Deregulation of the cable industry has been based largely on the assumption of existing diversity and competition and on the promise of promoting diversity within the industry. To test this assumption, a study examined levels of channel diversity for a sample of cable systems at three stages of the deregulation process. A random sample of 326 fully operational cable systems was selected and a typology of 32 different types of programming available to cable operators were defined and differentiated. Information was then collected on the capacity and size of each system, and the program channels offered by the system at three subsequent points in time, corresponding to periods of high (1976), moderate (1981), and no regulation (1986). Results indicated that the level of diversity in cable programming has increased since the restrictive policy era of the early 1970s, but findings question whether cable has truly lived up to its potential for diversity. (Two tables of data are included; 19 references, a chronology of selected cable regulation/deregulation, and the typology of channel diversity are attached.) (RS)
CHANNEL DIVERSITY IN CABLE TELEVISION

by

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ABSTRACT

CHANNEL DIVERSITY IN CABLE TELEVISION

The promotion of diversity within and among media has been one of the oldest and most consistent of the stated goals of American media policy. However, early efforts at the regulation of cable by the FCC arguably limited the amount of cable diversity. Advances in technology and the advent of deregulation in the mid 1970s, on the other hand, would appear to provide cable with the potential for significantly increasing diversity. Further, support for deregulation has often been based on the argument that increased competition and diversity preclude the need for direct government intervention in the marketplace.

In the continuing policy debate over deregulation, it is important to know both to what extent the assumptions of deregulation are valid (i.e., does diversity exist?) as well as whether deregulation has finally permitted cable to live up to its acknowledged potential for diversity (i.e., has diversity increased with deregulation). This study examines levels of channel diversity for a sample of cable systems at three stages of the deregulation process. It finds that levels of diversity have increased significantly over time, suggesting that deregulation has directly and indirectly encouraged diversity in cable television. However, it also finds that cable's full potential for diversity has yet to be realized.
CABLE DIVERSITY

ABSTRACT

CHANNEL DIVERSITY IN CABLE REGULATION

Deregulation in the cable industry has been based largely on the assumption of existing diversity and competition, and on the promise of promoting diversity within the cable industry. While anecdotal evidence has been provided in support of these conclusions, there has not been any empirical confirmation of either the assumption or promise of diversity in cable.

This study examines levels of channel diversity for a sample of cable systems over time, and finds that while there has been significant increases in channel diversity, there is still considerable room for improvement.
The promotion of diversity among media sources has been one of the oldest and most consistent of the stated goals of American media policy. In the 1960s, with the increased capacity of cable systems and the advent of program importing services promoting the growth of cable, many public interest groups saw in cable the potential to bypass the technological limits of broadcasting and significantly increase the diversity of media sources available to the American public. Federal Communications Commission (FCC) regulation of cable at that time, however, seemed to be aimed more at restricting cable diversity than promoting it (LeDuc, 1973). Over the next decade, though, advances in program distribution technologies, continued growth in system capacities, and a shift in regulatory policy permitted cable the opportunity to finally live up to its potential of providing increased diversity in television.

That promise, or argument, of increased diversity in video media services and channels lies at the heart of the movement towards deregulation in television and cable; competition and diversity have been said to have grown to the point where regulation is no longer needed to insure that the public interest is served. In light of the continuing policy argument over deregulation in video industries, it becomes manifestly important to consider the various questions of diversity: does diversity exist in cable, has diversity increased or decreased under
deregulation, and to what degree? That is, it is important to not only argue that diversity exists, but to measure it, and to see in what direction that measure is going.

The significant growth of cable and other video programming services in the late 1970s and 1980s have certainly held forth the promise and potential of diversity. There have been both more, and larger, cable systems over time, and there are certainly more cable programming services available today than in the mid 1970s. But the mere number of services and/or signals is not the same thing as diversity: many services offer essentially the same type of programming, and therefore do not contribute to increased diversity. Furthermore, not all services and channels are available to all cable viewers. Thus, there is serious need to go beyond general statements regarding increased channel capacities and program choices and examine the reality of diversity in cable, to define and measure the actual degree of diversity available to cable viewers on a regular basis. Further, any measurement of diversity should take into consideration changing levels of channel capacities and in the number and nature of programming available to cable operators.

