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An Inquiry into the Acceptability of Unjustified Composition and Omission of Column Rules to Newspaper Readers

Karl E. Ruthenbeck

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AN INQUIRY INTO THE ACCEPTABILITY
OF UNJUSTIFIED COMPOSITION AND
OMISSION OF COLUMN RULES
TO NEWSPAPER READERS

BY

EARL E. RUTHERFORD

A thesis submitted
in partial fulfillment of the requirements for the
degree of Master of Science, Major in
Printing Management, South Dakota
State University

1965

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In making this report, I wish to express my great debt and appreciation to my advisor, Mr. J. K. Hvislendahl, associate professor of Journalism, to Dr. George E. Phillips, head of the Printing-Journalism Department, and other members of the Printing and Journalism faculties of South Dakota State University for their help in organizing and setting up this project and report. Appreciation is also due to many other individuals for their cooperation and assistance, particularly members of the faculty and student body of Roosevelt High School, Virginia, Minnesota, and the Virginia Junior College, and to Donald Hodnick, junior college student, who administered the questionnaire to junior college students.
AN INQUIRY INTO THE ACCEPTABILITY
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This thesis is approved as a creditable and independent investigation by a candidate for the degree, Master of Science, and is acceptable as meeting the thesis requirements for this degree, but without implying that the conclusions reached by the candidate are necessarily the conclusions of the major department.

/ Thesis Adviser

Head, Printing-Journalism Dept.
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CHAPTER I

INTRODUCTION

For several decades every conceivable cost item in newspaper production has been scrutinized to squeeze out a few pennies of savings here and there. Page shrinkage has been increased, column measures reduced, margins cut, composing machines speeded up, teletypewriters and computers introduced—all for the purpose of cutting costs.

Concurrently with the need for reduced costs, some editors feel the need for increased readability and a change in the appearance of their newspapers. At a time when "change" itself is accepted as an indicator of "progress," new styles of news presentation are sought.

Experimentation has been taking place in using the unjustified line (uneven right hand margins) as a means of moving toward the objectives of lower costs and "new" appearance. Notably, the Denver Post has adopted unjustified composition as a means of cutting costs. Also, increased use of unjustified composition for advertising copy, in both newspapers and magazines appears to reflect the feeling that unjustified type can project a new image—a more "friendly" and informal atmosphere.

Then, why do newspapers retain a typesetting style established centuries ago? (Just when did the justified line become the accepted standard?) Why must every line be the same length without regard to the number of characters in the line? How can typographers condone such practices as wide word spacing and letter spacing just to maintain the
ideal of a justified line? Why set type in justified lines if the unjustified line can be read as rapidly, or perhaps, more rapidly?

The many questions simmer down to two which appear to be most relevant: Would there be any cost-saving in setting type in unjustified lines? The second, would readers accept the unjustified line? This paper will attempt in some measure to present an answer to the second.

In Japan, for example, many printing machines are being equipped for two-column justification (columns with a marginally set type left, right, or centered on a line of type, the way of-spaced) with some printing of text and lead superimposition. Yet, as a use of self-spacing operators, machine has been limited, especially in the body material. Ideas as such of a newspaper's style are unknown.

Both the layout and the initial letter must be on the un justified style of earlier, have adapted the monospace system of the average style.

For with more of necessity for justification, especially in such operations, a printing machine with justification and various margins are necessary in the black lines. Many printing machine, letter shop and especially printer's own printer are also published in the unjustified lines as the justification, not justified, or the other with type space. The justification, besides the first of the body text and the initial letter must be adapted to the unjustified letterset, not various and unsatisfactory.

Research and practical operations are all, may be unjustified margins, a suitable letter spacing, the combination of the same type space are skilled by printing marginally unclassified settons. Moreso, in cases of the total or the local to make 10% separation are shown to be important. The justification is used up in lines.
CHAPTER II

GREATER SPEED — LOWER COSTS

Principal impetus for the change to unjustified composition has come through the demand for ever increasing speed and lower costs. That this can be accomplished by eliminating the justified line will be considered self-evident, and no effort will be made to investigate this side of the question beyond listing a few areas in which savings might result.

We know, for example, that composing machines have been equipped for years with self-quadders (devices which automatically set type left, right, or centered in a line without the use of spaces) which have speeded up ad and head composition. Yet, the use of self-quadding composing machines has been ignored completely for body composition where so much of a newspaper's costs are concentrated.

