<i>Newsroom</i> : "I will be goddamned if some online reporter is going to call my sources and say they are from our paper." (publisher)
<i>Morning News B</i>	Interviews, public documents	2	Forecast profitability	1996	<i>Sales</i> : "We bundled print and online, but there were clients who wanted online only. These were less interesting to sales reps and the organization wasn't ready to deal with that reality." (vice president, marketing)

varying degrees of success. Their margins were higher on other products that were easier for them to sell. Online was really just a novelty to them." "I occasionally sell a bundled print and online package," explained a print rep at the *Press A*. "There is no standard package, and it is hard to really know what the print advertisers would want." I gathered data on the overlap between print and online advertisers at five of the research sites, asking managers to estimate how many of their top 25 online advertisers were represented among the top 25 newspaper advertisers. Customer overlap was only 7 of a possible 125. The travel category at the *Press A* was a good example. Of the top ten booking agents online, only four advertised in print. In summary, the lack of customer overlap, a different selling process, and the lower relative gross margins combined to limit the amount of time and attention print sales reps were willing to invest in online.

**Position reinvestment incentives.** The resource rigidity that I observed in the initial response of

these newspaper sites fell almost entirely into the category of resource dependence. But even as these incumbent organizations came to realize the risks incurred by depending so heavily on their traditional customers, they did not necessarily overcome their resource rigidity. Market position incentives to continue reinvesting in the core newspaper businesses remained strong. Nearly every research site conducted huge studies to estimate the cannibalization effect of providing their news information online. This concern was particularly acute at the *Expositor A* and the *Press A*. The director of the Press Company's Internet group reflected, "I think the notion that people would start reading their newspapers on the screen was quite prevalent." Managers at both of these sites wanted to stall or delay any investment in a technology that might cannibalize the core newspaper business. One senior manager described his strategy as "wait and see," preferring not to take his paper online before adoption became inevitable.

### Threat Perception and Resource Rigidity

I next examine how a perception of threat affected the resource rigidity at each field site, first presenting the field data and then summarizing the observed behavior more formally. The data indicate that a strong perception of threat was associated with increased financial and organizational commitment to an online venture. At the various sites, the perception of threat built gradually and at slightly different paces. But by 1997–98, most newspapers' managements had become genuinely concerned about the imminence of online newspaper publishing, even though the advertisers in their mainstream markets still did not view digital media as a valuable advertising outlet. The director of marketing at the *Morning News B* described the evolution of their thinking:

You felt like Chicken Little screaming "The sky is falling," but after a while people started listening when they saw what the other competitors were doing. We made watch lists for TV, radio, vertical start-ups, telephone companies, and Citysearch. Citysearch was poaching people. . . . The publisher was unlike some in that he saw the threat.

Whereas in earlier funding discussions, proponents tended to describe online publishing as a growth opportunity meriting investment (often with little success), in 1997–98 these discussions turned to the perceived threat posed by the Internet. Data in Table 4 show that threat perception developed across the sample. Threat perception was evidenced as negative statements about the lack of control managers had in preventing losses to the Internet. For example, the CEO of the Press Company's Internet group explained, "There were people who thought we would lose half of our circulation." Others worried about losing classified advertising products, including employment, real estate, and auto listings. These products (representing as much as 60 percent of the profit of most metropolitan newspapers) appeared to be very portable to the searchable database format available online. One executive recalled his organization's perception as follows: "McKinsey had come in and had done a rather startling analysis of the classified business. They predicted that 20–30 percent of our classified revenue would disappear by 1998. That raised enormous alarm bells in some people." Finally, managers were concerned that the impact of digital media was largely out of the newspaper companies' control and that it would run its course with or without their participation. "What if we do every damn thing we can think of and execute flawlessly and we still don't make it?" lamented the

publisher of the *Beacon A*. "We can slow it down, but we can't stop it."

In seven of the cases, this mounting concern about the Internet threat led to expanded financial and organizational commitment. The archival data also showed evidence that threat perception generated resource commitment. For example, a 1997 business plan for the *Beacon B* estimated that 15 to 20 percent of its print classified revenues might be lost to online. One business plan explained, "If we don't cannibalize ourselves, someone else will." While earlier proposals had emphasized financial returns and new market opportunities, arguments for increased funding now stressed the growing threat to print revenue from online competition. Despite mounting losses in the online business, frequently exceeding 100 percent of online revenues, expenditures grew by as much as 400 percent during the years that threat perceptions were building (see Table 4). The number of employees allocated to the online ventures also increased. For example, dedicated online staff at one site expanded from 5 to 40 people during an eight-month period in 1998. Staffing levels reached or exceeded 100 individuals at many sites (see Table 4).

The expanding resource commitment was not limited to financial expenditures and headcount; it extended to operating commitments such as management time and effort. The threat posed by digital media overcame customer dependencies that might otherwise have pulled investment away from the new technology. "Look, it didn't make any sense for us to try to sell this stuff, but we began to feel that if we didn't work on it, it might come back to haunt us," said a sales manager at the *Beacon A*. Reporters were asked to summarize articles and stories before they were published in print, and many were encouraged to write follow up on stories just for the Web.

Indeed, threat perception was observed to have a powerful catalytic effect on both types of resource rigidity, a situation that can be summarized in my first two propositions:

*Proposition 1a. The perception of an imminent threat in the face of discontinuous change enables managers to overcome sources of resource rigidity that stem from resource dependence.*

*Proposition 1b. The perception of an imminent threat in the face of discontinuous change enables managers to overcome sources of resource rigidity that stem from incumbent position reinvestment incentives.*

