The evolution of the newspaper industry can be viewed within the perspective of a dialectic ecology that emphasizes the determinative influence of the environment on the development of newspapers in the three stages of variation, selection, and retention. This perspective also introduces the concept of contradictions that rupture into life-threatening crises in the evolution of organizations. The variation, selection, and retention stages in the life-cycle of newspapers take into account four dimensions: population, technology, resources, and adaptation maneuvers. The newspaper industry evolved through a phase of disorganization before evolving along the lines of the following historic scenario: variation, 1825 to 1845; selection, 1845 to 1900; and retention, 1900 to the present. Contradictions generated by organizational growth and adaptation ruptured into periods of crisis: 1825 to 1845; 1890 to 1900; and 1960 to the present. The contemporary crisis in the newspaper industry is a result of the internal and external contradictions that have evolved since the 1830s. Internal contradictions reduced newspapers' flexibility and mobility in exploiting resources and in meeting competitive challenges. External contradictions produced a dense environment that heightened competitive pressures in the exploitations of resources. The dialectic of internal and external contradictions now threatens the life of the newspaper as a "surviving species" of information organization. (Author/HOD)
THE SOCIAL ECOLOGY OF THE NEWSPAPER

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Presented to the History Division of the Association for Education in Journalism and Mass Communication, Annual Convention, Oregon State University, Corvallis, OR, August 1983.
ABSTRACT

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The Social Ecology of the Newspaper offers an alternative analysis of the newspaper's contradictory evolution as a species of formal organization within the consciousness industry. The analysis is guided by an integration of Darwinian evolution and Marxist dialectic: "dialectic ecology," a synthetic perspective drawn from the sociology of organizations. The ecology perspective emphasizes the determinative influence of the environment on the development of organizations in the three stages of variation, selection and retention; the dialectic perspective introduces the concept of contradictions that rupture into life-threatening crises in the evolution of organizations.

The variation, selection and retention stages in the lifecycle of newspapers are examined in the four dimensions of population, technology, resources and adaptation maneuvers. The newspaper industry evolved through a phase of disorganization before evolving along the lines of the following historic scenario: variation, 1825-45; selection, 1845-1900; and retention, 1900 to present. Contradictions generated by organizational growth and adaptation ruptured into periods of crisis: 1825-45; 1890-1900; and 1960 to present.

The contemporary crisis in the newspaper industry is a result of the internal and external contradictions that evolved since the 1830s. Internal contradictions reduced newspapers' flexibility and mobility in exploiting resources and in meeting competitive challenges; external contradictions produced a dense environment that heightened competitive pressures in the exploitation of resources. The dialectic of internal and external contradictions now threatens the life of the newspaper as a "surviving species" of information organization.

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The natural history of communications reveals "a revolution in seeing that took time to see." A revolution in communications evolved into the consciousness industry, a multi-billion dollar institutional configuration of profit-motivated American mass media. The capitalist image-making institutions of the consciousness industry are as influential in the Twentieth Century of Dan Rather and Jerry Falwell as the Catholic Church was in the Renaissance Europe of Johann Gutenberg and John Calvin.

The printing press was an instrument of Protestantism's challenge to the centuries-old authority of Catholicism, with its *imago mundi* displayed in the rituals and icons of sacred consciousness. The Protestantism of the capitalist ethic was a transitional stage in a cultural movement from sacred to secular consciousness, a transition from a spiritual to a material style of praxis. The material style of Protestant-inspired capitalism, and its conflicts with older regimes of religious and economic authority, exploded into cultural and organizational revolutions.

The newspaper was a vanguard organization that emerged in the revolutionary era between 1789 and 1848, when the subversive vocabularies of egoism, capitalism and journalism entered the secular lexicon of modern consciousness and opened up possibilities for alternative images and interpretations,
ideologies and identifications. Like a charismatic movement
grown conservative and rigid in the industrial and institutional
orthodoxies of its old age, the American newspaper evolved
through conflicts, contradictions and crises, finally to be
displaced in its prophetic and quasi-religious secular role
by the generation of new species of electronic technologies
and imaging institutions.

To understand the metamorphosis of the American newspaper
into a quasi-secular institution of the consciousness industry
requires an explanatory scheme. The following sections outline
a conceptual framework, dialectic ecology, constructed from
ecology and dialectic models in the sociology of organizations.
The synthetic perspective of dialectic ecology then is used
to sketch the life cycle of the newspaper industry. An analytic
motif is secularization, meaning the rationalization of charisma
in an organizational setting and the transfer of image-wielding
religious authority to secular institutions.

I

The ecology and dialectic models in the sociology of
organizations are starting points for the analysis of the newspaper
industry within the synthetic perspective of dialectic ecology.
The ecology model stresses the on-going processes of evolutionary
change in organizations; the dialectic model emphasizes the role
of contradictions, ruptures and radical fissures in social life
that open possibilities for either dissolution or reconstruction
of organizations. The synthesis of dialectic ecology is seen as
a contribution to the sociology of organizations that also offers
journalism historiography a model retaining the explanatory power
of evolutionary theory, yet avoiding the ideological fallacies of the scholarly disenfranchised Progressive paradigm.

Ecology. The ecology model of organizations is grounded in the "mystery of mysteries" that Charles Darwin called *The Origin of Species* (1859). His parsing of the irregular and discontinuous process of natural history in stages of the "struggle for existence" provided sociology with an intellectual infrastructure for the analysis of organizational and social evolution.