Printing Magazine and National Lithographer comments on the unjustified style as having been adopted for economic reasons by the Denver Post:

The high cost of computers for justification, according to some newspapers, is raising once again the questions as to whether or not justified right-hand margins are necessary in the first place. Many weeklies, shoppers, house organs and similar short run papers are being published with unjustified lines set in Justowriter, Variotype, or other cold type means. The Denver (Colo.) Post, however, is probably the first daily to set in unjustified right-hand margins using Fairchild perforators and TTS-operated linecasters.

Punchers and manual operators set all copy in unjustified lines, avoiding letter spacing. The remaining en or em quad spaces are filled by dropping necessary space-bands between words or spaces at the end of the line to make it full. Operators are allowed to hyphenate. Classified copy is provided typed line
for line.

The Post has nine Fairchild light-touch perforators and one multiface perforator. In addition the plant has seven Model 31 Linotypes and one Model B Intertype converted to tape operation, as well as 32 manual linecasters.

Reader reaction? According to the Post, which has been using this style for about a year, about 250 comments, mostly critical, were received. When compared with the thousands of complaints received when a comic strip was cancelled, reader reaction to the change to unjustified lines is regarded as practically non-existent.

The basic purpose behind the conversion to a non-justified style was to obtain increased productivity in punching and linecasting operations without the acquisition of a computer. Unjustified lines, in the opinion of the Denver Post, are fully justified.¹

In its style, the Post apparently uses spacebands which justify normal lines, and only short lines are filled by dropping spaces at the end. No use is made of self-quadders.

Further comment in trade publications indicates use of unjustified composition overseas as well as in America. Reproduction Methods reports on an address by Alistair McIntosh, Old Woking, Surrey, England, general director of the Grosham Press, speaking at the Second Annual Cold Type Composition Conference in Chicago. Says Reproduction Methods in an unsigned feature:

... He points out just how oddball some of the printing industry's shibboleths really are. Said McIntosh at the recent Cold Type Conference in Chicago:

"We haven't justified two lines in five years, except by accident... Get back to what readers want--99 per cent don't give two hoots about most things we do... Centered headlines

¹"When Is Unjustification Justified?" Printing Magazine and National Lithographer, LXXXVIII, October, 1964, p. 84.
and justified lines are sheer ruddy waste . . . Thank God no
one has yet thought of justifying equations . . . 1

Reproduction Methods printed a condensation of a booklet issued
by the company explaining its system. It says, in part:

There is a choice between even word spacing or even line
length (justified lines)--and although the weight of tradition
is in favor of the latter, the weight of evidence is that
readability is improved with the former. In any event, a justi-
fied page means time-wasting calculations and a second typing
line by line—an increase in cost which cannot easily be justi-
fied by any improvement in function. 2

As a summary of the savings in composition costs that might be
realized through full utilization of unjustified composition, the
following might be listed. As stated previously, they are not included
here as part of this paper's problem; only to indicate the areas in
which benefits might result from the new system. Some of these might be
self-evident while others might be subjects for further study:

1. Elimination of Word and Letterspacing by the manual operator

and the TTS punch operator. As an indication of the value of
this statement, cursory surveys were made in the composing
rooms of two daily newspapers—the Mankato Free Press at
Mankato, Minn., and the Mesabi Daily News at Virginia, Minn.

At the Free Press, two AP wire tapes and two local tapes were
analyzed for word and letterspacing. The AP tapes yielded 231

1 "The Case for Unjustified Type," Reproduction Methods, V,

2 Ibid., p. 32.
lines of which 51 had thin spaces added above the spaceband perforation, while 11 had en spaces added with the spaceband. This totalled 62 lines that required additional spacing—one out of every 3.73 lines. (None of the lines were letter-spaced although one line used two spacebands and two en spaces between its words.) The two local tapes produced 320 lines of which 39 had thin spaces added on top of the spaceband, eight had letterspaced words, and one had en spaces with the spacebands. This totalled 48 spaced lines or one line in 6.66.

At the Daily News, two local tapes were obtained for analysis and two galleys of type were set manually. The tape produced 256 lines of which 66 had thin spaces added, six had two spacebands and a thin space, and 21 had letterspaced words, adding up to 93 lines—one out of 2.75 lines. For the manually produced type, 241 lines were set, and none were spaced unless spacing was required to cast. Wide range spacebands were used on the linecasting machine. Seventeen lines required spacing (en spaces), or one out of 14.18 lines. Catchlines, code lines, heads, dashes and similar lines were not counted in the computations.