**TABLE 4**  
**Perception of Threat Helps Overcome Resource Rigidity**

Newspaper	Stated Source of Threat	Year Threat Emerged	Evidence	Examples of Threat	Pattern of Behavior <sup>a</sup>	Expenditure Expansion <sup>b</sup>	Employee Expansion
<i>Beacon A</i>	Readership, display advertising, classified advertising	1996	Interviews, archival documents, public documents	<i>Lack of control</i> : "What if we do every damn thing we can think of and execute flawlessly and we still don't make it? We can slow it down, but we can't stop it." (publisher)	Literal replication	1996-98: 400%	1996-98: 15→40
<i>Beacon B</i>	Classified advertising	1997	Interviews, archival documents	<i>Focus on loss</i> : 1997 internal estimates of 15-20% loss of classified share by 2001 (1997 strategic plan)	Literal replication	1997-99: 300%	1997-99: 5→18
<i>Press A</i>	Readership, display and classified advertising	1997	Interviews, archival documents, public documents	<i>Focus on loss</i> : "There were people who thought we would lose half of our circulation." (CEO, Internet group)	Literal replication	1997-1999: 300%	1997-99: 50→100+
<i>Press B</i>	Readership, display and classified advertising	1997	Interviews, archival documents, public documents	<i>Negative effect</i> : "People were telling us that newspapers were heading to the graveyard and we were beginning to believe them." (publisher)	Literal replication	1997-99: 250%	1997-99: 30→50
<i>Expositor A</i>	Stock price, classified advertising	1997	Interviews, archival documents, public documents	<i>Focus on loss</i> : "We were worried about classifieds primarily. These new firms were set to come in and take our most profitable piece of business." (early online president)	Literal replication	1997-99: 300%	1997-99: 50→100+
<i>Expositor B</i>	Readership, display and classified advertising	1998	Interviews, archival documents, public documents	<i>Negative effect</i> : "We [middle managers] had been concerned for a while, but . . . the reason we finally got into the market was that our CEO was taking heat from Wall Street." (vice president, product development)	Literal replication	1998-2000: 250%	1998-2000: 15→31
<i>Morning News A</i>	Primary motivation/distribution/production savings, not threat	n.a.	Interviews, archival documents, public documents	<i>Not threat</i> : "Eighty percent of my costs are production and distribution. Now all of a sudden I have a solution. It is not a content play, but a major cost reducer and product expander." (publisher)	Theoretical replication	1997-99: 200%	1997-99: 60→100+
<i>Morning News B</i>	Classified advertising	1998	Interviews, public documents	<i>Negative effect</i> : "You felt like Chicken Little screaming 'the sky is falling,' but after a while people started listening." (vice president, marketing)	Literal replication	1998-2000: 400%	1998-2000: 5→40

<sup>a</sup> These categories are based on Yin's (1994) analytical technique of replication. In theoretical replication, the behavior was not observed, but its absence was consistent with the theory argued above. The cost structure at the *Morning News A* revealed an opportunity motivation existed, but for reasons that were theoretically consistent with the general pattern observed.

<sup>b</sup> Period based on relevant expansion of threat perception at a site. Numbers represent company estimates from the start of year 1 of the study period to the end of year 3.



Observations at every primary research site confirmed the negative relationship between threat perception and resource rigidity (see Table 4).

In Table 4, which summarizes these observations, I have noted whether the data observed followed Yin's pattern of replication (1994). When an observed site replicated the pattern, I called the case a literal replication. When a site did not follow the pattern, but for reasons that were not inconsistent with the proposition, I called the case a theoretical replication. If sites had not followed the pattern for other reasons, the exceptions would also have been noted. Notice in Table 4 that seven of the eight sites showed behavior that was a literal replication of the pattern: threat helped overcome resource rigidity. The exception to this pattern was the *Morning News A*. At this national newspaper, the Internet actually helped to solve an existing organizational problem. Thus, it was not discontinuous to its operating requirements in the same way that it was for other locally distributed newspaper organizations. Whereas the other papers had huge economies of local production and distribution, the *Morning News A* did not. According to the president and publisher:

This was a wonderful opportunity from the start. If you are a national newspaper with a 3 percent penetration, all of a sudden you have an opportunity for virtually no cost to distribute the product. . . . The Internet creates huge opportunities to deliver product in areas that were uneconomical before. . . . Eighty percent of my costs are production and distribution. Now all of a sudden I have a solution.

Also, because it had a limited classified product, this newspaper did not share the fear of cannibalization with many of the other sites in the sample. The Internet matched a set of sustaining needs for the print newspaper business and was accepted accordingly. The key distinction was that the opportunity was not discontinuous for the *Morning News A*, as it was for the other research sites. Thus, the newspaper does not follow the pattern of replication observed in the other sites, but for theoretically consistent reasons (Yin, 1994).

### Threat Perception and Routine Rigidity

Although threat perception reduced resource rigidity, it increased routine rigidity. In keeping with previous research, my findings show that threat perception produces three intermediate behaviors that amplify routine rigidity: contraction of authority, reduced experimentation, and focus on existing resources (Staw et al., 1981).

**Contraction of authority.** Data confirmed that corporate management asserted its control over decision making, withdrawing considerable authority from operating divisions, in each newspaper adoption of online publication studied here. This contraction of authority involved transferring more control to corporate officers, such as the head of business development, the CEO, or a newly appointed online director. At nearly every site I studied, these individuals or groups assumed control of strategy. Table 5 gives examples of the observed contraction of authority. Sometimes this shift was accomplished by imposing business plan templates on local site managers. According to the vice president of technology and operations at the *Beacon A*,

It was very centralized in the beginning, which was very uncharacteristic, because the culture is very much to let these guys run their own businesses. We had a basic business model for every site. We gave them money. We told them they could hire people, but we told them exactly how to do it.

The contraction of authority also took the form of centralized decision approval. The *Morning News Company's* CEO personally directed online strategy at the flagship paper, and the head of business development made strategic, financial, and hiring decisions for all the other newspapers. Similarly, the *Press A* required the newspaper CEO to approve all senior hires. Sites had to follow detailed budgets and adhere to strict marketing plans. The ventures were allowed little autonomy in local planning. This restriction increased reliance on existing routines because it limited the alternatives considered. Further, operating managers were less likely to change corporate-imposed routines. As one operating manager explained, "We felt like even though we were all very focused on the online business, the corporate folks kind of had a plan and stuck with it, even though we could see the failures occurring in our local market." The effect of this behavior can be formally stated:

*Proposition 2a. Perception of an imminent threat leads to a contraction of authority that amplifies routine rigidity.*

**Reduced experimentation.** The contraction of authority had a feedback effect on the level of experimentation in online strategy. For example, one of the papers at the *Beacon Company* wanted to experiment with other forms of revenue generation, but it felt constrained by the corporate strategy that imposed a site template for sales strategy, business models, and product plans. This reduced experimentation was not solely a function of corporate control; the data show that the aggressive pace of

