Incidental Paper

New Competition and New Media

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Program on Information Resources Policy

Harvard University

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NEW COMPETITION AND NEW MEDIA
Benjamin M. Compaine
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TABLE OF CONTENTS

LIST OF FIGURES AND TABLES

PREFACE

This article was prepared for a presentation to the 6th International Congress of IDATE (Institut Pour le Développment et l'Aménagement des Télécommunications et de l'Economie) in Montpellier, France, October 24-26, 1984. It was published in the Bulletin de l'IDATE, No. 17, October 1984 as part of the proceedings of that Congress. The theme of the Congress was The New Communications Business.

I also made many of the same points in a presentation to the Malente (West Germany) Communications Conference on "International Communications and National Media Policies," September 16-19, 1984.

The Program is publishing this work as an Incidental Paper because we believe there may be a general interest in the subject and this forum will give it wider circulation than it would otherwise have.

Ben Compaine
December 1984

EXECUTIVE SUMMARY

- Over the centuries, technologies ranging from alphabets and writing to the printing press, computers and photocopying machines have expanded the processes available for the creation and dissemination of information. The options finding their way into the marketplace today, named cable, DBS, videocassettes, videotex, and so on, are a continuation of this historical trend.
- Often, newer technologies available to media providers add to the degree of competition. The number of competing players depends to a large degree on the policies of a given society, through its government, in promoting or restraining opportunities for diversity.
- Today, the so-called new media technologies are forcing democratic governments to re-evaluate the nature of the limited controls they have imposed on media players. All developed nations will be facing the same issues, but they are likely to adopt different, and sometimes conflicting, strategies.

NEW COMPETITION AND NEW MEDIA

Since the first drawings on the walls of caves, there has been a regular infusion of "new" competition in the realm of the media. Often, some new technology or technologies applied to the task have fostered this new competition. The development of an alphabet in Greece in the 7th century B.C., improvements in the implements of writing over succeeding centuries, and the familiar litany of printing press, steam engine, and electronics quickly bring us to contemporary media processes.

Each development in some way expanded competition, in that new media processes generally have added to rather than replaced older media processes. Whereas the laboriously handwritten manuscript was once the only form for text—and therefore the scriptorium maintained control over its reproduction, price and distribution--today we have mass-printed books and even electronically transmitted text for viewing on a video tube.

This latter, part of what has been dubbed telematics or télématique, is therefore simply the latest in the historical linage of new technology creating new competition for the old. With perhaps the exception of cave drawings, just about all previous technologies have survived in parallel as means for mass communication.

Still, life has become more complicated for anyone interested in the subject of competition in media. In part, this is because competition in media has at least one dimension more than does competition in, say,

toothpaste or virtually any other commodity. The mass media--newspapers, magazines, books, television, radio, records, films, electronically accessible data bases--have a special place in virtually all literate societies as they are charged with conveying messages. In democratic societies, we are usually interested in maximizing a diversity of ideas, opinions, and information of all sorts. In closed societies, the media are as important, but usually with the goal of providing a uniform "party line," and hence with limited diversity. This paper focuses on competition in pluralistic societies that hold dearly diversity of information sources.

Quantifying the Media Industry

There are economists who specialize in measuring the extent of competition--or its obverse, concentration--in an industry. Economists are good for quantifying things and then measuring them. In the media business, that itself presents two problems. The media can be treated by economists as any other industry for purposes of measurement. They can count up who owns what, calculate percentages, devise indices of pricing power.

Problem One: What is the Relevant Market?

Although this may seem rather straightforward, the first problem is that the technology of recent years has made the definition of the appropriate divisor for concentration indices debatable. That is, what is the appropriate market? Figure 1 outlines the boundaries of the