2. Frees the Operator of the Mental Calculation required of each line as to whether it is full enough to justify.

3. Could Eliminate Use of Spacebands. With the use of the quaddor, no spacebands would be required, eliminating their cost, the time and trouble of cleaning two or more times each
shift, and the trouble they cause in the assembler in tape operation. The regular TTS thin space is a 3-em space, which would be near the ideal for spacing between words.

These could be used instead of spacebands. There would be only 22 spaces in the magazine channel, but a second channel might be used, alternating between the two as is done with the double e-channel attachment.

4. **Elimination of Expensive Equipment.** Expensive computers, used by some large metropolitan newspapers to justify copy, could be eliminated. It would also eliminate the double typing required by some cold type systems, or sending the tape through a second unit, such as the Justewriter.

5. **Elimination of "Loose" Lines.** On hot metal composing machines, "loose" lines would be eliminated—with the troubles they cause—by using the self-quadder. All lines would be the correct tightness for casting. This would eliminate hair-lines, breaking down the walls of the matrices, squirts, etc.
CHAPTER III

WILL READERS ACCEPT IT?

Printing industry publications indicate interest is prevalent in unjustified composition. While some view it as a passing fad or a novelty, others have given it serious consideration.

Jack Z. Sissers, typographer from Northwestern University, writing in the 1964 Penrose Annual, mentions the use of unjustified composition as an innovation in newspaper design by several American newspapers, chiefly the New York Tribune and the Denver Post. He discusses the necessity and importance of innovations to present day newspapers:

So there are some newspaper editors in America who are providing real innovations in their designs. Is innovation in design necessary? What do the editors who provide design innovations hope to gain by their actions? There are probably two major answers to the latter question. One is the editors hope to compete more favorably with other media and activities which take readers away from their newspapers. The new designs are not only easier to read, but they are exciting to look at. Television, magazines, radio, and books all compete for a reader's time. Each of them has something exciting to offer the reader. Now it is possible that a fascinating, new design may make reading newspapers pleasurable.

The second answer is that design innovation may make newspapers look truly modern or reflect a modern up-to-date spirit. Almost all products which Americans buy reflect the contemporary spirit. Clothes, automobiles, refrigerators, appliances of all kinds, and the architecture of buildings all look quite different than their counterparts of twenty-five years ago. Packaging too has undergone striking design changes. If the design of a newspaper may be considered equivalent to the packaging of a product, then there is need for modern packaging. While the package itself does not affect the contents very much, the purchaser probably feels that the package is symbolic of the contents. Quality products packaged in an ugly way may be thought to be of lesser quality.
Both answers to the question are also related to the communication process, where a contemporary design facilitates the transmission of news from the publisher to reader. Gyorgy Kepes, a noted graphic designer, commented on this subject when he wrote:

The laws of visual perception are conditioned by the visual habits of time. Visual communication can be efficient only if it adapts itself to the new landscape and the new psychology of contemporary man. Book design (and newspaper design) to be efficient, must make significant adaptations to the contemporary scene. (Bracketed words are Mr. Sissors').

In conclusion then, changes in newspaper design are being made, although only a few represent major innovations. The necessity for some kind of change is becoming obvious to publishers and editors. Since the movement towards change is growing, innovations in design should come if only as part of a slow evolutionary process. Newspaper design should then be as modern as are most other American products.2

Alexander Lawson, writing in his "Composing Room" department in The Inland Printer and American Lithographer, discusses trends in composition, but takes the stand of traditional typographers that only the justified line is true craftsmanship. Although he admits flush left typesetting has the advantage of a standard fixed space between words, and that readers have some familiarity with the style, he feels it is not esthetic:

The acceptance of computers for preliminary steps in typesetting has brought further demands for re-evaluation of procedures in straight-matter composition, particularly in the narrow-column widths required by daily newspapers.

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The high cost of computers which are designed to program word division, compared to those models which are not so designed, has prompted a number of experiments, or perhaps re-examinations of acceptable standards of legibility in typesetting. There is indeed some doubt that automated typesetting will be any improvement whatsoever on time-honored practices.

It is becoming increasingly apparent that the new technology is bringing into the composing room a group of engineers who are impatient with existing standards of quality in the setting of type. Whenever the question of good spacing is introduced, there is a general murmuring about obsolescent craft-oriented methods "which need to be overhauled—but quick!"