**TABLE 5**  
**Evidence of Threat-Motivated Behaviors Linked to Routine Rigidity, 1996–98<sup>a</sup>**

Newspaper	Contraction of Authority			Reduced Experimentation			Focus on Existing Resources		
	Behavior	Examples	Behavior	Examples	Behavior	Examples			
<i>Beacon A</i>	Literal replication	Breaking from an early policy of local development, corporate-developed business plan templates for all sites, including budgets, and organization charts	Literal replication	Local market experiments and variation <i>discontinued</i> because each site was forced to follow corporate plan	Literal replication	In 1996, corporate beings tracking print readership and online audience overlap tracked monthly			
<i>Beacon B</i>	Literal replication	Product template, including content categories, determined by corporate	Literal replication	Nonstaged deployment of capital created lock-in on initial corporate plan	Literal replication	Product development based on value to the print product			
<i>Press A</i>	Literal replication	Whereas earlier involvement was minimal, the CEO becomes involved in all online budget approval decisions	Literal replication	Despite increasing losses, resource commitment expands without pushing on the drivers of missed targets	Literal replication	Tremendous concerns about cannibalization, readership studies done asking whether people would stop reading the paper			
<i>Press B</i>	Literal replication	Corporate staff select initial online director and early strategy	Theoretical replication	Some local experimentation occurs after outside online director is hired; different content strategies, revenue stream tested and changed based on market tests	Theoretical replication	Focus moves away from the newspaper to the business model and customer requirements that are unique to online media			
<i>Expositor A</i>	Literal replication	CEO drives entry into online, taking over previous role of local publishers	Literal replication	Online given directive not to lose money, and funding for experiments very difficult	Literal replication	Advertising products built around the needs of print advertisers			
<i>Expositor B</i>	Literal replication	All decisions regarding classified strategy governed by corporate	Literal replication	Corporate driven classified plan enforced over previous local experiments	Literal replication	Cannibalization surveys conducted			
<i>Morning News A</i>	Theoretical replication	CEO runs the online business at flagship paper for extended period	Theoretical Replication	Experimentation occurred within the current business model and print advertiser customer requirements	Literal replication	All product development expenditures built around impact studies on print advertisers			
<i>Morning News B</i>	Literal replication	Corporate business development director creates site strategy and personally approves all funding	Literal replication	Local market experiments and variation <i>discontinued</i> , forced to follow corporate	Literal replication	Selling strategy built around “up-selling” to existing advertisers			

<sup>a</sup>These categories are based on Yin's (1994) technique of replication. In theoretical replication, the behavior was not observed, but its absence was consistent with the theory argued above. The *Morning News A* was opportunity, not threat, motivated. However, the opportunity the newspaper saw was related to cost savings in the core business, not to creating a new business (see Table 4). Therefore, the experimentation that did occur was focused on the core business. Thus, the case varies from the pattern, but for theoretically consistent reasons. The *Press B* did not follow the observed pattern for reasons discussed subsequently in the text.

resource commitment also made it more difficult to step back and change behavior. The sample firms expanded resource commitments by more than 100 percent per year during the period of accelerated threat perception. Recall that employment at the *Morning News A* went from 5 to 40 people in less than eight months. Expenses at the *Beacon B* doubled, then nearly doubled again in 1997 and 1998, contradicting original forecasts of profitability by 1996 (see Table 5). Whereas initial disappointments might have prompted managers to regroup, the perception of threat caused them to press ahead on the same misdirected paths. To paraphrase Santayana's (1905) definition of a fanatic, it was as if the organizations were doubling their speed upon losing their direction. If an initial response is wrong, then expanding resources may only solidify those initial tendencies. The *Beacon A*, for example, hired more than 40 people to implement an expansion strategy that closely resembled that of the newspaper business model. Because the expansion occurred so quickly, the resources invested reinforced rather than reshaped established routines of the parent. The effect of this behavior can be formally stated:

*Proposition 2b. Perception of an imminent threat leads to a reduced level of experimentation that amplifies routine rigidity.*

**Focus on existing resources.** The fear of cannibalizing the core newspaper business prompted managers to focus on their existing resources, rather than consider new options presented by the new technology (see Table 5). One manager at the *Press A* expressed fear that the online publication would drain revenues from the print publication: "Cannibalization was a huge concern for everyone initially. . . . We asked questions about readership overlap and whether they would stop reading the paper." Functional managers often retained oversight for the online products. For example, the president of the *Expositor A* Internet site explained that "because the classified organization was so worried about defending the print classifieds business, that group held onto the online business." Because they were focused on the existing business, they responded with routines that worked well in that business. Development of the new technology was often driven by the effect it would have on the newspaper, despite the parallel growth of a separate online ad market. The head of sales for the Press Company's Internet group stated, "On the one hand I should go do whatever we need to do, but on the other hand there is concern about the paper." The effect of this behavior can be formally stated:

*Proposition 2c. Perception of an imminent threat leads to a focus on existing resources that amplifies routine rigidity.*

Table 6 summarizes evidence on the effects of each of these threat-motivated behaviors on routine rigidity. In almost every instance, threat-motivated response led to aggressive replication of the newspaper product and business model. Seven of the eight research sites turned out a product that was merely an extension of the newspaper. Indeed, many of the sites republished more than 85 percent of their Web site content directly from the local newspaper product. The publisher of the *Beacon A* observed this: "We learned [from early involvement with new media] that there wasn't very much appetite for an 'electronic' newspaper. . . . But that is exactly what we did with the Internet." Common features such as discussion boards, site-searching tools, breaking news from third-party sources, community forums, and other content features commonly provided by the many new entrants were largely absent from newspaper sites. Ironically, the technologies to develop these products were largely available and relatively easy to deploy. The chairman and CEO of the Beacon Company reflected:

Where I think we missed the boat is that we saw it as an extension of the newspaper. In other words, something richer and deeper than the newspaper. . . . Our Internet operations were really run by people who came out of the newsroom, so they were editors who tended to look at this more as a newspaper.

Most sites simply reproduced the newspaper. The online director at one site remarked, "Remember that I had said to the CEO at the time that it made absolutely no sense to replicate the newspaper on the Internet. Then I saw the product and it was just that."

The rigidity was expressed not only in the product but also in the business model. I compared the income statements of the eight research sites against a panel set of five competing online entrant firms. This analysis identified six categories of revenue associated with digital media that differed from those built around a print newspaper (e.g., e-mail and interactive advertising). Whereas a comparative set of entrants averaged more than five new revenue categories per site, most of the newspaper sites had only one (see Table 6). These new categories accounted for more than 40 percent of many of the entrant firm revenue streams. As the CEO of the Expositor Company explained, "We couldn't see any models that we were familiar with, nor any we knew how to make money with."

**TABLE 6**  
**Routine Rigidity Associated with Threat-Motivated Behavior**

Newspaper	Early Product	Percent Print Content <sup>a</sup>	New Revenue Categories <sup>b</sup>	Examples
<i>Beacon A</i>	Extension of newspaper	>75%	1	"We learned . . . that there wasn't very much of an appetite for an 'electronic' newspaper . . . But that's exactly what we did with the Internet." (publisher)
<i>Beacon B</i>	Extension of newspaper	>85%	1	"Where I think we missed the boat is that we saw it as an extension of the newspaper, in other words, something richer and deeper than the newspaper." (CEO)
<i>Press A</i>	Extension of newspaper	>85%	3	"Remember that I had said to the CEO at the time that it made absolutely no sense to replicate the newspaper on the Internet. Then I saw the product and it was just that." (CEO, Internet group)
<i>Press B</i>	Multisourced interactive media	<50%	3	"We are really becoming a separate company from the newspaper. I came from there. I love the paper, but we are now a different group with a very different way of working." (online editor)
<i>Expositor A</i>	Extension of newspaper	>85%	1	"We couldn't see any models that we were familiar with, nor any we knew how to make money with." (CEO)
<i>Expositor B</i>	Extension of newspaper	>85%	1	"We failed to recognize the importance of tools such as search, but rather presented this in the layout of a printed newspaper." (vice president, product development)
<i>Morning News A</i>	Extension of newspaper	>90%	1	"Where we made our mistake was we missed the next wave of opportunity. We could have said we want to be a national classified source. We could have become different content verticals. But we have done very little on content verticals." (publisher)
<i>Morning News B</i>	Extension of newspaper	>80%	1	"I don't see this as that different than what the newspapers currently do; it is just another channel." (vice president, marketing)

<sup>a</sup> Based on internal estimates at each site in 1998.