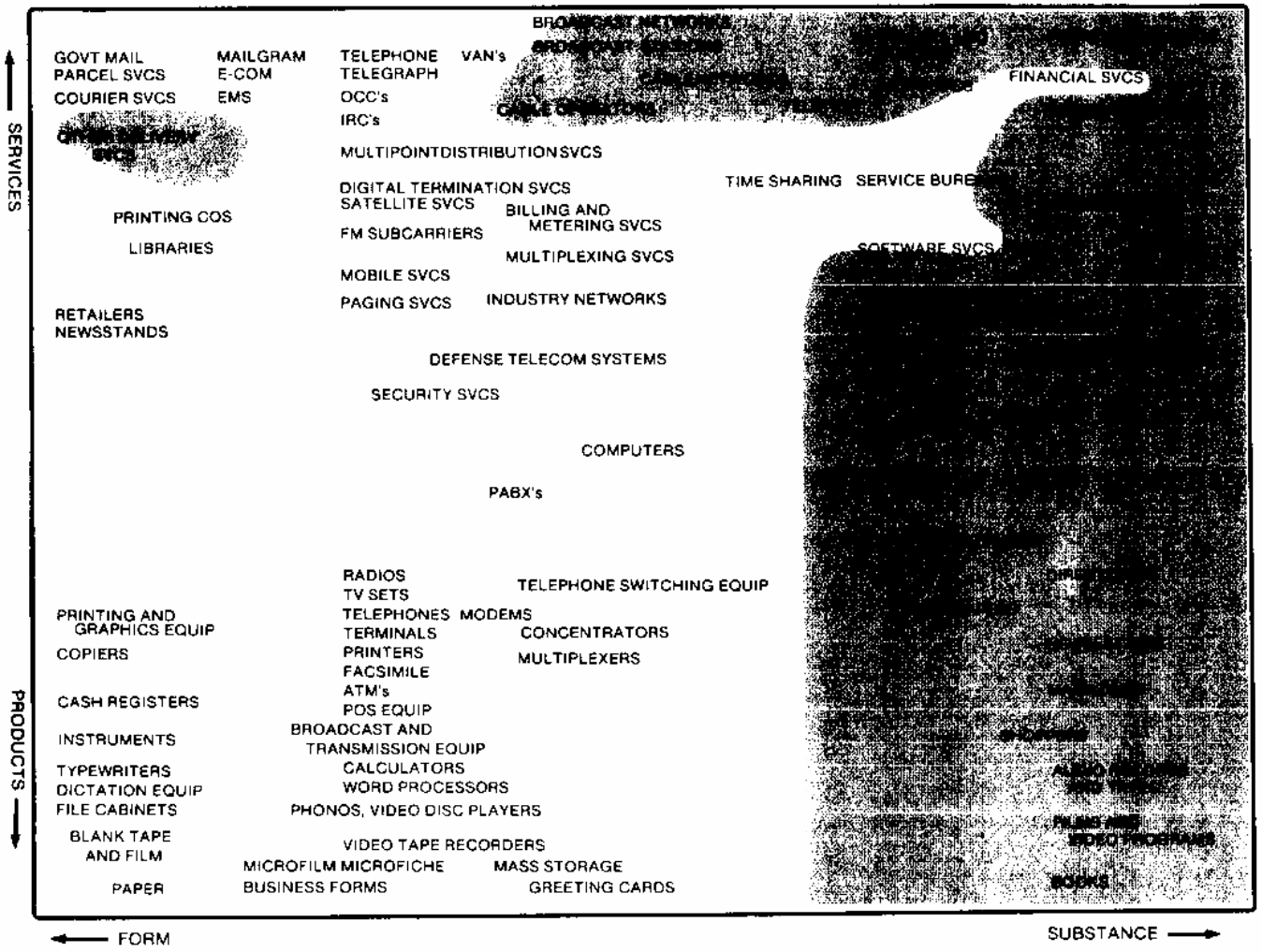

Figure 1. The Mass Media

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traditional media business.[1] But to study media competition, should one look at the market for newspapers isolated from that for magazines? To what extent are broadcast television and even radio fungible for the substance of the print media? Traditionally, economists and their usual employers--private and government lawyers--have looked at a specific medium, such as newspapers. It can be legitimately argued that that approach, if it ever was valid, is becoming less so as the technology of the alternative media forms merge into one another.[2]

Still on this first problem of market definition, there is a question of who is the user of the media? Some media, such as newspapers and magazines, and in the United States to a degree more than almost anywhere else, broadcast television and radio, are paid for in total or large measure by advertisers. Thus, an appropriate measure of economic concentration for these media may not be in how much consumers pay to receive them but to what extent there is market power in the pricing of advertisements. On the other hand, media forms such as books, records and theatrical films are funded mostly or totally by their users, in which case the economic consideration is the ability of suppliers to charge nonmarket prices to consumers.

In addition to competition within a particular media segment and competition among media industries, geographical competition is a factor. Newspapers in the United States and Canada, and to lesser degrees elsewhere, are largely local media. Although the United States has about 1700 daily papers and no more than about seven percent of total daily circulation is controlled by any one firm, only about 30 central cities have fully competitive newspapers and only one, New York, has three alternatives.[3] As seen in Table 1, most people have more

TABLE 1

NUMBER OF MAJOR VIDEO AND AUDIO OUTLETS IN METROPOLITAN AREAS, 1981

Rank	Market	CABLE		Total UHF & VHF Channels	Radio Stations
		% of Homes Passed	Average Number of Channels		
1.	New York City	28%	29	14	39
2.	Los Angeles	23	23	18	32
3.	Chicago	6	27	11	39
4.	Philadephia	23	27	10	30
5.	San Francisco	59	23	12	28
6.	Boston	19	23	9	23
7.	Detroit	4	27	7	23
8.	Washington, D.C.	8	29	7	20
9.	Cleveland	32	20	5	21
10.	Dallas-Ft. Worth[a]	23	35	6	20
15.	Seattle-Tacoma	41	23	7	26
20.	Denver	13	37	5	23
25.	Kansas City	30	30	6	19
30.	Nashville	3	16	5	17
40.	Orlando	44	18	5	12
50.	Dayton	51	30	4	12

a. A.C. Nielsen, May 1982

Source: Video and audio outlets--CBS Inc. Current to August 1981.