Most investigators of typographic legibility during the past 30 years are agreed upon one point—spacing. A leading typographic authority, Stanley Morison, has stated, "Spacing, in fact, is more important than choice of size or design of type." It is then reasonable to assume that only further denigration of quality can result from the continuing demand for reduced costs.

One of the suggestions already made for newspaper composition is simply to eliminate hyphenation by putting all the spacing for justification between the words. In a line of 11 picas, such a solution would appear to run counter to all precepts of legibility.

A moderate space between words allows a certain number of words to fall within the eye-span of the reader. Therefore, a deliberate spacing cut would slow the reader down. Admittedly, the problem is not so severe within the length of a newspaper line as it would be in a measure suitable for a book, but there would also be considerable loss in the amount of copy which could be set in a column, a factor of concern to most editors.

Another approach to a reduction of word-breaks is to set each line flush left. A definite advantage to this method would be the standard fixed space between words. There would be practically no loss of space, since in a narrow column the flush style is as productive as full length lines.

In recent years, there has been a great deal of interest in thought-unit composition, which is adaptable to books but would be of limited value in newspapers. In thought-unit composition, the lines break at the end of a thought or at rhythmic points. While this style is commendable in certain books which are difficult to read, it requires lavish space, and in newspaper composition the economic use of space is a prime consideration. Furthermore, the style of newspaper writing does not require a break-down into thought sequences since it must be simple enough for instant comprehension.

The flush-left style is of course familiar to most readers through the medium of typewritten copy. It is also commonly used by advertising designers. But eight columns of flush-left lines in a full newspaper page may present an unfamiliar appearance to the reader.
This familiarity factor is extremely difficult to assess, but it nevertheless exists. Probably the first researcher to discuss this is Sir Cyril Burt, the British psychologist and world authority on the legibility of print. Mr. Burt states: "In practice legibility is not merely a matter of the size and shape of the black marks on the white paper or of the physiological efficiency of the eye; there is also what may be called (in the fashionable phrase) a 'psychosomatic' influence at work; printed matter seems more legible, and reading becomes more accurate and quick, when the material is set in a type which the reader, perhaps without realizing it, finds esthetically pleasing."

Mr. Burt also cited the difficulty encountered in changing the style of the British Journal of Statistical Psychology. Readers complained that the periodical no longer looked like the Journal, and subsequently found it hard to read.

The consequences of the introduction of automation in typesetting are just beginning to be recognized. It is quite obvious that there will be no simple solution. On the one hand are the printers who—ever since the invention of movable type—have been concerned with the basic relationship of typography to comprehension and understanding. In opposition are the engineers with fresh viewpoints and the desire to improve existing procedures.

We need to attempt, at the very least, an improvement in quality in addition to an increase in production. That has been the history of the printer's craft for 500 years, and it need not change, even when the pace is more rapid. If the lessons of the past may be taken as examples, we may witness a distinct lowering of esthetic quality until a rebellion of taste permits a revival on the terms of the craftsmen.1

Mr. Lawson appears to make two assumptions which are relevant to our problem. First, that unjustified columns cannot be handled in a manner which would be esthetically pleasing and, second, that readers want their newspapers to go on looking the same, year after year.

These quotations indicate unjustified composition is receiving serious consideration, and that, perhaps, a new dynamic style may evolve from it. Some of the advantages that could be suggested for adopting unjustified composition might be as follows:

1. **Better Word Spacing.** Spacing between words can be kept to the ideal of a 3-em space, or altered as desired without submitting to the vagaries of the Linotype spaceband. Closer spacing enables the eye to include more words at a fixation, increasing reading speed. With better word spacing, the line hangs together better, and stands out more distinctly as a line, lessening the need for generous spacing between lines.

2. **Elimination of Letterspacing.** Jarring and sometimes incomprehensible letterspacing so common in the narrow newspaper column would be entirely eliminated.

3. **Offers a New and Different Appearance.** Promises to be the first real innovation in newspaper design in many years.

4. **Gets More "Air" into the Page.** Redistributes the available white space in a page from excessive space between words, where it is not needed, to between columns where it can aid the reader.

5. **Columns Might Be Brought Closer Together.** With added space at end of lines, less space might be needed between columns to provide optical separation of columns.