<sup>b</sup> Based on 1998 comparisons of print newspaper income statement analysis and new entrant income statement analysis. The entrants were selected from interviews with new media experts. The comparison sites included Citysearch, Monster.com, Yahoo, i-village, and CNET. Six categories of revenue were identified as being new for print newspapers: fee-based archival access, e-mail marketing, e-mail list rental, fee-based data analysis, behavioral targeting, and demographic targeting.

### The Notable Exception—Outside Influence and Separate Structure at the *Press B*

The most notable exception to the pattern of routine rigidity was the *Press B*. And although this site was similar to the others in most contextual factors, it was the only site that launched a structurally differentiated venture from the outset—a decision that was largely influenced by the CEO's external personal network. Like the rest of the sample, the *Press B* struggled with resource rigidity early on, and threat perception ultimately became the means to overcome that constraint. Recall that in initial proposals managers had argued, "If we don't cannibalize ourselves, someone else will." Similarly, the *Press B* management's early thinking about the form of its Internet product did not significantly differ from the assumptions of the managers at the other newspapers in the sample. The *Press B* newspaper managers assumed that the product would be a "newspaper in electronic form." But unlike the other incumbents, the *Press B* did not follow these

initial impulses to replicate the newspaper. This shift originated with the suggestion by the CEO that someone from outside of the newspaper industry look at the online business. The CEO's view had been shaped from the recommendation of a long-time friend and personal advisor who was based in Silicon Valley and had been observing some of the changes created by the Internet. The *Press B* senior management then launched a search for outside advice on strategy. A Silicon Valley business executive with a background in new media was hired to write the original business plan. That original plan called for an organizational design with significant autonomy from the newspaper. The new venture was subsequently set up as a wholly owned subsidiary and hired outside managers with new media experience. The management team then recruited a separate sales force to price and sell online ads. They also developed a separate brand to signal that the product, although owned by the parent, would be distinct from the newspaper. Fi-

nally, the Internet group was located in offices more than a mile away from the print offices. Some newspaper staff were allocated to the venture, and important links to the newsroom were preserved. But the locus of the new venture, both physically and operationally, was distinct.

Early on, the site evolved into a regional source of news and information that was distinctly different from the newspaper. More than 50 percent of site content originated from sources other than the newspaper (see Table 6). Lead stories were different, and they rotated throughout the day; sections that did not exist in print were added; and users were provided with a host of tools that enabled them to take advantage of digital media, including traffic Web cameras, searchable event databases, interactive discussion forums, and new forms of content. Just how different the new product became was described by one online editor:

Page views from the newspaper are now barely more than one-third of the available pages on our site. We are really becoming a separate company from the newspaper. I came from there. I love the paper, but we are now a different group with a very different way of working. They are one source of information—an important source. But we buy our content from them like we buy it from anywhere else.

The site captured new and different categories of revenue, and it developed its own business model. Though its site was not as innovative as those of competing nonnewspaper entrants, the *Press B* evidenced considerably less routine rigidity than the sites of other online newspapers in the sample (see Table 6). Whereas, for example, most of the others captured only one new category of revenue, the *Press B* captured three: fee-based archival access, e-mail marketing, and fee-based usage data analysis. Similarly, less than 50 percent of the *Press B*'s site content was reused newspaper content.

### **Outsiders, Structural Differentiation, and Threat Perception**

Though all the research sites debated whether to structurally differentiate their online ventures, a desire to leverage the assets of the print business motivated many to stay integrated with their parent newspaper organizations. In the *Beacon A*'s original 1990 online business plan, the publisher wrote: "The power of the newspaper to provide thrust for the new services can be harnessed only if it achieves deep levels of integration with the newspaper. Structuring the experiment as an enterprise separate from the newspaper would be crippling if not fatal." The vice president of business develop-

ment at the *Morning News A* stated: "Our basic strategy is an integrated strategy. . . . In the local information market, the newspaper has an advantage. To separate the online unit from the newspaper is to give away a lot of that advantage."

Nevertheless, four of the research sites in the sample did eventually differentiate the organizational structure of their online ventures. The underlying motivation in each case was related to outside influence on decision making. Two of the sites separated in response to the adamant demands of online employees hired from outside the newspaper. In the case of the *Press A*, an influential board member from the technology industry helped introduce the company to a high-profile new media expert who was eventually offered a job as the online media director. His condition for joining the venture was that it be separated from the parent organization. Thus, though the venture was launched from within the newspaper, it was separated from it in the summer of 1997. At the *Beacon Company* the process was more evolutionary and driven by interactions with outside partners. For example, an outside partner that marketed online directory services through the newspaper's Web site had asked to be allowed to build its own agency to sell the online ads. Within a year, the sales agency had tripled the performance of the print sales reps, despite an identical headcount. The newspaper eventually purchased the agency, but kept it separate at the demand of the sales director. The agency kept adding online advertising categories beyond the directory ads through 2000, by which time it was selling close to two-thirds of the online ads for the *Beacon A* site.

Each site that separated its online venture from the parent organization cited the influence of outside parties in the decision process. The process of differentiation often occurred over several years, owing to the reticence of functional units in the newspaper organization. As mentioned earlier, the *Press A* separated from the newspaper organization in the summer of 1997. The *Beacon A* separated in the spring of 1999, and the *Beacon B* followed in the summer of 1999. To determine whether a venture was structurally differentiated from its parent organization, I performed analyses that included units' own reported structural classifications as well as other metrics, such as reporting lines and physical locations (see Table 7). Note that in the four sites that separated, corporate managers mentioned outside influence, while managers who chose to remain integrated did not. This pattern of observation leads to a formal proposition:

**TABLE 7**  
**Outside Influence and Structural Variation, 2000**

Newspaper	Outside Influence on Structural Choice	Timing of Changes	Divisional Unit <sup>a, b</sup>	Reporting Lines <sup>c</sup>	News <sup>d</sup>	Sales <sup>e</sup>	Physical Location <sup>f</sup>	Description
<i>Beacon A</i>	Outside partner 1997; outside online CEO, 1999	Spring 1999	D	D	H	H	D	Set up as a differentiated unit in a different building from the parent with primary reporting through the online general manager.
<i>Beacon B</i>	Outside advisor, 1998	Summer 1999	D	D	H	H	H	Set up as a differentiated unit, but shared responsibilities with some parent functional staff. Primary reporting responsibility still through online general manager.
<i>Press A</i>	Outside board member, 1997; outside online CEO, 1997	Summer 1997	D	D	H	D	D	Set up as a differentiated unit in a different building from the parent with primary reporting through the online general manager. All functional staff hired separately for online.
<i>Press B</i>	CEO's personal advisor, 1994; outside business plan consultant, 1995; online CEO, 1995	Spring 1995	D	D	H	D	D	Set up as a differentiated unit in a different building from the parent with primary reporting through the online general manager. All functional staff hired separately for online.
<i>Expositor A</i>	No key outside influence mentioned	Remained integrated	I	I	I	I	H	Kept integrated with the parent. Online general manager and small support staff hired and located in a separate building, but all functional staff kept integrated with parent.
<i>Expositor B</i>	No key outside influence mentioned	Remained integrated	I	I	I	I	I	Kept integrated with the parent organization. Online general manager hired, but all functional responsibilities coordinated through parent.
<i>Morning News A</i>	No key outside influence mentioned	Remained integrated	H	I	H	I	I	Structure was hybrid. Newsroom was clearly hybrid, with some online content going back to the newspaper, but most functional reporting went through the parent.
<i>Morning News B</i>	No key outside influence mentioned	Remained integrated	I	I	H	H	I	Kept integrated with the parent organization. Online general manager hired, but all functional responsibilities coordinated through parent.

<sup>a</sup> "I" represents an *integrated* structure; "H," a *hybrid* structure; and "D," a *differentiated* structure.

<sup>b</sup> Based on management's self-description.

<sup>c</sup> Based on primary reporting responsibility of functional staff, e.g., online sales manager reporting to print sales manager (I), online GM (D), or both (H).

<sup>d</sup> Based on primary responsibility for content development: print newsroom (I), separate online newsroom (D), hybrid (H).

<sup>e</sup> Based on primary responsibility for selling online ads: print staff (I), independent sales reps (D), hybrid (H).

<sup>f</sup> Based on the location of the online venture: within the parent organization (I), physically separated from the parent (D), or a hybrid (H).

*Proposition 3. Involving outside influence when deciding how to respond to discontinuous change will increase the likelihood that managers will structurally differentiate a new venture from its parent organization.*

Even before sites differentiated structurally, some managers had begun to perceive that the Internet, while perhaps still representing a threat, could become a source of new opportunity for their newspapers. The president of the Press Company explained:

We were worried about the Web in that it would alter the way in which people would get information, but it was not purely defensive. We had launched into entertainment years ago as a defensive move. It eventually became a new source of growth for us. Many of the threats eventually become opportunities. The Internet may be the same way.

This dualistic view was, however, hard to maintain in an environment in which operating responsibilities for the newspaper predominated. Thus, the data reveal that one reason for creating a differentiated structure is to decouple the motivation at the parent from the motivation at the venture. As the former head of new media at the Beacon Company reflected, "I didn't focus people on the threat, especially those managing the new business. Where I did emphasize the threat was in working with the print folks to get them off their butts and in arguing for resources." Data from the other sites confirm that structure affects how managers perceive their motivation.

The data show that the differentiated structures helped to create environments where motivation could be built entirely around the separate opportunity that existed for the online model. "When we simply changed our name from the newspaper name to 'the city.com' . . . it changed people's expectations of what would be on the site. This, in turn, changed how people in our online organization viewed who they were and what they were producing." The new president of the Beacon Company's new media group observed, "Now that we are separate, we own the opportunity in a way we never did when we were still with the newspaper." Even as the concept of the opportunity was changing in the differentiated units, the parent organizations remained focused on the threat to the core business; discussions there centered on cannibalization and the inevitable path of digital media. "This," cautioned one CEO, "could be the death of our entire franchise." That threat perception remained high in the newspaper organizations was a critical factor in overcoming resource rigidity, but

opportunity perception was given a chance to develop simultaneously in the ventures. Stated formally:

*Proposition 4. Structural differentiation can help decouple threat perception in a parent from an opportunity perception in a new venture.*

In the four sites that did not differentiate their ventures from the parent organizations, managers continued to be preoccupied with the threat to their organizations. The vice president of the *Expositor B* insisted, "We continue to see this as a way to protect classifieds, and that if we don't do it someone else will." Comparing the sites that separated with those that remained integrated reveals that opportunity perception emerged only where there was structural differentiation. Table 8 summarizes comparative data for Proposition 4.

Not only did outside influence and structural differentiation help to decouple the cognitive perceptions in the newspaper organizations from those in the online venture, but also all three of these variables were correlated with relaxed routine rigidities. This relaxation was driven largely by the effect of each of these variables on the three intermediate behaviors that increase routine rigidity. For example, structural autonomy lowers the tendency for a parent organization to assert authority over a new venture. Structural autonomy expanded the ability of venture management to run local experiments that would not have been possible in a world of business model and product templates. Outside influence also helped expand the alternatives considered in the new ventures. One manifestation of this was the previously noted impact outsiders had on the choices of structure. But outside influence also expanded the product and business model ideas in these ventures. The external partner at the *Beacon A* proposed pricing and product categories that the newspaper had not thought of. As a Web site editor who came from the newspaper commented about the online director who was brought in from outside: "He is constantly seeing digital media in different ways than I am used to or appreciate. At first, it bothered me, but now that I see it working, I increasingly endorse the input." In addition, structural autonomy and a renewed opportunity mind-set freed venture managers from a newspaper focus, because their responsibilities in the parent newspapers were no longer immediate.

The four sites that differentiated structurally also substantially increased their innovation. Whereas the integrated sites continued to derive as much as 90 percent of their Web site content from their sponsoring newspapers, all of the differentiated