The sociology of organizations has experienced an on-again, off-again infaturation with evolutionary theory. Sociologists reinvented evolutionary metaphors stripped of the assumptions about the inevitability of "progress" in the 1970s, when journalism historians denounced the Progressive paradigm as bankrupt, redundant and intellectually exhausted. Ecology entered the new vocabulary of evolutionary social analysis, reemphasizing the role of the environment on the development of organizations.

Renewed emphasis on the environment's interaction with organizations is traceable to Emery and Trist, who asserted that environment constitutes a "causal texture" that determines organization development and survival. Emery and Trist do not suggest, however, that their causal texture is an evolving structure.

Causal textures are evolving types of environment, according to Terreberry. She construed the evolution of causal textures in three phases in which organizations evolve.
from environments formally disorganized, through an intermediate phase of growing rationalization and bureaucracy, to the status of institutions. Environments grow increasingly unpredictable and turbulent, Terreberry argued, and organizations lose their autonomy in environments in which other organizations increase their influence.

Two important factors in the ecology of organizations, according to Hannan and Freeman, are the population of organizations in an environment and the niche in which the population survives and reproduces. Within a niche or "market," organizations exploit resources with strategies of specialism and generalism. Specialism involves a high degree of exploitation of "targeted markets" accompanied by relatively high degrees of risk; generalism is a strategy of relatively low-level exploitation of broader market domains with lower degrees of risk.

With its grounding assertion that the environment selects organizations for survival, the ecology model identifies three stages in the process of change in organizations: variation, selection and retention. According to Aldrich, variation may occur between organizations and within organizations. Inter-organizational variation often involves the creation of new organizations, prompted by secularization, immigration and technological improvements. Intra-organizational variation of forms is a by-product of growth in size and internal complexity resulting from changes in the technologies used to exploit resources in the environment.

Selection refers to the processes in which newly-created or modified organizational forms are selected on the basis of
their fit in the environment. "Organizations fitting environmental criteria are positively selected and survive," according to Aldrich, "while others either fail or change to match environmental requirements." Aldrich described environments in terms of resources they make available to organizations, resources that prompt inter-organizational competition. Selection processes are relative, an organization gaining relative superiority over others in its acquisition of resources; effective organizations are those achieving a relatively better fit with the environment than others. Selection, then, not only refers to the survival or elimination of organizations based on their fit with the environment, but also adaptation of variations to meet environmental contingencies.

Retention is a mechanism referring to the preservation, duplication or reproduction of selected behaviors and structures that tend to assure survival in the future. Retention is a stage of conservative orthodoxy that prevents changes in the form and ideology of organizations. Stinchcombe, for instance, found many organizations retained the structures that characterized them at their emergence. Retention mechanisms include: institutionalization of selected forms through socialization agencies, such as schools; cultural values and beliefs of hegemonic elites, organizations and institutions; bureaucratization, a process of rationalization designed to preserve the organization's form, protocols and procedures; and professionalization, with its habitual behaviors, rules of thumb, folk wisdom and mythologies.
Likewise, "work styles" evolve through stages of creation, growth and decline, and alterations of innovations and stagnation in the organizations in which the behaviors are embedded, according to the "metamorphosis model" of Mensch. Two general dimensions of innovation are discernible, according to Mensch: innovations of material technology (i.e., mechanization, steam power; computers) and innovations in knowledge technology (i.e., protocols, procedures, work styles). The industrial process is parsed as self-regulating, historical cycles of "basic innovations" that trail off into sequences of less revolutionary "improvement innovations" and empty "pseudo-innovations."

Basic innovations are "a new method of operations," "a new technology" or "a novel area of activity that can potentially offer employment to a large group of people," according to Mensch, and they have appeared in "clusters." Clusters of basic innovations emerged during the history of industrialization around the years 1825, 1886 and 1935; another cluster of basic innovations will occur, Mensch predicted, between 1983 and 1995. Basic innovations occasion a rearrangement of industry, a reorientation of consumers, and a structural change in society that involves increased specialization and divisions of labor.

Improvement innovations are extensions of basic innovations. Improvements on basic innovations in material and knowledge technologies are governed by the law of diminishing returns: each improvement has a lesser beneficial impact until the point is reached that improvement innovations are pseudo-innovations. When the impetus from basic innovations dies out, improvement innovations cease to be "improvements" at all. Pseudo-innovations
are marketing ploys offering the masquerade of change and improvement.

Innovations are linked to the life cycle of industry. Mensch's model of technological evolution recognizes three stages comparable to the variation-selection-retention schema. In the early stage, organizations tend to be small, flexible and innovative; firms attempt to gain advantages over competitors with basic and improvement innovations. During later stages, organizations' size and complexity have grown, making basic innovations virtually impossible and improvement innovations less dramatic. Organizations at this stage generally have reached the limits of exploitation with their existing technologies and become increasingly inflexible and reliant on pseudo-innovations.

In advanced stages, long-term market control through "concentration"—"absorption and parasitism," according to Emery and Trist—is a typical organizational maneuver. Incentives for strong competition diminish, inflexibility becomes acute, according to Mensch, and the "dinosaur effect" sets in since large, complex organizations are unable to change their products quickly enough to meet consumers' changing lifestyles and selection criteria. The cycle Mensch depicts is an industrial version of the political process Michels described as the "iron law of oligarchy"—radical insurgencies grow into conservative, even reactionary, institutions that contradict their grounding ideologies and practices.