choice in the number of television signals they receive, even though there are fewer television stations nationally than there are newspapers. Book and magazine publishers, relying as they do on large regional and national markets, compete in a larger geographical context. Cable operators, while providing a dizzying array of channels, for the most part are monopoly providers within their highly restricted franchise territories and are subject to a decreasing amount of government control over their pricing. Finally, there is a new factor of potential global competition, as video cassette player/recorders proliferate and as direct broadcast satellite systems, perhaps out of the control of the nation to which their programming is receivable, start beaming signals in competition with land-based -- and often government-controlled -- television. In effect, we are seeing receding toward the horizon the traditional market boundaries with which so many were so comfortable.

Problem Two: How Much is Enough?

The second problem for a discussion of competition is anchored to the lessening of the distinction among what had been well-understood media formats. Today, "television" can be delivered not only over-the-air, but via cable, cassettes, discs, or directly from a satellite. The picture on the screen can be the type of text and graphics typically associated with magazines, books and newspapers. Thus, the conventional labels are less useful than ever. "Print" or "video" are essentially examples of formats in which some content or substance can be displayed or otherwise manipulated by users. Words can

come as speech or as writing. And that writing can be gouges carved in rock, toe marks in the sand, ink on paper, or glowing phosphors on a screen.

These are among a multitude of ways in which we can express information substance. Substance may be data, knowledge, news, intelligence, or any number of other colloquial and specialized denotations and connotations that can be lumped under the general rubric of "information."

Process is the application of instruments, such as typewriters, computers, printing presses, the human brain, telephone wires, or delivery trucks to the creation, manipulation, storage and transmission/distribution of substance in some intermediate or final format. For example, a traditional newspaper, an ink-on-newsprint format, relies on processes including entering thoughts of a reporter into a computer by manipulating a keyboard of a video display terminal with storage in the computer, and the eventual creation of a printing plate and distribution to consumers via trucks. Part of that process may be different should the same article be distributed to some consumers via a telephone link to a video display terminal. In that case, some of the process is the same (the entering and storing of information), the formats are different for the end user (text on screen vs. ink on paper), but the substance may remain constant.

How then does one measure how much diversity of sources is "enough?" If 20 firms account for 50 percent of newspaper circulation in the U.S., is that too few, enough, or can this be a sign of too many firms creating too much fragmentation in society? If not this number, then what? An even stickier question is, what are the adequate ground rules for assuring that any person's or institution's ideas--political,

social, commercial or whatever--have some opportunity for access to the media? And more difficult still, how does one measure which formats should have what conditions for access? That is, it may be relatively easy to provide access to a print newspaper for messages, as these have the most space flexibility. And as authoritarian societies know, the photocopying machine has become Everyman's printing press.

On the other hand, what about access to prime time broadcast television? We know that up to now there has been limited spectrum available particularly in the major metropolitan areas, and that prime time cannot be expanded by more minutes than nature has provided for us. Cable television, a newer process for a familiar format, alleviates the spectrum problem, but it can never eliminate the fact that a handful of channels will likely get the bulk of the viewing audience at any given time. Thus, even as technology provides us with more conduits for distributing information, there is no guarantee that the mass audience will want to receive much more than what has traditionally been mass entertainment. Indeed, in the United States, dozens of cable networks have been struggling to achieve even a one or two percent market share, as the bulk of the audience with access to dozens of stations persists in viewing the four traditional broadcast networks, plus three or four of the newer offerings, the most successful of which--the pay television networks--are showing other forms of mass audience fare.

The extent of competition in the media, as in other industrial sectors, is in large measure a function of the national policies that encourage or limit market forces. Societal norms set the boundaries for these policies, and politics then establishes the rules. In England, the spread of the printing press in the 16th century led to the

establishment of the Royal Stationer, created by the Crown, through which all printing was controlled in the 17th and 18th centuries. In France, a government edict in 1686 fixed the allowable number of printing masters. Backed by government, an oligopoly gained control of the printing business. Thus, in 1644, Paris had 75 print shops with 180 presses. By 1701, the number of presses had grown to 195, but these had consolidated into 51 shops.[4] This early tradition of government's being involved in the structure of the information business was in large measure the motivation for the strong prohibition against such intervention written into the U.S. Constitution. Thus, whereas European governments have to varying degrees extended such early intervention into newer media processes, such as telephone and broadcasting, the U.S. has maintained a relative hands-off attitude.