One serious obstacle stands in the way of wide adoption of unjustified composition—the belief that reader reaction would kill
any publication trying it. But just how would newspaper readers react to such a style? Is there universal hostility to a ragged right margin? That is the answer this paper is seeking. The question appears to be one that will have to be answered before any sizable number of newspapers will make the plunge. A few bold experimenters have crossed the line—but will others follow?

While justified lines appear to be important, perhaps they are important only to the typographer who has been tied to that form all his life. Some evidence exists to show that the reader is concerned, not so much with form, as with actual readability.¹

The purpose of the research reported in this paper was to set up a problem to determine reader reaction to the left-flush style for body type. Typical newspaper readers were asked to compare various methods of handling news copy with the standard justified column with column rules. Since unjustified type has the effect of letting more "air" into the page, this problem was expanded to include reader reaction to omission of column rules, a device used in recent years on the premise that it aids readability. It was, also, considered possible that the presence or absence of column rules might have an effect on the acceptance or rejection of unjustified columns.

Four choices were offered in comparison to the standard style:

1. Standard justified column with 12 points of space between columns instead of rules.

2. Unjustified composition with column rules.

3. Unjustified composition with 12 points of space between columns instead of rules.

4. Unjustified composition with 6 points of space between columns instead of rules.

The question to be answered was stated as follows:

When offered a choice, do readers significantly prefer the justified column over the unjustified column and do they prefer column rules over space between columns?
CHAPTER IV

INSTRUMENTS USED IN THE SURVEY

Plan

To compare reader reaction to the different styles of setting newspaper body type, a front page was set in five different formats, using justified and unjustified lines. These were shown to an interviewee in pairs. The interviewee was then asked to indicate which he felt he could read more rapidly. This was believed to be an indication of which format was more acceptable to him. Only this one question of which page could be read more quickly was used as the main part of the survey inasmuch as a similar study conducted by Mr. J. K. Hvistendahl has shown that "read more quickly" and "most attractive" are questions which are functionally related and yield substantially the same answers.\(^1\) As a check on the first part of the survey, however, it was decided to show the interviewee all five pages simultaneously and ask him to select the page he "liked best."

Page Specimens

The front page of The Publishers' Auxiliary was selected; first, as a newspaper with which the public would not be familiar and,

second, to help identify printers and journalists if they were not known to the interviewer. It was believed that printers and journalists, having definite opinions on style, would not be suitable subjects for the survey.

The tabloid size was selected as representative of a trend in newspaper size and, also, to be more convenient in administering the survey. A page making prominent use of photographs was selected to reflect the trend to greater use of pictures.

In composition for the justified pages, the body type was 8-point No. 1 Excelsior on a 9-point slug, 11 picas. Justification was done in the normal manner, using wide-range spacebands, and word and letterspacing when necessary. For the unjustified composition, the same type and slug sizes were used. Instead of spacebands, a .058 thin space was used between words to approximate the 3-em space used in Taletypesetter operations. In both styles, words were hyphenated when necessary in the usual manner.

Heads were set in various Spartan faces to be similar to the original page and in tune with the popular trend. The top head was set left flush while the other two were set to the left but indented an en-
"Kickers" were used on two heads. For each of the five pages the display elements were left unchanged.

The pages were made up as follows:

A - Set in traditional style using justified type with 6-point hairline rules between columns.
B - Justified type was used with 12-point slugs between columns instead of the rules.

C - Unjustified type with column rules.

D - Unjustified type with 12-point slugs instead of column rules.

E - Unjustified type with 6-point slugs instead of column rules.

Page A was the standard which provided the basis for comparison. Page B was used to determine reader reaction to absence of column rules since this type of makeup has been advocated by typographers as promoting reading ease. Pages C and D were used as counterparts of A and B, using unjustified composition. Page E was introduced to determine if a slight difference in handling the columns—in this case bringing them closer together—would make unjustified composition more palatable to the reader.

The Questionnaire

The questionnaire was planned to provide data on reader preference by sex, age, education, speed of reading, and extent of reading.

Age classification was provided to divide interviewees into high school, post high school to age 25, and into 10-year age spans thereafter. This division, however, was felt to be meaningless and the subjects were redistributed into three major groups: high school, junior college, and adult. The adult division was then divided into
three sections of below 35 years, 36 to 55, and over 55. This was done on the premise that the 36-55 group would include the major news consumer group.¹

In order to determine the effect of education on the readers' choices, the respondents were divided into four groups: those having had an eighth grade, a high school, a junior college, or a senior college education. The junior college classification was included because of the presence of junior colleges in the area.