The metamorphosis model portrays long growth stages preceded by relatively short, but disruptive, periods of turbulence when clusters of basic innovations emerge. The
turbulence of innovation periods, according to Mensch, also produces syndromes of cultural identity crisis and needs for new identifications. Identity crises in culture yield a double-edged dialectic. On one side, identity crises make possible the construction of radically new social formations, and on the other, more tragic side, a "technological stalemate" in which alienation increases without the availability of alternatives. 21 Man as a tool-making animal, then, is trapped, says Mensch, hence, "the attempt by industrial man to identify himself with the machine, as if it were a new totem animal."

The evolution of "identifications," "knowledge" or "ideas" is not strictly cumulative, according to Koestler, but proceeds in "zigzag fashion." The evolution of knowledge and knowledge technologies is continuous and cumulative only during consolidation periods following major breakthroughs. With consolidation comes, sooner or later, increasing rigidity, orthodoxy and academicism leading into an evolutionary "dead end," followed by a new crisis and a breakthrough out of the "blind alley."

Four dimensions of the ecology model of organizations provide an analytic framework for understanding the newspaper industry's evolution through stages of variation, selection and retention: population, technology, resources and adaptation maneuvers.

In the case of newspapers, population simply refers to the number of newspapers operating within an environment at a specified time; technology in its material and knowledge forms evolves through phases of basic innovations, improvement innovations, and pseudo-innovations; resources upon which newspapers depend for survival are circulation and advertising; and adaptation
maneuvers include optimal location to exploit resources, mobility to meet competitive challenges of other organizations through planned initiatives and counter-initiatives, and absorption and parasitism or concentration to achieve long-range market control with a minimum of competition.

The ecology model suggests that organizations evolve along the lines of the following scenario: A placid-random environment, in which newspapers exist as small, formally unorganized enterprises, is a pre-variation phase for the "take-off" of the newspaper industry, and its evolution through stages of variation, selection and retention.

Variation. Basic innovations in technology spawn a new species or population of newspaper organizations that exploit environmental resources with strategies of optimal location. New methods of operations are introduced, which offer employment to a substantially larger group of people. New organizations and methods of operations tend to introduce turbulence into the population and its environment.

Selection. The population of newspapers increases, the field grows clustered with competing newspaper organizations growing in size, complexity and rationalization. Competition for resources increases, prompting improvement innovations to gain competitive advantages over other newspaper operations. Mobility to meet competitive challenges is an adaptation maneuver that becomes increasingly less effective. Newspapers are less flexible and the "dinosaur effect" begins to set in toward the end of the selection stage.
Retention. Newspaper operations grow even larger, more complex and bureaucratic. The newspaper population declines as a result of concentration, and competition dwindles, assuring the surviving newspaper operations long-range market control. Improvement innovations are succeeded by pseudo-innovations. Selected newspaper operations attempt to preserve their form through bureaucratization, institutionalization through socialization and legitimation in university-level journalism education, and the emergence of professionalization with its cultural apparatus of values and beliefs.

The ecology model described here in admittedly truncated fashion is hardly the radical breakthrough in the theoretical analysis of the American newspaper industry that McKerns advocated, however, it represents a clear break with the heretofore dominant conceptualization of American journalism history--the Progressive paradigm. Others in the past have taken similar ecological points of view: Robert Park's natural history model, Alfred McClung Lee's newspaper as "social instrument" thesis, and, more recently, Michael Schudson's social history of newspapers.

A defect of the ecology model is its ostensible failure to elaborate a theoretical structure for the production of crisis. How does one account for crisis in the life history of a surviving species of organizations? A dialectic perspective of organizations offers a theoretical structure for contradictions that break out into crises in the life cycle of organizations. The elaboration of a dialectic perspective, presented below, is a fundamental consideration in the analysis of the American newspaper industry's evolution.
Dialectic. A dialectic view of organizations, formulated by Kenneth Benson, is drawn from a general perspective of Marxism. Benson's dialectic approach specifies four principles of dialectic analysis: totality, praxis, social construction and contradiction.

Totality is a principle that insists upon the study of social phenomena relationally, as complex and interrelated wholes with partially autonomous components. From a dialectic standpoint, totality is characterized by ruptures in the social fabric.

Praxis involves the reconstruction of social arrangements, based on the Marxist doctrine that the point is not to analyze the world, but to change it. And to change the world of social arrangements requires social construction.

Social construction asserts the principle that people continually construct and transform the social world through their interactions with each other, gradually building social patterns that eventually establish institutional arrangements. Production of social structure is guided and constrained by the environment. Social construction, in turn, is influenced by ideas, actions, interests and power of organization participants.

Contradictions are produced by processes of social construction. Contradictions generate ruptures, inconsistencies and incompatibilities between on-going production and previously established social formations; radical breaks with the present order only are possible through ruptures. Even though an organization's structure may resist its own further development, such contradictions may produce crises that open the way for
reconstruction—even creation of new organizations. Still another view is Gouldner's: "In short, a contradiction is a 'bind'; one cannot escape one horn without impaling oneself on the other."

The contribution of a dialectic perspective to the ecology model is an emphasis on the centrality of contradictions that spur discontinuities and dislocations in the evolution of organizations. Crises, then, are a fundamental characteristic of the life cycle of organizations. The metaphors of dialectic and ecology constitute the synthetic grammar or logic of dialectic ecology.