**TABLE 8**  
**Decreasing Routine Rigidity, 2000**

Newspaper	Outside Influence	Structure	Managerial Framing	Examples	Content from Print <sup>a</sup>	Local Market Penetration Score <sup>b</sup>	New Revenue Categories <sup>c</sup>
<i>Beacon A</i>	Outside partner, 1997; outside online CEO, 1999	Differentiated	Opportunity emerges	“Now that we are separate, we own the opportunity in a way we never did when we were still with the newspaper.” (New head of new media)	45%	1.9	4
<i>Beacon B</i>	Outside advisor, 1998	Differentiated	Opportunity emerges	“We were all set to let people buy ads online. . . . The papers didn’t want to buy into it. This is one area where we will do better as a separate company.” (vice president, technology and operations)	50%	1.4	4
<i>Press A</i>	Outside board member, 1997; outside online CEO, 1997	Differentiated	Opportunity emerges	“They just sit there and make us figure it out. They don’t make the decisions for us.” (vice president, sales)	50% <sup>c</sup>	2.1	6
<i>Press B</i>	CEO’s personal advisor, 1994; outside business plan consultant, 1995; online CEO, 1995	Differentiated	Opportunity emerges	“Page views from the newspaper are now barely more than one-third of the available pages on our site. . . . The newspaper is one source of information, an important source. But we buy our content from them like we buy it from anywhere else.” (online editor)	35%	1.7	5
<i>Expositor A</i>	No key outside influence mentioned	Integrated	Threat persists	“Functional reporting relationships are extremely time-consuming. It’s not just that the groups think like the newspaper. It takes a lot longer to make collective decisions.” (early online president)	75%	1.1	2
<i>Expositor B</i>	No key outside influence mentioned	Integrated	Threat persists	“We continue to see this as a way to protect classifieds, and that if we don’t do it someone else will.” (vice president, product development)	70%	0.9	3
<i>Morning News A</i>	No key outside influence mentioned	Integrated	Threat persists	“Our basic strategy is an integrated strategy . . . In the local information market the newspaper has an advantage. To separate the online unit from the newspaper is to give away a lot of that advantage.” (vice president, business development)	90%	1.6	2
<i>Morning News B</i>	No key outside influence mentioned	Integrated	Threat persists	Discussions with management remain centered on defending classified products.	75%	0.5	2

<sup>a</sup> Based on internal estimates and income statement analysis at each site.

<sup>b</sup> Ratio of monthly Web site users to daily newspaper readers. Data collected from newspaper sites and checked against Media Metrix and Nielson NetRatings as well as circulation data from the Audited Bureau of Circulation.

<sup>c</sup> Based on 1998 comparisons to entrant income statements. Entrants were selected by new media experts and included Citysearch, Monster.com, Yahoo, i-village, and CNET. Six categories of revenue were identified as new to the newspapers: (1) fee-based archival access, (2) e-mail marketing, (3) e-mail list rental, (4) fee-based data analysis, (5) behavioral targeting, and (6) demographic targeting.



sites borrowed only 50 percent or less of their content from their sponsoring newspapers (see Table 8). This evolution had a positive effect on market adoption of the new products; sites that had separated and shifted their emphasis to the emerging opportunity enjoyed much higher local market penetration than the other sites in the sample. I created a local market penetration score on the basis of public data, calculating the ratio of monthly Web site users to daily newspaper readers; A score of 1.0 implied that a Web site's monthly users were equal to the newspaper's daily readers; anything above that amount implied more users per month relative to daily readership. Whereas the differentiated sites averaged a score of nearly 1.8, the integrated sites averaged barely 1.0 (see Table 8). The separated sites also introduced more innovation to their underlying business models, averaging close to five new categories of revenue, compared with just more than two new categories in the integrated sites (see Table 8). Both the autonomy to focus on the separate business and the perception of an independent opportunity seemed to facilitate greater divergence from the traditional routines of the core business. Thus, a final proposition can be stated:

*Proposition 5. Outside influence, structural differentiation, and opportunity framing combine to relax routine rigidity in a new venture.*

Data confirming this observation were also consistent across research sites (see Table 8).

## DISCUSSION

### Differentiating the Structure of Inertia

In the introduction to this article, I noted the apparent contradiction in the literature regarding the impact of threat perception on organizational inertia. Whereas a number of scholars have observed threat to be a catalyst that enables organizations to overcome inertia (Barr & Huff, 1997; Cyert & March, 1991; Lant et al., 1992), others have found evidence that threat actually increases inertia (Dutton & Jackson, 1987; Staw, Sandelands, & Dutton, 1981). Acknowledging conflicting observations in related research on risk, Sitkin and Pablo (1992) hinted that the phenomenon itself might be underspecified. They suggested that part of the confusion stems from viewing outcomes along a single determinant of behavior and argued for a model based on a more complex set of determinants. Scholars have also observed the need for a more theoretically complex view of inertia in research on resource commitment and organizational change. For

example, Johnson (1988) showed that inertia is comprised of both a motivational determinant and a procedural determinant. Using data from the response of a clothing retailer who was threatened with industry change, Johnson showed investment can be highly motivated, but also deployed rigidly through traditional business routines. Faced with the performance decline of its core business in "down-market niche" men's wear, the retailer initially sought to diversify into new markets. But it then reapplied its existing business model, rather than adapting or repositioning its main business. Threat motivated resource commitment, but routines remained locked on the traditional business model.

The current study identifies these unique determinants of inertia as resource and routine rigidity. Both constrain adaptation, but they have very different underlying causal mechanisms. Data show that resource rigidity stems from an unwillingness to invest, while routine rigidity stems from an inability to change the patterns and logic that underlie those investments. The first relates to the motivation to respond, the second to the structure of that response. Recall that the issues regarding resource rigidity in the data dealt with allocating financial resources or management time to projects that supported the venture. These inertial forces were very different from those related to the routines and logics traditionally used to develop news content and run the newspaper business. Both the current study and the previous research by Johnson (1988) reveal that not only are these determinants of inertia different, but also that they can move independently. By analogy, resource rigidity is concerned with movement along a line, while routine rigidity deals with the trajectory of the line. A manager could invest aggressively and still fail to adapt underlying routines. Sull (1999) called such a pattern of behavior "active inertia."

Ironically, a closer examination of the previous literature reveals that earlier *measures* of inertia actually align with the observed categorizations of resource and routine rigidity, even if the *definitions* lacked the underlying specificity. Specifically, re-examination of previous research shows that threat decreases resource rigidity but increases routine rigidity in a predictable, repeated pattern across the previous studies. For example, the literature that views threat as a catalyst to response typically measures behavior as a willingness to commit resources. Kahneman and Tversky's (1984) study of risk showed that individuals are more often willing to commit financial resources when they perceive the issues of concern as being in the domain of loss rather than in the domain of gain. Mittal and Ross

(1998) observed that individuals who had been given threat scenarios exhibited a significantly greater willingness to spend than participants who had been given opportunity scenarios. Similarly, the literature on strategic change suggests that threat-driven response unlocks *resources* for investing in new strategic initiatives (Lant et al., 1992).

This is very different from the view that threat is a constraint, as is seen in research that measures changes in organizational process and operational logic. For example, Herman (1963) measured communication and information patterns within an organization. Staw, Sandelands, and Dutton (1981) and Nutt (1984) examined changes in the underlying business logic of organizations. Thus, variables that measure a willingness to invest financial or attention-based resources (Lant et al., 1992) have been confused with variables that measure change in “dominant logic” (Prahalad & Bettis, 1986) or change in operating routines (Staw et al., 1981). The reason these subtypes of inertia move in different directions is that their underlying causal mechanisms differ, a factor that ironically shows up in these previous measurement efforts in the relevant research.