To compare slow with fast readers, and meager with extensive readers, two questions were included which asked subjects to rate themselves according to reading speed and the number of newspapers they read. This is by no means an accurate method of obtaining the information, but was used as the only practical way for this survey.

To record the subjects' choices, a table was provided on the questionnaire giving six different random orders of presentation. The table was prepared as follows: With the use of five different pages, ten different combinations of pairs are possible. Slips were prepared for each possible pair: AB, AC, AD, AE, BC, BD, BE, CD, CE, DE. These were placed in a box and drawn to obtain a random order. This was repeated until six different orders were obtained.

The questions asked the subject to indicate which of each pair he felt he could read more rapidly. The term "rapidly" was used to indicate reading ease, ease being assumed to be the prime consideration for most readers.  

As a final question, the subject was shown all five pages at the same time and asked to pick the one he "liked best." At the beginning of the survey, a question was included asking him to select the page he considered to be most modern in appearance, but this was dropped. The term "modern" as applied to newspapers appeared to be meaningless to most readers who had difficulty making any other selection than the one they liked best.

**Procedure**

In administering the survey the interviewer and interviewee were seated at opposite sides of a table. The interviewer laid out the five pages in front of himself, face down, each marked by a letter on the back. For the first six subjects, the A page was on the left of the interviewer and the E page was on the right; for the next six interviews the order was reversed. This was done to avoid a tendency to pick either the right or left hand one.

The interviewer explained that the cards were five front pages of a newspaper, the same page in each case except that the text type was

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1Barnhart and Jones, *loc. cit.*
handled differently. The question was then read to him and the pages turned over and shown to him in pairs. As he indicated which he felt he could read more rapidly, the letter was circled on the questionnaire by the interviewer. He was then shown all five pages and asked to select the page he "liked best," and this letter was checked by the interviewer. The subject was finally handed the questionnaire and asked to check the answers to questions 2, 3, 4 and 5. Sometimes this was done before the test was administered.

All of the interviewing was done by the writer except for the junior college group. While the survey was conducted on a non-random basis, an effort was made to make the sampling as varied and representative as possible.

For the high school group, 25 interviews were obtained from the writer's beginning graphic arts class at the beginning of the year before opinions on proper printing style had been formed. An additional 25 were obtained on a combined random and volunteer basis from a high school study hall; those selected at random were given the opportunity to refuse if they did not wish to participate.

For the junior college group, a college boy on the staff of the college paper was employed to obtain 50 interviews in the college lounge. He was instructed to use only the questions as printed on the questionnaire and in no case explain the difference in the pages.
CHAPTER V

ESTIMATES OF READING SPEED

In estimates of reading speed, the standard justified lines were significantly preferred in all comparisons of the two unjustified pages with the three unjustified formats. A significant preference also appeared for the column rules. In establishing the significance of the results in these comparisons, the sign test was used.\(^1\) The sign test, based on chi-square, employs the following formula:

\[
x^2 = \frac{(A - B) - 1}{A + B}
\]

and B: number of selections for Page B.

Page A, using justified lines with column rules, as expected, was significantly favored over the three unjustified sample pages well beyond the .001 level. Page B, same as Page A but with column rules omitted, also showed preference over the unjustified pages beyond the .001 level of significance.

Whether column rules were used, or whether columns were spaced 12 or 6 points appeared to have little effect on the choices made when the unjustified pages were compared with the standard Page A. In comparison with Page B (no column rules), a significant rise was noted in the choices made for Page C (the unjustified format using column rules). This difference was significant at the .02 level using the

chi-square test. When Page B was compared with Pages D and E (unjustified pages using 12 and 6-point slugs instead of column rules) the results were almost identical with those obtained when these two pages were compared with Page A.

When the two justified pages (A and B) were compared, a significant preference (at about the .05 level) was found for the page using column rules. This might reflect the fact that column rules were used by the principal newspapers in the area of the state in which the sampling was done, and readers may have consciously or unconsciously responded to that which was familiar to them.

This preference for column rules continued in the comparisons among the three unjustified pages. The unjustified page with column rules (Page C) was significantly preferred beyond the .001 level when compared with the unjustified pages which substituted 12 and 6-point slugs for the rules.