**Dialectic Ecology.** The synthetic perspective of dialectic ecology focuses attention on crises generated within processes of variation, selection and retention in the life history of organizations. Dialectic ecology construes the evolving newspaper industry through ecological stages punctuated by periods of contradictions that rupture into life-threatening crises and prompt varying degrees of adaptive reconstruction.

The evolution of the newspaper industry within the perspective of dialectic ecology follows this scenario: The creation of a new species of newspaper organizations generated turbulence or crisis during the variation stage, 1825-1845. The relatively short, but disruptive, variation stage was followed by a longer period of selection, 1845-1900, culminating in a short crisis period, 1890-1900, generated by a crowded field of newspaper organizations. Survivors of the selection stage evolved through the retention stage, 1900-1980, only to face a crisis.
period, 1960-1980, in which reconstruction is constrained by the dinosaur effect.

The remaining sections of this essay sketch the life cycle of the newspaper industry within the perspective of dialectic ecology. The four analytic dimensions of population, technology, resources and adaptation maneuvers are used to outline the major considerations in each stage. The analysis begins with an overview of the pre-variation phase before 1825, a period crucial for understanding the cultural and organizational context leading to the revolutionary transformation of the variation stage.

II

Two loci of authority—civil and religious—have characterized social systems from the earliest civilizations of Egypt, Mesopotamia and China. Within those systems, structures for symbol production were attached to the palace-and temple complexes. The two structures deployed symbolic instruments to win allegiance and compliance from the non-elite strata of those societies. In the Christian epoch, knowledge and symbol production was the province of the Roman Catholic Church.

The technological innovation of the moveable type printing press in the 1450s did not alter the basic structure of knowledge production. The printing press in Europe, and later in the Americas, was an instrument of the communication revolution that exploded in a proliferation of books and other materials; the entire corpus of classical literature had been put into print by 1520. Much of the production, of course, took the form of Bibles, prayer books, psalters and a wide variety of religious tracts and civil treatises sanctioned by the Church.
In the pre-variation phase, newspaper operations were relatively primitive and simple compared to the formally organized stages of industry development after 1825. Newspapers of the Eighteenth Century led a precarious existence in terms of population, technology, resources and adaptation maneuvers.

**Population.** In 1765, only 23 newspapers were published in the colonies; 20 of the 35 newspapers published at the outset of the Revolution survived. Thirty-five years later, in 1800, roughly 200 newspapers, including 24 dailies, were being published in the United States. In 1820, the total number of newspapers had more than doubled to nearly 465, 42 of them dailies.

**Technology.** Printing was a labor intensive job, typically one-to-two man operations, dependent on the availability of information and such scarce resources as paper, ink, type and the press itself. Printing technology was virtually unchanged from Gutenberg until 1813 when George Clymer of Philadelphia introduced what Mott called the "first radical departure" in press technology, the Columbian press, which introduced metal levers to replace the winepress-screw of Gutenberg's press. The Columbian press, which cost about $400, was quickly adopted by most New York newspapers. Twelve years later, basic innovations in steam-driven presses would be introduced, a technology that would set the stage for the emergence of a radically new newspaper organization.

**Resources.** Newspapers' circulations were relatively small during the pre-variation phase. Between 1750-1800, the average circulation was about 600. Isaiah Thomas characterized the
conditions required of a successful paper in these terms:
"It has always been allowed that 600 customers, with a considerable
number of advertisements, will but barely support the publication
of a newspaper." Newspapers contained advertisements that were
little more than announcements of available goods for sale.
Subscriptions were the main source of publishers' incomes.
Newspapers were sold to upper class readers who could afford the
$6 to $10 annual subscription price; by comparison, a barrel of
flour cost $9 in 1800.

Adaptation Maneuvers. The optimal strategy for survival
during the pre-variation phase involved securing a license to
print "by authority" of the colonial government and to keep the
license, often a trial-and-error affair of obeying laws prohibiting
libel, slander, sedition and blasphemy. The Constitution and Bill
of Rights granted "the press" a degree of autonomy from government
control, since licensing of papers was made, in effect, unconstitutional.

After Independence, many papers overtly aligned themselves with
political parties, and the optimal strategy became advocacy to
promote the party against its rivals. Environmental conditions
simply required newspaper entrepreneurs to do the best they could
to maintain a profitable circulation level, a constraint somewhat
eased by the financial support of political parties.

III

The life cycle of the modern American newspaper industry
began in the variation stage, 1825-1845, a crisis period for
newspaper organizations and a time of cultural turbulence. Like
Protestant revivalists of the time, the new newspaper organizations
were insurgent voices in the evolving style of secular American
culture.
Population. The variation stage is marked by explosive growth in the number of newspapers. The population of newspapers increased six-fold between 1800 and 1840, from a total of 235, including 24 dailies, to 1,404, including 138 dailies. The total number of newspapers and the number of dailies tripled between 1820-1840, and the figure nearly doubled during the 1840s. The United States of 1833 had 1,200 papers, including 65 dailies—three times as many papers as England or France.

Technology. A spurt of basic innovations in material and knowledge technologies revolutionized America's emerging newspaper industry. David Bruce introduced type-casting machinery in 1822; a steam-driven cylinder press that produced 2,000 copies an hour was installed in 1825 in the New York Daily Advertiser at a cost of $4,000 to $5,000—ten times the price of the Columbian hand press introduced twelve years earlier; and Richard Hoe improved printing technology with a double-cylinder press in 1832, boosting production to 4,000 copies an hour.