This image of laissez-faire in the U.S. should not be exaggerated. It was the U.S. Congress that early in this century established the conditions for the assembling of a privately owned but highly regulated telephone system. And while broadcasters have had far more latitude in operating than virtually anywhere else in the world, their programming decisions have been shaped to some degree by regulatory requirements such as the fairness doctrine.

Competition and Concentration in the United States

By any standard other than the most narrow, there is little evidence to substantiate a conclusion that there is unhealthy concentration of ownership of the traditional media in the United States. By some measures, that ownership is substantially less concentrated than it was 30 or 40 years ago.[5] For the first time, local newspapers are competing for reader attention (if not yet for advertisers) with a national paper (USA Today) and national editions of The New York Times and The Wall Street Journal. Direct mailers, 9000 weekly newspapers and thousands of "shopper" newspapers are providing strong competition for local advertising support for the daily papers. The national television networks are losing audience share to independent television stations and to cable-delivered networks. The broadcast chain with access to the largest television audience through its own stations is not one of the networks but Metromedia. The number of magazine and book titles proliferates and the number of new publishers has kept pace with the acquisition of established ones.

The number of firms with a major stake in some segment of the traditional media continues to grow. By one count, 64 organizations are major players in at least one media segment and few are dominant in as many as two.[6] In 1982, only five firms were true media conglomerates, having major holdings in at least three of the six industries measured: newspapers, magazines, broadcasting, book publishing, cable television, and theatrical film production.

With the dispersion of substance available via satellite and telephone, access by more sources to more sources is likely to increase

further, not diminish. Some commentators are in fact concerned now about fragmentation of society and information overload as the result of the overwhelming variety of formats for substance.

The proliferation of new communication processes over the years has made it increasingly difficult for any single entity, even governments that have the will and power, to have total control over the mass media. The Shah of Iran learned that lesson the hard way. Although his government controlled the broadcast and major press spigot, it was not able to stop the inflow of messages from the Khomeini forces in Paris, which used small, cheap audio cassettes to smuggle in instructions and inspiration for low-tech duplication and distribution. By putting in a sophisticated telephone system, the Shah gave his enemies direct dial international phone calls, much harder to monitor than those going through an old-fashioned switchboard. And the Xerox machine became the printing press of choice--cheap and harder to control than a large roll-fed offset press.

Over the years the Soviet Union has engaged, with varying degress of intensity, in jamming broadcasts aimed into its territory from the West. The Soviets no doubt view such broadcasts as a far more pervasive factor in challenging their control than the few books that can be physically smuggled in or locally written underground tracts that are limited in quantity to the number of copies that can be made with carbon paper. (Unlike the Shah, the Soviets go to great lengths to restrict availability of and access to the relatively small number of photocopying machines--a factor for which they may pay an economic price as well). In Western Europe, broadcasting authorities have had periodic skirmishes with offshore "pirate" radio broadcasters. Today there is great hand-

wringing over potential violation of national borders by the footprint of direct broadcast satellites for television and for data flows from computer to computer via telephone switches that do not respect the customs inspectors at the frontier.

It has been reported that bootlegged copies of the controversial movie "Death of a Princess" were being shown in living rooms in Saudia Arabia at the same time it was being broadcast--over that government's protests--in Great Britain and the United States.[7] In the Philippines, where there are seven networks and only a two percent penetration of VCRs, one of the most popular tapes has been of the videotape footage of the murder of Benigno Aquino that has not been shown over the air. (To escape detection, the material was smuggled into the country on tapes that were labeled as pornography. The first ten minutes or so were indeed what they were labeled, so the customs agents wouldn't readily find the contraband footage.)

One of the most dramatic pieces of evidence that technology is moving faster than the ability of governments to control the media is the competition that video cassette recordings are providing for broadcasters and movie house operators. As might be expected, the penetration of VCRs has been greatest in those countries that already had the largest number of television sets. But as Table 2 indicates, the United States and Canada lag well behind Western Europe in their use. Moreover, these figures likely understate penetration in Europe in that they express only machines exported by Japan. Although these account for almost all sales in the U.S. and Canada, the tabulation does not count the sizable number of the machines manufactured and sold in Europe. But even with those counted, leading the world in VCR

TABLE 2

VIDEOCASSETTE RECORDER
PENETRATION IN SELECTED REGIONS, 1983[a]

	TV sets in Use (000)	VCRs Exported to (000)	VCRs as % of TV sets	Medium # of Broadcast Nets
W. Europe[b]	119,222	16,844	14.1%	2
U.S. & Canada	189,280	14,426	7.6	5
Middle East[c]	2,470	1,938	78.5	2
Australia & New Zealand	6,422	1,561	24.3	2

a. Videocassette recorders exported from Japan to indicated destination, 1976-1983. Does not take into account transhipments once in destination country or non-Japanese-made VCRs, primarily those made by Thomson in Europe.

b. Belgium, Denmark, Finland, France, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Monaco, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, W. Germany.

c. Major oil producing or supported countries: Bahrain, Iran, Kuwait, Qatar, Saudi Arabia, United Arab Emirates.