This paper will examine and measure levels of diversity in cable television over time, and consider whether the increased freedom for cable operators to select channels has, in fact, led to increased diversity in media sources for cable viewers.
Channel Diversity

Cable channel potential and regulation

Early cable systems functioned essentially as repeaters and distribution systems for existing nearby broadcast stations. As they brought in additional viewers for those broadcast television stations, early cable systems were tolerated and even welcomed by television broadcasters. This attitude quickly changed, however, when cable systems began to provide additional programming choices to viewers, as operators discovered that diversity, in the form of additional channels, attracted more subscribers and increased revenues and profits. Initial attempts to regulate cable in 1962 largely resulted from broadcaster pressure upon the FCC based upon a concern over the potential economic harm that such competition for cable viewers posed for broadcast stations (Sterling, 1982, LeDuc, 1973).

Existing broadcast stations argued that some marginal stations, particularly those in rural areas, could be forced out of business if the distant, or nonbroadcast, programming that cable systems were beginning to offer attracted a significant portion of the local audience. They argued that, while offering increased channel diversity and choices to cable subscribers, cable could result in diminished diversity for all viewers in the local market should broadcast stations be forced to cease operation because of reduced advertising revenues. Largely on the basis of this argument, the FCC imposed limits on the ability of cable systems to import distant signals into the top 100 markets. Not everyone bought this argument, however, as a House
Subcommittee on Communications inquiry the following year criticized the FCC for holding back the development of cable (Sterling, 1982). The FCC's cable regulations were revised several times over the next few years in response to various continuing criticisms. Throughout this period, however, certain limits remained on the ability of cable systems to provide additional programming choices. These restrictions were such that some critics (e.g. Kaplan, 1978, p. 161) were arguing that most cable programming consisted of "little more than a few additional channels of mass-appeal broadcast television fare and non-broadcast channels that duplicate the content of television, radio and newspapers." In other words, cable contributed little to increasing diversity in video programming.

In the mid 1970s, prompted by several court decisions, economic research showing that cable had only a limited impact on broadcast television, and a revision of the copyright provisions, the FCC began dropping many of its cable channel regulations. After years of ignoring research indicating that cable would have only limited economic effects on broadcast stations (see Park, 1970, 1971, 1972a, 1972b; Comanor & Mitchell, 1971, 1972), the FCC issued a report on its Inquiry into the Economic Relationship Between Television Broadcasting and Cable Television in 1979 confirming the lack of significant negative threat (Sterling, 1982), and the deregulation of cable began in earnest, culminating in the 1984 Cable Communications Policy Act, which effectively eliminated most national and local regulation of
cable system signal choice. Subsequent Court decisions removed one of the last restrictions on program selection by declaring the FCC's must-carry rules unconstitutional. A chronology of selected cable regulation and deregulation citations is provided in Appendix A.

As a result, cable operators have had increased freedom since the mid 1970s to select which program channels will be carried by their systems. Changes in TVRO and pay television regulations, also in the mid 1970s, fostered the development of regional and national programming services. Finally, the continuing expansion of the subscriber base has provided a growing economic base for program funding, contributing to the expansion of channels and programming available to cable operators. Cable system operators have had, therefore, increased opportunities for providing diversity in the programming offered to subscribers. Whether they have taken advantage of these opportunities to provide increased diversity to their subscribers is the focus of this paper.

Diversity in Cable Programming

Diversity has been a somewhat problematic concept in broadcasting. The basic concern over media diversity is based on the Jeffersonian concept that "truth" will emerge from the interaction and clash of diverse opinions and information in the marketplace of ideas. Recognizing the importance of this concept, the founding fathers installed the First Amendment to ensure that the government would not reduce diversity by
interfering in the marketplace of ideas, figuring that economic competition would limit the ability of private interests to limit diversity. Changes in technology, as well as the social and economic fabric of American society, seems to have led to reductions in the amount of diversity evident in recent times in many media (Bagdikian, 1983), and thus an increased concern over measuring and promoting the level of diversity in those media.