### **Toward an Interpretive Model of Response to Discontinuous Change**

Failure to recognize the difference between resource rigidity and routine rigidity risks more than just contradictory results. When researchers do not recognize this distinction, they may also fail to observe important interactions between the two subtypes of inertia. For example, research on overcoming inertia should focus on response motivation and resource commitment. And yet, while variance perceptions and performance declines often decrease motivational constraints (Barr & Huff, 1997; Cyert & March, 1963), they can simultaneously increase constraints on the underlying logic of an organization’s operating routines (Johnson, 1988; Sull, 1999). By differentiating types of inertia, one can focus on their unique implications for organizational response. I used my observations from the study, formalized above as Propositions 1a–4, to develop a longitudinal model that maps how the perception of discontinuous change impacts overall inertia. Figure 1 contains this model.

Propositions 1a and 1b support the notion that the perception of an imminent threat can unlock resource rigidity (Cyert & March, 1963; Lant et al., 1992). Note that threat perception leads to behavior that is different from the behavior observed by Christensen and Bower (1996). Their findings sug-

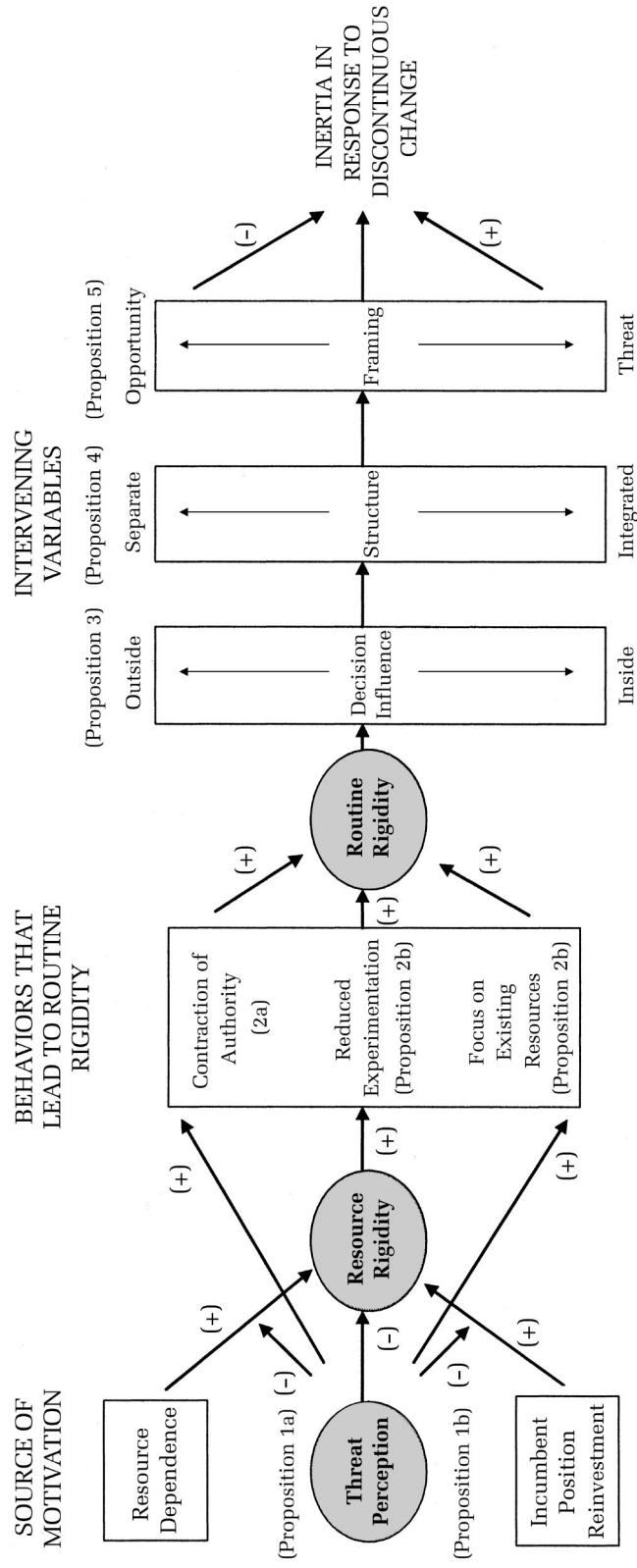
gest that when discontinuities are led by noncore customers, established firms do not allocate resources to a new business or technology. And yet the current study shows that threat perception can lead to intense resource commitment, even in the absence of core customer demand—recall the rapid growth in expenditures observed in the present sample, which occurred despite the virtual lack of overlap between print and online customers. As one sales representative noted at the *Beacon A*, “Look, it didn’t make any sense for us to try to sell this stuff, but we began to feel that if we didn’t work on it, it might come back to haunt us.” Threat was the catalyst to overcoming resource rigidity.

The data also reveal that the ability to overcome one type of inertia appears to increase problems with the other. The observed increase in routine rigidity stems from three intermediate behaviors that arise from threat-induced response—contraction of authority, reduced experimentation, and focus on existing resources (Propositions 2a, 2b, 2c). These behaviors were shown to be self-reinforcing. For example, threat perception led to a rigid focus on the existing business. This focus on existing resources was hardened by the aggressive pace of commitment, which created lock-in effects and reduced the ability to experiment. The aggressive deployment of resources required increasing corporate oversight. And corporate leaders’ contraction of authority further reinforced the focus on the established business at the expense of the new opportunity (see Figure 1). These self-reinforcing behaviors led to intense routine rigidity, causing managers to adhere more closely to familiar routines and behavioral patterns.

### **Observations on Structural Differentiation: Sources and Implications**

Previous research has repeatedly demonstrated a link between structural autonomy and innovation (Christensen, 1997; Tushman & Anderson, 1986; Tushman & O’Reilly, 1996). The current study helps expand understanding of the forces that lead to the decision to structurally separate a new venture. The data show that outside influence shapes the choice to structurally differentiate (Proposition 3) and that structural differentiation cultivates an environment in which managers are more likely to turn their attention to the independent opportunity associated with a discontinuity (Proposition 4). And while outside influence does appear to be linked to the decision to separate a venture from its parent, there are still questions as to why some of the newspaper companies studied here incorporated such external influence, while others did not.

**FIGURE 1**  
**An Interpretive Model of Inertia in Response to**  
**Discontinuous Change<sup>a, b</sup>**



<sup>a</sup> Primary question variables are shaded gray.

Note that the data do not seem to indicate that the sites that failed to harness outside influence had access to outsiders and then ignored them. In the interviews with senior managers regarding the choice of organizational structure, only those who structurally separated their ventures mentioned outside influence. I asked the managers at the four sites that remained integrated, "What outsiders did you involve in your decision?" None of them mentioned outside individuals or organizations in their responses. Thus, the first relevant question appears to be how outsiders entered firm and individual networks. On this point the data are not entirely conclusive, but all of the companies that eventually detached their online ventures seemed to draw their outside influence from external networks: an outside friend of the CEO (the *Press B*); a board member and new hire (the *Press A*); an apparently serendipitous set of comparative successes with outside partners (the *Beacon A*); and an outside advisor (the *Beacon B*). That the reach of formal and informal networks would influence the firms' internal decision making is consistent with network theories and team composition studies (Geletkanycz & Hambrick, 1997; Podolny, 2001; Stuart & Podolny, 1996). This observation leads to questions regarding how such nodes in a firm's external network develop and how they influence the firm. Influence may be a function of status (as indicated by the role of one CEO's personal network) or of the intensity of an interaction (as in the case of the external partner of the *Beacon A*). Given the original research questions and the design of this study, these questions cannot be immediately answered. Nonetheless, the observed link between outside influence and structural choice should help sharpen subsequent research on the sources of and mechanisms leading to structural autonomy.