In addition to innovative material technologies, the creation of a new form of newspaper organization required basic innovations in knowledge technologies. Newspapers that had adopted steam-driven printing technologies continued to operate with pre-variation phase knowledge technologies of content, pricing and distribution. The result: subscription lists and circulations, upon which newspapers depended for their incomes, remained virtually unchanged; less than a dozen American newspapers had an annual net income of more than $10,000 in 1833.
Benjamin Day combined innovative material and knowledge technologies to create a variant newspaper organization—the New York Sun, 1833. The four-page Sun proffered news of local events laced with sin, sex, sensationalism and scandal, a significant departure from the stodgy content of the political and mercantile papers of the day. The Sun's circulation reached 2,000 in two months, 5,000 in four months, 10,000 in 15 months and by late 1835 circulation had climbed to the unprecedented (in America) figure of 19,000; the New York Courier and Enquirer, probably the largest paper in the country up to that time, claimed a circulation of 4,500 in 1833 when newspaper's average circulation hovered at about 1,000. In 1836, Day doubled the size of the Sun to eight pages, circulation reached 30,000 and the paper generated an annual net income of $20,000—twice the income the most profitable papers had earned in 1833.

The key to the Sun's success rested on the knowledge technologies of pricing and distribution called the "London plan," which represented a departure from traditional pricing and subscription/distribution methods in favor of penny a copy street sales. This approach gave the Sun the financial cushion of cash-in-advance for its product and the low price boosted sales.

The Sun succeeded in opening up a new market domain for newspapers, prompting imitation by opportunistic entrepreneurs bent on exploiting the new market of the growing laboring classes. Within five years of the Sun's appearance, 34 new dailies were started in New York City. Nineteen of those newspaper operations failed within the year they were founded, leaving the city with
at least 15 penny papers competing for profits garnered from working class readers.

**Resources.** Reliable circulation figures for newspapers during the variation stage are virtually nonexistent. Newspapers doubtless exaggerated their circulations in an attempt to lure advertisers into the papers' columns to bolster profits. Exaggerated claims notwithstanding, the circulations of the penny papers far exceeded the comparatively meager circulations of their predecessors, a result of innovative printing processes making larger circulations physically possible and the opening up of a virtually unexploited niche far larger than the niche in which the mercantile papers operated.

Two innovations in advertising suggest the almost immediate rationalization of the commercial aspects of the penny papers. The first innovation was Day's requirement that advertisers pay cash-in-advance of the publication of their commercial messages. Like the London plan policy of cash-in-advance, a similar policy regarding advertising tended to protect newspapers against losses stemming from unpaid bills. The other innovation in advertising was the insistence that commercial messages be changed daily, a policy implemented by James Gordon Bennett's New York Herald in 1847. Advertisements, like news, had to be "fresh"; advertising thus assumed a quality of news—timeliness.

**Adaptation Maneuvers.** The penny papers' primary strategy was optimal location in relation to a previously ignored social class. Unlike the mercantile papers, the penny papers appealed to working class audiences in a period that also saw the rise of the labor press. The penny papers' pricing and distribution technologies
put newspapers within reach of readers who could take or leave the newspaper on a daily basis. Journalism historians generally credit Bennett with expanding definitions of "news" far beyond the narrow confines set by the mercantile papers, including the unabashed coverage of vice and violence—much of it written with a reckless disregard for conventional morality and decorum.

Bennett's Herald literally spoke a new language, using vocabulary deemed inadmissible in proper company. The language of the Herald was the language of the lower class, the language of "the people" excluded from polite society.

Basic innovation in material and knowledge technologies fueled intra-organizational growth and complexity, prompting specialization and divisions of labor. Newspaper organizations became segmented into departments; the occupational roles of publisher, editor, business manager, reporter, printer and newsboy appeared. Hierarchical order emerged within the new organizational form of newspapers. They began to operate along the rationalized lines of an organization chart.

The content, pricing and distribution of the innovative penny papers were radical departures from earlier newspapers forms and procedures. The new organizational form of newspapers tapped into working class niches, and the optimal strategy was to position newspapers in relation to the new market. Selection processes swelled circulations, profits and the population of newspapers, creating a crisis situation in the established order.

This crisis in the environment was expressed in commercial and moral conflict, a guise for ruptures in the social and cultural fabric of America. The working class became increasingly self-
conscious, challenging the propertied elite. The insurgent penny papers reinforced this emergent and militant consciousness with a symbolic repertory that fostered new identities and definitions of the world. Increases in penny paper circulations were a recognition of charisma, expressed in terms of a commercial transaction: 'readers exchange money for the charismatic commodity of news that allows their participation in the mysteries of heaven and earth. This recognition was a legitimation of penny papers' charismatic challenge to established image-making authorities and new definitions of reality. Printing operations of the pre-variation phase made money out of religion; the penny papers of the variation stage made a religion out of money.

The newly-created newspaper organizations of the variation stage had survived their initial selection, a process that continued between 1845-1900, a period culminating in another crisis in the emerging consciousness industry.

IV

In the selection stage, 1845-1900, newspaper evolved into an industry. The processes of selection fostered growth in the number, size, complexity and rationalization of newspaper operations. The survival of selection processes through adaptation generated contradictions that ruptured into a newspaper industry crisis in the 1890s. Two types of contradiction set the stage for crisis.

Type 1: Internal Contradictions. Intra-organizational growth reduced newspapers' flexibility and mobility in exploiting resources and in meeting competitive challenges; in short,
adaptation to selection pressures generated internal constraints inhibiting newspapers' capacity for further adaptation and survival, at least according to the evolving logic or rules of competition that emerged during the selection stage.