In comparing the 12-point space between columns with the 6-point space, as applied to the unjustified page, a preference appeared for the wider space significant at the .01 level.
Table 1. Reader Estimates of Reading Speed

<table>
<thead>
<tr>
<th>Format</th>
<th>Significantly preferred to</th>
<th>Level of significance ($X^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Justified lines with column rules</td>
<td>B. Justified/12-pt. space</td>
<td>.05</td>
</tr>
<tr>
<td></td>
<td>C. Unjustified/rules</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>D. Unjustified/12-pt. space</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>E. Unjustified/6-pt. space</td>
<td>*</td>
</tr>
<tr>
<td>B. Justified lines with 12-pt. space</td>
<td>C. Unjustified/rules</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>D. Unjustified/12-pt. space</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>E. Unjustified/6-pt. space</td>
<td>*</td>
</tr>
<tr>
<td>C. Unjustified lines with column rules</td>
<td>D. Unjustified/12-pt. space</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>E. Unjustified/6-pt. space</td>
<td>*</td>
</tr>
<tr>
<td>D. Unjustified lines with 12-pt. space</td>
<td>E. Unjustified/6-pt. space</td>
<td>.01</td>
</tr>
</tbody>
</table>

*Significant beyond the .001 level
CHAPTER VI

READER SELECTIONS OF BEST LIKED PAGES

A significant preference for justified composition was shown when subjects selected the page they "liked best."

No significant difference developed between the two justified pages, one with column rules (Page A) and the other with 12-point spacing instead of the rules (Page B). Similarly, there was no significant difference between the two corresponding unjustified pages, one with rules (Page C) and the other with 12-point spacing (Page D).

The two justified pages—using column rules (Page A) and 12-point spacing (Page B)—were preferred over the corresponding unjustified pages (C and D) by similar margins. Because of the similarity of the number of first choices made for A and B, and for C and D, these were grouped and compared for the chi-square test—A & B against C & D. The significant difference between these two groups was beyond the .001 level of significance.

Pages A, B, C and D were then grouped for comparison with Page E, the unjustified page using 6-point spacing between columns. This difference was significant at the .01 level.

This section of the survey in which the "best liked" pages were selected was substantially in agreement with the first section (Chapter V) in which the interviewees selected the page he believed could be read more rapidly. The margin of preference, however, in
this section (liked best) dropped to non-significant levels in two comparisons—between Pages A and B and also between Pages C and D—which had shown significant preference differences in estimates of reading speed.

### Table II. Reader Selections of Best Liked Pages

<table>
<thead>
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<th>Format</th>
<th>Significantly preferred to</th>
<th>Level of Significance ($x^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Justified lines</td>
<td>C. Unjustified/rules</td>
<td>*</td>
</tr>
<tr>
<td>with column rules</td>
<td>D. Unjustified/12-pt. space</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>E. Unjustified/6-pt. space</td>
<td>*</td>
</tr>
<tr>
<td>B. Justified lines</td>
<td>C. Unjustified/rules</td>
<td>*</td>
</tr>
<tr>
<td>with 12-pt. space</td>
<td>D. Unjustified/12-pt. space</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>E. Unjustified/6-pt. space</td>
<td>*</td>
</tr>
<tr>
<td>C. Unjustified lines</td>
<td>E. Unjustified/6-pt. space</td>
<td>.01</td>
</tr>
<tr>
<td>with column rules</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Unjustified lines</td>
<td>E. Unjustified/6-pt. space</td>
<td>.01</td>
</tr>
<tr>
<td>with 12-pt. space</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant beyond the .001 level
CHAPTER VII

PREFERENCES ACCORDING TO DEMOGRAPHIC DATA

Estimates of Reading Speed

Estimates of reading speed for the various pages were not significantly affected by the readers' sex, age, education, reading ability or reading extent. In this respect, the findings of this survey were similar to other surveys of a similar nature. While some differences are shown in the compilation, these were found not to be significant by the chi-square test, or were possibly caused by sampling errors.

Sex: A significant difference between the sexes in their estimate of which page could be read more rapidly appeared only in one comparison. While both preferred the standard justified page with column rules (Page A) over the unjustified page with 6 points space (Page B), female readers gave Page A a much heavier margin of preference than did the males. According to the chi-square test this was significant at the .04 level.

Age: Among the adult group of interviewees, age had no significance in selections made in the ten comparisons. Selection of subjects for this group was made to favor the 36 to 55 age group and consisted of about one-half of the interviews made. The "up to 35" age group made up about one-third of the total, and "over 55" age group about one-sixth,

\[\text{Hiwtkan, loc. cit.}\]

\[\text{See Table 1, Appendix.}\]
As a result, any difference among the groups may have been due, in part, to the smaller number in the younger and older age groups.