Source: Calculated from compilation by CBS Inc. from Table & Television Factbook, 1984; Japan Tariff Association, Japan Exports & Imports, 1976-1983 editions.

ownership are the oil-rich Middle Eastern nations, where there are as many as five VCRs for every known television set.

What determines the penetration of VCRs? It appears that where there are not significant government-imposed barriers, a substantial factor is competition from other forms of television. In Western European nations, where there are typically two government-controlled or highly regulated television networks, VCRs gave viewers their first opportunity to become their own programmers, through renting or buying tapes. In England, where the tradition of renting televisions has carried over to VCRs, there is a booming tape rental market, with prices as low as 50p per night. A cynic might conclude that, when it has the chance, the mass audience demonstrates that it is not being fulfilled by the fare that the broadcasters are providing--at least not enough of the time. (The other side of this coin is that viewers may find the quality of programming so compelling that they find it desirable to record one for later viewing while watching the other in real time.) In the United States, which has four over-the-air-networks and a growing number of cable-supplied networks, VCRs have seen healthy growth only in the past two years, and overall penetration is still relatively low.

Substitutability Among Video Options

If the need to foster diversity is a policy objective in democracies, then the degree to which various media processes are fungible is of import. The manufacturers of steel cans learned quite a while ago that their ability to set prices and gain market share was

determined not only by their relatively few steel can competitors, but by others who made aluminum, glass, and even cardboard containers. Similarly, broadcasters, whether private or government controlled, must recognize that they are not the only rooster in the video barnyard anymore, and that it will likely get more competitive rather than less so.

A statistical study by two economists at the Federal Communications Commission (FCC) has found "strong support [for] the proposition that VCRs and cable [television] are substitutes."[8] It also reported "some support to the conclusion that VCRs and broadcast television are complements."[9] While noting some paradoxes and data problems, the authors believe that their statistical evidence "tends to support the proposition that the video product market should be broadly defined--to include (at least) broadcast television, cable and VCRs."[10]

It is much too early to make any judgments about the impact of DBS. For all pratical purposes, it does not exist as a mass market service anywhere in the world, although bits and pieces are starting to become available. Probably ranchers in remote areas of the United States are the largest identifable market for DBS to date, having purchased large antenna dishes to capture the signals intended as raw feeds to cable headends and broadcasters. For this constituency, DBS is a substitute for a lack of broadcast television.

Substitutability Among Print Options

Print publishers have felt the heat of competition longer than their newer electronic brethren. Before radio made its way into the mass

media mix in the 1930s, the newspaper industry in the U.S. held 45 percent of media advertising, and consumer magazines about eight percent (Figure 2). While magazines held their share through the 1950s, radio and, to a lesser extent, television, eroded newspaper share to 31 percent by 1960. Newspapers have lost a small amount of market share to television in the past 25 years, with newspapers' share now down to about 27 percent, and magazines' near six percent. In large measure, this erosion accounts for the inability of cities to support the competing newspapers that existed before there was electronic media competition for consumer attention and advertiser expenditures.

Newspaper publishing companies in the U.S. did not sit around idly while their franchises deteriorated. In 1983, one third of the 447 television stations in the 100 largest markets were owned by firms that also published newspapers. However, as the result of an FCC policy discouraging newspaper-television affiliations in the same market, by 1983 only eight percent of the stations in the 100 largest markets were owned by the local newspaper.[11] They also owned about 600 out of about 9500 radio stations. Companies that own newspapers have been a diversified group, as the holdings of seven companies on Figure 3 indicate.

Today, publishers of newspapers face two forms of real and potential competition. As far as most publishers are concerned, the real competition they face is from the U.S. Postal Service and the highly computerized firms that have grown to take advantage of postal rates for mailing printed circulars that the publishers themselves compete to deliver as part of the newspaper. The direct mail business has thrived through the years. Before television, direct mail accounted for about 14 percent of advertising expenditures. With no dramatic shifts over