Type 2: External Contradictions. Inter-organizational growth, i.e., increases in the newspaper population, produced a dense environment that heightened competitive pressures in the exploitation and acquisition of resources. Adaptation that expanded the newspaper population generated external constraints in the acquisition of increasingly scarce resources through competition. With heightened competition, adaptation and survival became substantially more precarious.

Internal and external constraints created a double-bind for newspapers: intra-organizational inflexibility and immobility reduced newspapers' capacity to adapt, while inter-organizational expansion increasingly required greater flexibility and mobility to assure adaptation and survival. The double-bind produced a turbulent environment, resulting in a crisis in which newspapers evolved into an "endangered species."

Consider briefly the organizational parameters of the newspaper during the selection stage.

Population. The penny papers of the variation stage survived to become the dominant organizational form of the selection stage. The number of dailies increased from 65 in 1830, just prior to the emergence of the penny papers, to roughly 2,226 in 1900, when the retention stage began.
The field of the new species of newspaper organization grew more dense. In the Vatican of American journalism, New York City, for example, 18 dailies were in operation in 1840 compared to 29 dailies in 1899; in 1840, the ratio of circulation to population was roughly one newspaper copy for 6.5 persons compared to one copy for 1.2 persons in 1899. The cities of Boston, Philadelphia, Cleveland, Chicago, and San Francisco had 82 dailies in operation in 1880, with a circulation ratio of one copy for 2.1 persons, compared to 137 dailies in 1899 with a circulation ratio of one copy to 1.24 persons.

Technology. Material and knowledge technologies expanded during the selection stage with increasingly less beneficial improvements on the basic innovations introduced during the variation stage. A comprehensive recitation of well-documented improvement innovations need not be detailed here. Three types of material improvements, however, deserve mention: printing, papermaking and newspaper format/content.

Technological improvements in printing included: increases in the size, speed and efficiency of presses—press capacities increased from 2,000 to 48,000 copies an hour; mechanical folders and linotypes were introduced in the 1880s and 1890s.

Papermaking technology improved with the switch from rag-to-woodpulp-based newsprint, an improvement that resulted in lowered costs and substantial increases in the number of pages newspapers printed. Rag-based newsprint cost about 12 cents a pound in 1832 when dailies' consumption was about 1,300 tons; newsprint prices reached 22 cents a pound during the Civil War,
then rapidly declined after 1870 when less expensive woodpulp paper became prevalent. The price of newsprint had declined to two cents a pound by 1899 when consumption reached 569,000 tons. Woodpulp newsprint had displaced three-fourths of the rag-based papers by the late 1880s.

The newspaper industry's product underwent improvements in the form established in the variation stage. In addition to more pages, newspapers added typographical improvements to "frame" the news: illustrations and comics appeared, color printing was introduced, along with Sunday editions and magazine-format supplements; headline "schedules" became standardized.

Newspaper content also became standardized as a result of greater reliance on the telegraph, introduced in 1844. By 1880, half of all morning and one-fourth of all evening dailies were Associated Press members. The increasing flow of information into newsrooms brought further content and task specialization, i.e., wire editors, state, national and foreign desks. Likewise, the telephone, developed in the 1870s, covered the country by 1900, and even more task specialization occurred, with "leg men" in the field calling information to "rewrite men," whose work became more efficient with the typewriter.

The economic relationship between newspapers and advertisers was rationalized through rate systems. Advertising costs depended on the size, location and number of appearances. Advertising agencies, which had emerged in the 1840s, served as middlemen between newspapers and advertisers. Agencies purchased space from newspapers and resold it to their clients, earning "discounts"
or commissions ranging from 15 to 17 percent of the papers' stated rates. By 1900, the American Newspaper Publishers Association, formed in 1887, standardized the discount rate at 15 percent.

News and advertising production had adapted routines and protocols in response to material improvement innovations, and improvements in knowledge technologies created new occupations. By 1900, newspapers had become a rationalized manufacturing industry.

**Resources.** Classified and display advertisements were the rule by the 1870s. Advertising revenues for newspapers and other periodicals were estimated at $12 million to $15 million in the 1870s and nearly $96 million by 1900. The rapid expansion of advertising prompted journalism historian Frederic Hudson in 1873 to proclaim: "But is not this new mode after all, the style of our journalism of to-day? Is it not all on a grand scale?"

Fifty percent of newspapers' revenues was generated by advertising in 1880, 64 percent by 1910; space given to advertising increased from 25 percent to 50 percent by World War I. Newspapers' defensive posture in behalf of the lower classes during the selection stage was a form of economic exploitation, revealing a fundamental contradiction of capitalism: appeals to working and, by 1900, middle class niches boosted circulations, prompting businessmen to advertise in newspapers that oftentimes undermined the commercial elite that supported newspapers.

Total circulation for the 1,200 newspapers published in 1833 was an estimated 1.2 million. Daily newspaper circulation in 1850 was estimated at 758,454 compared to roughly 15.1 million in 1899—a 20-fold increase. By comparison, the population of the
United States increased from 23.2 million in 1850 to 75.9 million in 1900—a three-fold increase.

With the growth of circulation and advertising revenues, newspaper properties increased in value. Hudson, for instance, devoted an entire chapter in his 1873 history to "The Cash Value of Newspapers." Rollo Ogden, a former Presbyterian minister and editor of the New York Evening Post, in 1906 observed that "large capital in newspapers and their heightened earning power tend to steady them." The "steadying effect" also made newspapers increasingly conservative, less willing to take risks, less capable of meeting competitive challenges. The newspaper had become, as Mott put it, a "leviathan."