Measuring diversity in any context, however, is quite problematic, as the determination of the level of diversity depends to a large degree on the amount of difference in content which is considered to be significant enough to be considered distinctive. In broadcasting, for example, one could argue that any two programs, or even any two episodes of the same program, are different, and thus contribute to diversity. On the other extreme, it can be, and indeed has been, argued that there is no real difference among any of the programs provided by the American commercial television networks. The level of diversity evident in any analysis also depends on how comparisons are made, whether across channels, over time, or some combination of the two, and what alternative sources of diversity are considered (cf. Steiner, 1952; Owen, 1978; Levin, 1980).

A wide variety of diversity measures have been used in previous research (cf. Greenberg & Barnett, 1971; Levin, 1980; Waterman & Grant, 1987). Some critics (e.g., Owen, 1972) have indicated that traditional industry categories did not accurately reflect program types as conceptualized by audiences, and argued
for the inclusion of audience perceptions of different program/channel types in measuring diversity. Others (particularly Levin, 1971, 1980), have suggested that diversity needs to be measured not only in absolute terms, but relative to the number of channels available.

As the functional choice for cable operators is at the channel level (that is, cable operators select what programming services to be carried, and not, for the most part, what specific programs), diversity was defined for this study in terms of differences in the channels, or program services, made available to subscribers rather than in terms of specific programs. Since there may be considerable differences in channel capacity for cable systems (both across systems and over time), this study utilized several measures of diversity based on those used in earlier research. Following Levin (1971), absolute diversity was defined, and measured, as the number of different channel types carried by a cable system divided by the total number of channel types for the cable industry. Similarly, relative diversity was defined in terms of the number of different channel types divided by the channel capacity of the system. To facilitate discussion, a single, overall, indicator of diversity was created, as the average of the absolute and relative diversity measures.

**Methods and Measures**

A basic typology of program/channel types was assembled from industry sources and pretested on a sample of graduate students in communication who were familiar with cable programming. From
Channel Diversity

cable operators over the period of this study were defined and
differentiated (see Appendix B for typology). Specific
channels/services were then assigned to a single programming type
by seven separate coders, with an intercoder reliability of .914.

A random sample of 413 cable systems were selected from the
1974 TV Factbook. In choosing a sample from a time period prior
to that used for the data, potential problems with systems under
construction or in their start-up period was avoided.

Information was then collected on the capacity and size of each
system, and the program channels offered by the system, at three
subsequent points in time, roughly corresponding to periods of
high (1976), moderate (1981), and no regulation (1986), and thus
to times of ever increasing potential for diversity. Taking the
samples a few years after major shifts provided an opportunity to
consider trends in diversity. Missing values for some systems in
some years reduced the total panel sample size to 326 systems.

During this stage of the research, it was noticed that many
cable systems offered programming on a number of separate tiers,
and subscription rates indicated that many cable users did not
subscribe to advanced tiers. Since access to the programming is
crucial to the concept of providing diversity to an audience, it
was decided to also obtain a measure of diversity applied only to
those channels carried as part of basic service.
Results and Analysis

Table 1 offers sample means for the system and diversity measures being studied. The data does indicate both consistent and sizeable growth in the number of different channel types distributed by cable systems. As a result, both absolute and relative channel diversity increased from 1976 to 1986. The growth in relative diversity, however, was somewhat smaller than the increase in absolute diversity, suggesting that part of the growth in the number of different channels available to consumers was due to an expansion in the channel capacity of cable systems.

The data also indicated that diversity in the basic service tier increased less than the overall diversity measure. In fact, the increase in the level of diversity in basic tiers was only about half of the overall increase in diversity. This is a matter of some concern, as it indicates that a good bit of the available channel diversity on cable systems is available only to those consumers willing to pay extra for it.

Analysis of variance procedures, using time as the independent factor, were used to determine whether there were significant differences in diversity across the three periods. Separate analyses were performed for each measure of diversity. All resulting analyses of variances were statistically significant at a level of $p < .001$ (see Table 2), indicating that there were significantly different levels of diversity over the three periods. Further, examination of various contrasts and
Duncan's Multiple Range Test indicated that all three levels of diversity were significantly different from one another (at a level of \( p < .05 \)).

Finally, tests for trends were conducted in order to examine the linear and quadratic components of the differences in the diversity measures over time. The breakdown of these tests (given in Table 2) indicates that the trends in cable diversity can best be described by a combination of linear and quadratic forms. That is, not only does diversity seem to be increasing over time, but it is increasing at an increasing rate.