The study also provides a more refined view into the mechanisms by which structural autonomy helps relax routine rigidity. The data confirm that outside influence, structural independence, and opportunity orientation combine to relax routine rigidity and encourage innovation (Proposition 5). Conversely, when the companies studied here did not access outside influence and remained integrated and focused on the threat to the parent organization, the rigidity was perpetuated. Again, note that the role of structural autonomy is consistent with existing structural arguments regarding innovation (Christensen, 1997; Tushman & O'Reilly, 1996). But what makes the observations in this study unique is how structure was seen to be the mechanism that decouples resource and routine rigidity. The data show that structural autonomy allows threat and opportunity cognition to have different impacts on dif-

ferent parts of an organization simultaneously—threat framing overcomes resource rigidity in the parent, while opportunity framing eases routine rigidity in the autonomous venture. Structure's decoupling role further reinforces the key contribution of the study: the recategorization of inertia into resource and routine rigidity.

**Alternative explanations.** Taken together, these observations suggest that the conflicting findings in the literature regarding threat's effect on inertia can be explained by the failure to differentiate between resource and routine rigidity. An alternative explanation might simply be that the competing streams of findings are referring to different levels of threat perception. For example, the research describing threat perception as a catalyst might have examined only moderate levels of threat, while the studies that describe threat as a source of inertia might have been looking only at crisis situations. If so, previous findings of a U-shaped relationship between stress and inertia might explain the observed differences—moderate levels of stress decrease inertia, but extreme levels increase inertia (Yerkes & Dodson, 1908). However, one can derive reasons to rule out this alternative explanation both from the literature and from the data in the current study. First, the literature on threat as a catalyst contains examples of extreme crisis (Mintzberg, Raisinghani, & Théorêt, 1976; Papadakis, Kaloghirou, & Iatrelli, 1999). Moreover, the empirical literature on threat rigidity does not delineate levels of threat (Dutton & Jackson, 1987; Jackson & Dutton, 1988). More importantly, a U-shaped relationship between threat and inertia cannot explain the behavior of different *types* of inertia. The data in this study show settings of intense resource commitment that accompany low levels of routine adaptation. Further, if a U-shaped relationship were in play, one wouldn't expect variance in behavior when threat levels remain constant. The data in the study show that threat perceptions emerged between 1996 and 1998 and remained high in all the print organizations in my sample throughout the period of the study, both the innovative and non-innovative sites. Recall that even in the late periods at the *Beacon A*, for example, the newspaper CEO continued to say, "This could be the death of our entire franchise." Thus, it appears more likely the variance in routine rigidity can be accurately linked to the changes in structure that enable firms to decouple the effects of cognitive framing between resource and routine rigidity.

**Limitations and future research.** Like any model intended to capture the complexity of an organizational response process, the model developed here has elements that need further explora-

tion. For example, the study showed that the observed threat perception was largely a response to external analysts' forecasts of the demise of the newspaper industry. The question remains whether threat-based motivation could have been triggered without this external pressure. A second limitation in the study is that threat's link to rigid behavior emerges in part because changes are discontinuous with a firm's traditional routines. While these discontinuous settings helped specify the differences between resource and routine rigidity, they do impose boundary conditions on some of the findings regarding threat's link to routine rigidity. For example, the threat-induced behaviors of contracted authority, reduced experimentation, and focus on existing resources are problematic in discontinuous settings because they reinforce a firm's existing routines. When routines do not require this nonlinear adaptation, threat-induced response is not as likely to be as maladaptive.

Another limitation, which was noted earlier, is that the source of outside influence appears to be linked to firm and CEO networks. But that observation is only indicative, not conclusive, and needs to be tested more formally. Furthermore, questions remain as to how a node in a network might be more or less influential on a firm's internal decision process. I have presented potential mechanisms, such as status and intensity, that might be explored. Research should also look at whether the design of these networks is explicit or serendipitous. Again, the evidence from the current study is not conclusive. Finally, the current study reveals a tight correlation between outside influence, structural differentiation, and opportunity framing. Each of these variables is also correlated with innovation. The question remains as to whether these variables can vary independently.

## CONCLUSIONS

This study began with an effort to unwind the structure of inertia. I was able to show that the subcategories of resource and routine rigidity are discrete and have different causal mechanisms. Using this recategorization, researchers can resolve an inconsistency in the literature concerning whether threat perception is a catalyst or a constraint to discontinuous change. In building an interpretive model of response, I saw how threat perception releases constraints on resource rigidity while amplifying problems with routine rigidity. Further, although previous studies have shown the benefits of structural autonomy for innovation, the current research broadens knowledge of what leads firms to structurally differentiate by making links to outside

influence and external networks. Moreover, the benefit of structural autonomy is more than simply providing a separate setting for innovation. Structural autonomy helps decouple the effects of cognition on different types of inertia—separate structure allows threat perception to overcome resource rigidity in a parent company, while opportunity perception relaxes routine rigidity in a new venture. Distinguishing between resource and routine rigidity not only helps explain response to discontinuous change, but also opens up future research exploration of the differences and interactions between these categories of inertia.

These findings should also have relevance to management practice. Managers can draw on the power threat has as a catalyst for commitment. And yet, this study shows that response to discontinuous change requires more than just the commitment of resources. The underlying organizational routines that use those resources must also adapt when change is discontinuous. These findings might encourage managers to draw more heavily on their external networks to involve managers with experience outside of an existing business. Managers might also structurally separate their new ventures to restore opportunity frames among venture managers while maintaining threat framing in the parent organization.

In conclusion, the data show that threat perception is a powerful interpretive force that affects firm response to discontinuous change. And yet this influence is very different when one considers two distinct types of inertia: resource and routine rigidity. Recognizing these distinctions has been shown to be significant for two fundamental reasons. First, the literature rarely recognizes these categories, and by simply specifying their characteristics one can better describe the underlying phenomenon of inertia. Second, under conditions of discontinuous change, not only are these types of inertia different, but also, the mechanisms for overcoming one type can amplify problems with the other. Further research needs to be done on how and why some firms are more likely than others to structurally decouple resource and routine rigidity, but I hope that these initial findings will open new paths of inquiry and inform future research on inertia and organizational change.

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