Adaptation Maneuvers. Optimal location strategies of the variation stage, in which newspapers positioned themselves in relation to audiences through content, pricing and distribution, ceased to be adaptive in the increasingly clustered environment of the selection stage. Positioning strategies alone were inadequate in environments with many newspapers struggling to exploit the same or similar niches. Survival in the selection stage required more sophisticated adaptation maneuvers.

Selection stage adaptation maneuvers evolved into strategies of planned initiatives by newspapers, actions and counter-actions—all designed to gain a competitive edge over other newspapers. In the selection stage, newspapers engaged in a variety of "crusades" and "people's campaigns" for better schools, roads, parks, economic and political reforms to gain support from audiences. The shrill and sensational Yellow Journalism era, with the circulation battles
between William Randolph Hearst and Joseph Pulitzer, is a classic example of selection stage maneuvers. Pulitzer withdrew the World from the circulation war in 1898, after two years of intensive and expensive struggle that put the paper in the red, its competitive capacity pushed to a breaking point. High risk competition had imperiled the survival of the World. The retreat into a less competitive niche dissolved a go-for-broke conflict into a fiscal conservatism with its capital invested in property. With an estimated value of $10 million and annual net incomes of $1 million in the 1890s, the World was a profitable property. Architecture became a symbol of the property status of newspapers; Pulitzer erected the $2.5 million World building in 1890, and newspapers in other American cities erected similar awe-inspiring edifices between 1875 and 1900. Like medieval cathedrals, high rise newspaper skyscrapers were brick and mortar totems, icons of the secular city representing property, capital organization and power.

By 1900, newspapers had evolved into their mature form, resolving the contradictions of its selection through adaptation maneuvers involving retreat from high-risk competitive expansion. Competition for limited resources, and the allocation of those increasingly scarce resources through inter-organizational conflict in a dense field, generated a turbulent environment. The turbulence of the 1890s ruptured into organizational crisis. selection stage strategies that had been adaptive grew counter-productive and life-threatening. Survival came to depend on stability and withdrawal from competition. Newspapers adopted the conservative
survival strategies of long-range market control to retain their property, positions and resources through absorption and concentration.

V

The Nineteenth Century's innovative newspaper operations were merged and suspended during the post-1900 retention stage. The World collapsed in 1931; the Sun was merged in 1918, again in 1950, and, along with the combined Herald-Tribune, ceased publication in 1966.


During the retention stage, the newspaper population underwent shrinkage; technology entered a phase of pseudo-innovations; resources grew, although circulation failed to keep pace with increasing population; and adaptation maneuvers involved long-range market control. The dinosaur effect had become exacerbated; the retained forms and orthodoxies generated contradictions that threaten the survival of newspapers.

Population. Newspapers were merged and suspended during the retention stage, and the field became less clustered, less dense. Evidence for the shrinkage in the newspaper population is clear: 1,967 dailies operated in 1900; the number peaked at
2,200 in 1910, then declined to 1,763 in 1946, dwindling to 1,751 in 1975, 1,730 in 1981 and 1,720 in 1982. U.S. cities with competing dailies dropped from 559 in 1900 to 61 in 1961; by 1982, the number had been reduced to less than 30.

Newspaper ownership became concentrated into chain operations during the retention stage. Eight groups controlled 27 papers and 10 percent of the total circulation in 1900; and 35 years later, 63 chain operations owned 328 papers and controlled 41 percent of the total circulation. The 20 largest circulation newspaper companies (groups) in 1980, according to the ANPA, owned 404 dailies, accounting for nearly half (30.7 million) of the 62.2 million total daily circulation.

Large chains expanded by buying smaller newspaper groups: Newhouse Newspapers purchased the Booth group, Lee Enterprises bought Lindsey-Schaub (and promptly killed a "weak" paper), and Gannett absorbed the Speidel chain. Gannett, the largest newspaper firm in the United States with 85 dailies plus broadcasting and advertising properties, in 1980 reported total revenues of $1.25 billion and a profit of $151.9 million. Profitability and survival were gained by diminishing competition; fewer newspapers tended to stabilize the acquisition of resources.

Resources. Circulation growth continued, but failed to keep pace with population increases. Total daily circulation in 1900 was 15.1 million compared to 62.2 million in 1980—a fourfold increase. Circulation growth is less impressive when measured in terms of circulation per household. In 1900, circulation per household was less than one (.94), rose to 1.36
per household in 1910, then steadily contracted to less than 0.9 in 1980. Between 1946 and 1976, adult population growth outpaced circulation increases.

Daily newspaper advertising volume also grew in the retention stage. Advertising revenues in 1899 were estimated to be $95.9 million compared to $15.6 billion in 1980. A substantial part of that growth is explained by two key factors: rising advertising rates and increases in the total volume of newspaper advertising. The advertising content of daily and Sunday papers rose from roughly 50 percent in 1900 to 62.2 percent in 1980. Between 1970-1980, newspapers' share of advertising revenues declined, with radio and television acquiring larger shares of total revenues.

Profits gained through resource acquisition were constrained by substantial increases in paper costs. In the retention stage, newsprint prices jumped from two cents a pound in 1900 to roughly 23 cents a pound in 1980. Rapid price increase for newsprint during the 1970s, Smith wrote, "is perhaps the greatest cause of internal crisis, and is on the whole out of anyone's control."