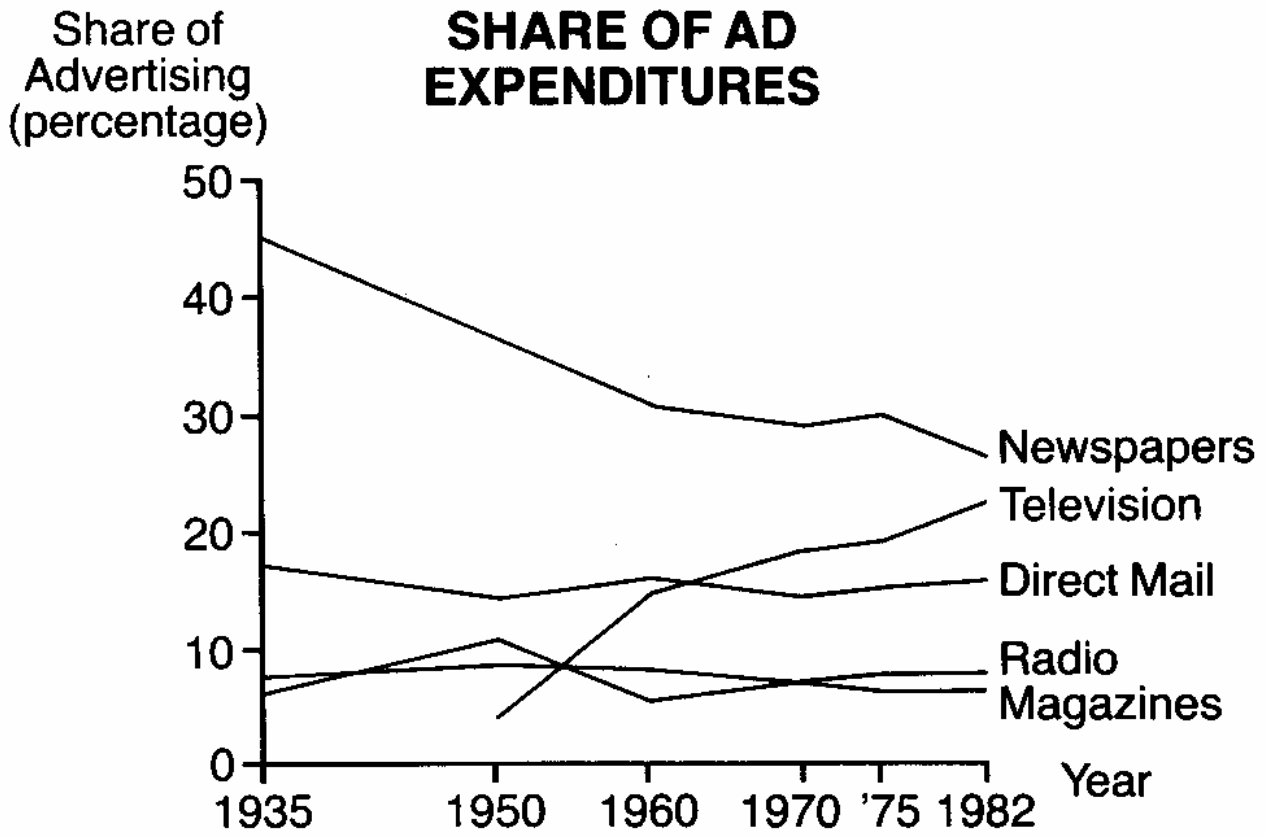

Figure 2. Share of Advertising Expenditures

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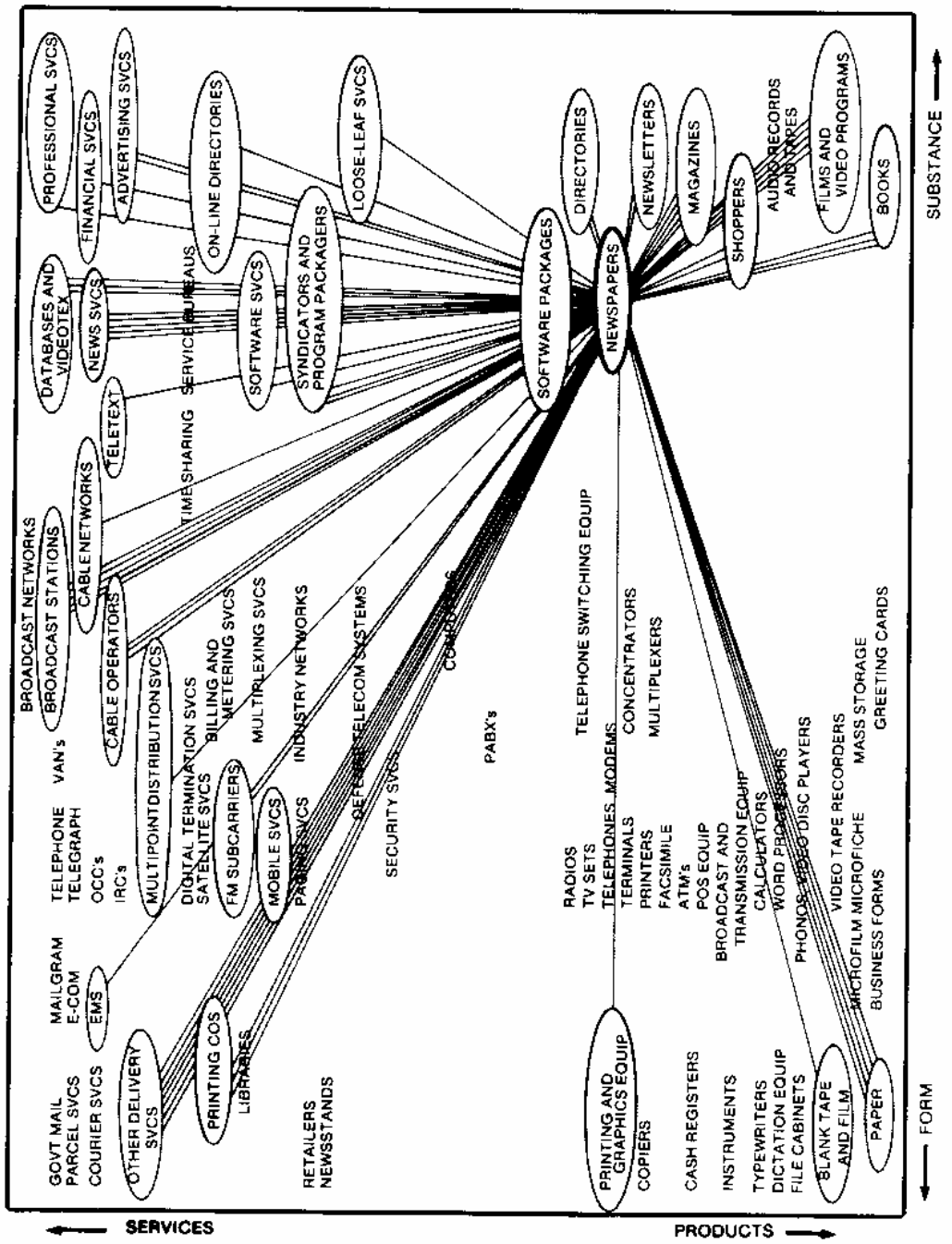