**Conclusions**

The data support the conclusion that the level of diversity in cable programming has increased since the restrictive policy era of the early 1970s. All measures of diversity examined did increase significantly from 1976 to 1986. There were more than three times the number of different channel types in 1986 than in 1976. Still, based on the results of this study, one can question whether cable has truly lived up to its potential for diversity. The growth in relative diversity is substantially less than that of the number of channels, and the relative and absolute diversity measures indicate that the average cable system offers less than half of its potential for diversity. Furthermore, less than one third of the potential diversity is available to basic subscribers. Channel diversity has increased, but is still rather low relative to its potential.
Channel Diversity

The growth in cable channel diversity seems related to cable's growth as a medium as well as changes in channel regulation. Greater system capacity and freedom inherently permits more and different channels. Increased levels of economic support provide the funding necessary to support the creation of additional programming services. Since the mid-1970s, the FCC, the courts, and the Congress have provided the cable television industry with the opportunity to expand through a series of deregulatory decisions. These decisions have arguably had not only the effect of permitting increased levels of diversity, but have contributed to the economic development and success of cable which have made the creation of diverse programming services feasible.

While the increases in diversity and deregulation have been concurrent, it should be noted that this study has not generated any direct evidence of causation. Certainly, other factors, particularly technological innovations and the continuing expansion of the cable industry, have contributed to the growth in diversity. Still, considering the evidence that early FCC regulation was harming not only cable (Comanor and Mitchell, 1971) but certain segments of over-the-air broadcasting (Park, 1972a), there is strong support for the argument that deregulation permitted and fostered the growth and expansion of cable which made diversity economically feasible.

In conclusion, this study explored the relationship that exists between deregulation and diversity in the cable television
industry. It was found that cable channel diversity had significantly increased since 1976. That result would tend to confirm one of the basic assumptions behind deregulation; that of increased competition and diversity. Further, it is likely that this increase has resulted directly from the growth of the cable industry over this period, an expansion which was made possible, and encouraged by, removal of the restrictive regulations of the late 1960s and early 1970s. In this case, at least, it would seem that the effect of deregulation in cable television has been to encourage diversity and thereby increase the common weal. Still, while the numbers of channels, and the level of diversity, as indicated through the examined measures, have increased, there is still some question as to whether cable has lived up to its full potential. As such, one must also conclude that there is still room for improvement, and a need to further monitor trends in channel diversity.
Bibliography


Inquiry into the Economic Relationship Between Television Broadcasting and Cable Television. 71 F.C.C.2d 632. (1979)


Owen, B. M. (1972) *Diversity and television*. Staff research paper by the Office of Telecommunications Policy, Executive Office of the President, Washington, DC.


Channel Diversity


### Table 1.

**Average Values over Time**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1976</th>
<th>1981</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel capacity</td>
<td>14.390</td>
<td>16.046</td>
<td>26.954</td>
</tr>
<tr>
<td>Channels not in use</td>
<td>3.845</td>
<td>4.542</td>
<td>5.972</td>
</tr>
<tr>
<td>Different channel types</td>
<td>3.798</td>
<td>5.402</td>
<td>12.617</td>
</tr>
<tr>
<td>Different channel types, basic service only</td>
<td>3.718</td>
<td>4.644</td>
<td>8.893</td>
</tr>
<tr>
<td>Relative Diversity</td>
<td>0.286</td>
<td>0.367</td>
<td>0.492</td>
</tr>
<tr>
<td>Absolute Diversity</td>
<td>0.119</td>
<td>0.169</td>
<td>0.394</td>
</tr>
<tr>
<td>Diversity</td>
<td>0.202</td>
<td>0.263</td>
<td>0.443</td>
</tr>
<tr>
<td>Diversity (basic only)</td>
<td>0.198</td>
<td>0.232</td>
<td>0.316</td>
</tr>
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</table>
Table 2.