Technology. The newspaper leviathan of the selection stage evolved into an industrial dinosaur during the retention stage in the life cycle of newspapers. The rigidities of the dinosaur effect generated technological conservatism that threatened the survival of newspapers in the post-1960s.

Retention stage conservatism, with its reliance on pseudo-innovations, e.g., tabloids in the 1920s "jazz journalism," exacerbated a growing lag in adopting new technologies. Writing in 1927, Silas Bent acknowledged the conservatism: "Newspaper owners and editors, instead of being exemplars of initiative
they are commonly supposed to be, are in truth rather a backward lot." The conservatism continued into the 1960s. Offset printing technologies were introduced in the late 1930s, but not widely adopted until the 1970s; only 40 percent of all newspaper copies in the early 1980s were printed by offset processes. The lag in adopting these new technologies prompted Smith to comment:

> The newspaper is more than ordinarily conservative. Its complex linkages to society force it to change its structure and system only when it is absolutely obliged to do so...It is continually being posed with the problem of simple survival.46

The rush to adopt new printing and processing technologies in the late 1970s was a survival move, an attempt to make newspaper operations more efficient by cutting rapidly escalating labor and newsprint costs. The introduction of computers to newspapers created a revolution in composing and news rooms. A nearly century-old production process underwent sometimes convulsive changes that, in fact, were life-threatening. Computerization in the late 1960s and early 1970s had cut labor time by as much as 40 percent, displacing laborers and prompting strikes. An indication of the rapid installation of new technologies is apparent in the case of video display terminals (VDTs): 7,000 VDTs were installed in newsrooms between 1971 and 1976. Technological changes generated discontinuities or contradictions in the production and distribution systems of newspaper operations. Material technology streamlined newspapers' internal production system, but the knowledge technology deployed to distribute newspapers remained largely unchanged. Computers
empowered newspapers with the capacity to produce more specialized content demanded by increasingly purposive and media-savvy consumers, yet newspapers cling to the broad domain, general circulation strategies of a century ago. Unlike magazines, newspapers have not adapted their content to the unique demands of specialized audiences.

Efforts at marketing "customized" newspapers through targeted "zoning" of special population groups, however, fail to resolve another contradiction: the newspaper is a "paper." The advent of teletext, facsimile, interactive cable and home computer distribution systems can bring about, as Smith put it, "a kind of Hegelian negation of the newspaper." The "paperless" paper electronically delivered directly to home computers makes the newspaper something of a Nineteenth Century industrial anachronism.

The crisis now threatening the survival of the American newspaper industry is astonishingly similar to the crisis that imperiled the mercantile papers more than a century ago. The mercantile papers of the 1830s had adopted new material technologies that speeded up the production process, but failed to innovate the knowledge technologies of diversified content and broad domain distribution systems. Like mercantile papers, today's newspapers have changed their internal material technologies, albeit rather slowly, without innovating new content and distribution systems; their survival is threatened primarily by the inability to distribute their products across space and time. The penny papers harnessed both material and knowledge technologies, eventually driving the mercantile press into extinction; the modern newspaper organization was born of the conjunction of material and knowledge
technologies. Like the penny paper organizations, the emerging electronic information media have innovated content and distribution systems that will eventually displace newspapers.

The life cycle of the modern newspaper has gone full cycle. Newspapers were born of a crisis generated by the conjunction of material and knowledge technologies; newspapers are dying in a crisis generated by the disjunction of material and knowledge technologies. Newspapers are trapped in the contradictions of their own evolution.
ENDNOTES


2. U.S. News & World Report, 92 (May 10, 1982): 34-35. The magazine's survey of "distinguished Americans" revealed television as the third "most influential" institution in the United States. Other media institutions received the following rankings: newspapers (13), public opinion polls (17), advertising (18), radio (19), magazines (20), and cinema (30). "Big Business" ranked second and "organized religion" ranked No. 26.


9. F. E. Emery and E. L. Trist, "The Causal Texture of Organizational Environments," Human Relations, 18 (1965): 21-32. Emery and Trist describe four causal textures: (1) placid-random, in which small organizations' "optimal strategy" is "to do one's best" to survive; (2) placid-clustered, an environment in which productive and destructive forces are clustered, organizations' objective is "optimal location" in relation to resources and organizations grow in size and become hierarchical and centralized; (3) disturbed-reactive, in which the environment is clustered with similar organizations attempting to survive by hindering others, organizational strategies involve planned initiatives and mobility to meet competitive challenges and "absorption and parasitism" to reduce competition; and (4) turbulent fields, in which the "relevant uncertainty" for organizations increases and organizational responses become increasingly unpredictable.


33. See Warren Francke, "An Argument in Defense of Sensationalism: Probing the Popular and Historiographical Concept," Journalism History, 5 (1978): 70-73. Francke quotes a New York Tribune (February 17, 1849) characterization of "The Satanic Press" as the "perverted product of a diseased Civilization wherein debauched and prurient appetites gloat upon the unripe and poisonous fruit of the Tree of Knowledge...It has one sole aspiration—to achieve notoriety and coin gold for its director by pandering to whatever is vile and bestial in a corrupted and sensual populace."

35. Mott, American Journalism, p. 548.

36. Smith, Newspapers and Democracy, p. x.


44. Smith, Newspapers and Democracy, p. 25.


47. Smith, Newspapers and Democracy, p. 43.