Figure 3. Newspaper Diversification

the years, it now has about a 16 percent share. The ability of direct mailers to compete with newspapers is purely a function of price, which in turn is determined by several layers of postal agencies. The mailing companies, as have publishers themselves, have taken full advantage of computer technology to improve their product, but still depend on physical handling and delivery for reaching the consumer.

The potential competitor for newspapers goes under the name of videotex or electronic publishing. It is much too soon to know when, if at all, these computer and telecommunications-based services will have an effect on local newspapers. This is because such services still require hardware in the home that costs hundreds of dollars at a minimum and ongoing telecommunications costs that alone could be greater than the current price of a printed newspaper. Advertisers, who provide about 80 percent of the revenue for daily newspapers in the U.S., are far from certain as to how they could use the videotex systems.

One of the most feared potential entrants into the media business in the U.S. is AT&T, now about one-third its December 1983 size in revenue, but still a major player. The court overseeing the AT&T break-up mandated that AT&T be excluded from providing substance over its own lines until 1990. This action was the direct result of political intervention by the newspaper industry, which feared that AT&T could have gotten into the electronic classified business, thereby threatening the most profitable piece of the print newspaper.

In the meantime, an industrial power, IBM, has teamed up with CBS, with its broadcast and publishing interests, and Sears, the merchandiser and lately financial services provider, to put together a videotex system a few years hence. Other players in videotex include

Knight-Ridder, already one of the largest newspaper publishers and owner of broadcaster properties; Times Mirror Co., with similar holdings; Dow Jones, a publisher with an expanding electronic financial and general information service; CompuServe, originally a computer time-sharing company; Readers Digest, owner of The Source electronic information database; Citibank, Chase Manhattan, Bank of America, E.F. Hutton, Merrill, Lynch & Co., and several other financial concerns interested in providing customers value-added services and at the same time cutting down on the paper flow for financial transactions. It is expected that more firms will be getting involved, despite the uncertainties.

Implications

What does all this say about concentration or competition? Where does it leave the small player who wants to get a piece of the action, including those who want to make sure they have access to be "speakers" or providers of substance? And what, if anything, are the implications of the U.S. experience for Europe and the rest of the world?

Clearly, many of the players involved with the newer media services are the same ones we know in the traditional media. But many of the newer players are from territory that seemed light-years from the media. In that sense, the number of competitors is increasing as the interests of the players blur and merge. This may add to the already growing confusion over the appropriate boundaries for identifying the relevant industry to investigate or regulate.

We might look to the old print business for some hint of the future of the elctronic one. One reason that the print business has had more freedom to operate is that it was not constrained by the limits of the technology, as was broadcasting. Printing presses might be expensive, but there was no technological limit to the number that could be made available, unlike 6 MH frequencies, for example. Moreover, publishers rarely had to depend on owning their network for distriubtion. The existence of a government-supported, common carrier postal system, that reached every household and business, from the top of Alps to the bottom of the Grand Canyon, assured publishers access to customers.