Analysis of Variance, Test for Trends.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Source</th>
<th>SS</th>
<th>d.f.</th>
<th>F</th>
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<tbody>
<tr>
<td></td>
<td>Total</td>
<td>27.63</td>
<td>977</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Between Groups</td>
<td>7.04</td>
<td>2</td>
<td>166.8**</td>
</tr>
<tr>
<td></td>
<td>Linear</td>
<td>6.94</td>
<td>1</td>
<td>328.9**</td>
</tr>
<tr>
<td></td>
<td>Quadratic</td>
<td>0.10</td>
<td>1</td>
<td>4.7*</td>
</tr>
<tr>
<td></td>
<td>Within groups</td>
<td>20.59</td>
<td>975</td>
<td></td>
</tr>
<tr>
<td>Relative diversity</td>
<td>Total</td>
<td>26.05</td>
<td>977</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Between Groups</td>
<td>14.05</td>
<td>2</td>
<td>570.9**</td>
</tr>
<tr>
<td></td>
<td>Linear</td>
<td>12.38</td>
<td>1</td>
<td>1006.5**</td>
</tr>
<tr>
<td></td>
<td>Quadratic</td>
<td>1.67</td>
<td>1</td>
<td>135.8**</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>12.00</td>
<td>975</td>
<td></td>
</tr>
<tr>
<td>Absolute diversity</td>
<td>Total</td>
<td>21.56</td>
<td>977</td>
<td></td>
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<tr>
<td></td>
<td>Between Groups</td>
<td>10.11</td>
<td>2</td>
<td>470.8**</td>
</tr>
<tr>
<td></td>
<td>Linear</td>
<td>9.46</td>
<td>1</td>
<td>808.6**</td>
</tr>
<tr>
<td></td>
<td>Quadratic</td>
<td>0.65</td>
<td>1</td>
<td>55.6**</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>11.45</td>
<td>975</td>
<td></td>
</tr>
<tr>
<td>Diversity</td>
<td>Total</td>
<td>11.25</td>
<td>977</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Between Groups</td>
<td>2.38</td>
<td>2</td>
<td>131.1**</td>
</tr>
<tr>
<td></td>
<td>Linear</td>
<td>2.24</td>
<td>1</td>
<td>246.2**</td>
</tr>
<tr>
<td></td>
<td>Quadratic</td>
<td>0.14</td>
<td>1</td>
<td>15.4**</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>8.87</td>
<td>975</td>
<td></td>
</tr>
</tbody>
</table>

* p < 0.05  ** p < 0.001
Appendix A

Chronology of Selected Cable Regulation/Deregulation

FCC asserts authority to regulate cable.

FCC requires carriage of local signals, prohibits carriage of distant signals which duplicate programming.

1966 Second Report and Order in Docket Nos. 14895, 15233 and 15971, 2F.C.C.2d 725 (1966), aff'd, Black Hills Video Corp. v. F.C.C., 399 F.2d 65 (8th Cir. 1968).
FCC extends carriage restrictions.

FCC redefines distant signal rules, requires cable systems to obtain "retransmission consent" from stations.

FCC requires local origination on large systems.

"Anti-siphoning" rules. FCC prohibits pay cable services from showing series, most movies and most sporting events.


FCC relaxed many of the carriage restrictions, particularly for smaller markets.


FCC relaxes rules for small systems.

1976 Leapfrogging Rules--Cable Television, 57 F.C.C.2d. 625 (1976)

FCC eliminates many distant signal restrictions.


Compulsory licensing of broadcast signals by cable operators, allowed retransmission of signals without specific consent.


FCC permits use of smaller TVRO satellite dishes, reducing cost of satellite programming to cable operators.

FCC questions presumption of economic harm of cable.


Court vacates pay cable rules, imposes strict standard for further cable regulation.


FCC concludes no need for distant signal or exclusivity rules.


FCC ends regulation of distant signals.


Preempts most state and local regulation of cable.

Removes many carriage requirements.


Court vacates "must-carry" rule, as violations of First Amendment.
Appendix B

Channel Type

Local Channels:

Network Affiliates
Independent Broadcast Stations
Public Broadcasting (non-profit) Stations

Local Origination: Automated
Local Origination: Access
Local Origination: Other

National/Regional Services:

General Interest
General Interest (Movies emphasis)
General Interest (Arts/Cultural emphasis)
General Interest (Other special emphasis)

News
Sports
Business/Finance
Public Affairs
Music/Videos
Nature & Science
Weather
Religious Programming
Shopping
Adult/X-Rated Programming
Travel Programming
Foreign Language
Education

Minorities/ Special Interest
Women
Family
Children

Movies: Classic
Movies: Current
Movies: International
Movies: Combination

Other