The parallel institutions in electronics have been the telegraph and telephone networks. Until recently, however, these were largely restricted to point-to-point carriage of voice or low-volume analog signals. Today, the harnassing of computers to the telecommunications networks makes possible the economic transmission of a vast volume of data. The twisted copper wire pair goes nearly every place the postman goes. So long as the telephone system is a common carrier, virtually anyone will be able to become an electronic publisher with a far lower capital investment than was necessary when one also had to own--or pay for the use of--a printing press.

The viability of this approach--and its time frame--will depend on public policy, which will directly or indirectly determine the speed at which the public-switched telephone systems implement digital electronic switching, upgrade current systems to provide for faster transmission of data throughout the system, install a widely available multiplexed capability and otherwise configure end-to-end systems that handle data

as facilely as they have handled voice. In the absence of concerted efforts on behalf of the public network (whether through market forces or government-induced policy), we are likely to see systems that large volume users will install to bypass the public network, to the extent they are legally permitted, thus gaining advantages not available to the low volume users.

Summary

The issues are the same for the U.S., Canada, Europe, Japan, Australia, and elsewhere in the industrialized countries. Among them are:

--the uncertainty of new opportunities and perceived threats for existing media players;

--a widening universe of players who will want to compete with the traditional ones vs. regulatory or other restrictions on their doing so;

--the role of government in pushing, restraining or merely establishing the playing field for one technology or industry sector competing with another;

--the stakes for control over the nature and distribution of substance for commercial, cultural, or political ends by private and public players.

As there is neither a right nor wrong policy in addressing these and other issues, it is rather safe to predict that no two nations will adopt identical strategies. What is appropriate in the vast heterogeneous expanse of the U.S. may not be appropriate for a more homogeneous European nation. Still, policymakers will have to think through

some of their decisions' less obvious possible consequences to the various players. A decision to establish a national policy for a particular piece of technology may cut off the benefits that would be derived by waiting for other technologies to come together, to gestate and take hold spontaneously.

On the other hand, leaving nature to take its course may result in a certain amount of spinning wheels, waste, and confusion. In general, however, as time goes on any entity or small group of entities will likely have more difficulty attempting to control the substance or process of delivery of that substance, short of implementing a totalitarian regime. And even those societies will find their job of control more challenging. Over the centuries technology has helped expand competition for the creation and distribution of ideas, information and entertainment. We are not at the beginning of an era, but in the midst of that long-term trend.

NOTES

1. For a complete discussion of the construction and application of the information business map, see John F. McLaughlin, "Mapping the Information Business," in Benjamin M. Compaine, ed., Understanding New Media (Cambridge, Mass.: Ballinger Publishing Co., 1984) or "La Cartographie de l'Industrie de l'Information," Le Bulletin de l'IDATE, No. 8, Septembre 1982, p. 57ff.

2. Similar technology is being used to produce media that are called by different names. National newspapers such as USA Today and The Wall Street Journal are sending facsimiles of their composed pages to remote printing sites using data transmission and satellites similar to the way that programmers send their materials to cable operators. Internally, the electronic newspaper is for real, as computers and video displays have replaced typewriters and copy paper. Videotex and teletext use broadcast, cable, or telephone transmission to video displays for text and graphics that otherwise would look at home printed on paper.

3. This tendency to one-newspaper cities is not quite as bleak as it may sound. Accompanying the demise of competition in central cities has been the development of newspapers in suburban areas that have grown up around the central city in the past 35 years. Thus, many people and advertisers still do have a choice of newspapers--the metropolitan daily or the local daily.

4. Robert Darnton, The Great Cat Massacre and Other Episodes of French Cultural History (New York: Basic Books, Inc., Publishers, 1984), p. 79.

5. See Benjamin M. Compaine, et al, Who Owns the Media? Concentration of Ownership in the Mass Communications Industry (White Plains, N.Y.: Knowledge Industry Publications, Inc., 1982). A contrary view is present in Ben H. Bagdikian, The Media Monopoly (Boston: Beacon Press, 1983). A response to Bagdikian can be found in a review of this book by Benjamin Compaine, "Winner Take (Nearly) All," Nieman Reports, Autumn 1983, pp. 39-41.

6. Compaine, pp. 452-455.

7. Thomas White and Gladys Ganley, The "Death of a Princess" Controversy (Cambridge, Mass: Program on Information Resources Policy, Harvard University, 1983), P-83-9, p. 39.

8. Jonathan D. Levy and Peter K. Pitsch, "Statistical Evidence of Substitutability Among Video Delivery Systems," Federal Communications Commission, Washington, D.C., April 1984, p. 27.

9. Ibid.

10. Ibid, p. 31.

11. Herbert H. Howard, "Group and Cross-Media Ownership of Television Stations, 1984," National Association of Broadcasters, June 1984, p. 3.