Some differences in degree appeared when high school students, junior college students, and adults were compared. While there were no reversals, the junior college group favored the traditional justified page with column rules over the unjustified pages, generally, by larger margins than did the high school and adult groups. Noteworthy here was the selection of the justified page without rules (Page B) over the unjustified page with rules (Page C). The high school and adult groups did not make a significant distinction between these two pages while the junior college group favored the justified page beyond the .001 level by the sign test.

The high school and adult groups, also, did not distinguish significantly between two unjustified pages, one with 12-point spacing and the second with 6-point spacing between columns. The junior college group, however, selected the 12-point spacing at the .004 significance level.

Differences between these groups might be ascribed to differences in administration of the survey. The high school group was surveyed by a teacher in a classroom, the adult group by an adult usually in the interviewee's home, while the junior college group was interviewed by a college student in the college social room. These variations may have affected the results to some extent.

Following is the table showing significance of selections made by the three groups:
Table III. Estimates of Reading Speed by High School, Junior College, and Adult Groups

<table>
<thead>
<tr>
<th>Format</th>
<th>Significantly preferred to:</th>
<th>Level of significance ($X^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>50 HS</td>
</tr>
<tr>
<td>A. Justified lines with rules</td>
<td>Justified/12-pt. space</td>
<td>none</td>
</tr>
<tr>
<td>B. Justified lines with rules</td>
<td>Unjustified/rules</td>
<td>.03</td>
</tr>
<tr>
<td>C. Unjustified rules</td>
<td>Unjustified/12-pt. space</td>
<td>.001</td>
</tr>
<tr>
<td>D. Unjustified/12-pt. space</td>
<td>Unjustified/6-pt. space</td>
<td>*</td>
</tr>
<tr>
<td>E. Unjustified/6-pt. space</td>
<td>Unjustified/12-pt. space</td>
<td>.007</td>
</tr>
<tr>
<td>F. Unjustified/6-pt. space</td>
<td>Justified/12-pt. space</td>
<td>none</td>
</tr>
</tbody>
</table>

*Beyond .001 by sign test.

Education: No significant difference resulted among those adults with an eighth grade, high school, junior college, or senior college education in their selection of pages which could be read more rapidly.

Reading Rate: No significant difference in choices was made by interviewees who classed themselves as slow, average, or fast readers.

Reading Extent: No significant difference in choices was made by those who read few newspapers, an average number, or more than most people.
Best Liked Pages

On the second part of the questionnaire, in which interviewees were asked to select the page they "liked best," sex, age, education, reading speed and reading extent appeared to have no significant effect on the choices made.

Sex: In the compilation of first choices there appears to be a difference between the sexes, an apparent reversal in selections for the two justified formats, one with rules and the other with 12-point spacing (Pages A and B). In submitting the Male and Female columns to the chi-square tests, however, the difference between the two columns was not found to be significant.

Age: The adult group, classified according to age, did not produce a significant difference in first choices of "best liked" pages among young, middle aged, and older readers. The high school and junior college student groups\(^2\) did not make choices significantly different from the adult group.

Education: The adult group when classified according to education appeared to produce a difference between those with a college education as compared to those with a high school and junior college education. Again these differences were not found to be significant.

\(^1\)See Table 2, Appendix.

\(^2\)See Tables 3 and 4, Appendix.
Reading Speed: Using rate of reading as a criterion, in which subjects interviewed were asked to classify themselves as readers of below average speed, average speed, or above average speed, the "under" and "over" average speed readers appeared to favor the justified format without column rules (Page B), while the reader of average speed appeared to favor the justified format with column rules (Page A).

This difference did not reach the .05 level of significance, however.

Reading Extent: No significant difference was found in first choices of "best liked" pages among readers of average number of newspapers, as compared with readers who classified themselves as under average or over average in number of newspapers read.
CHAPTER VIII

SUMMARY AND CONCLUSIONS

Summary

In order to determine the acceptability to newspaper readers of unjustified type composition and omission of column rules, sample pages were printed for this survey offering the following choices:

A - Justified lines with column rules
B - Justified lines with columns spaced 12 points
C - Unjustified lines with column rules
D - Unjustified lines with columns spaced 12 points
E - Unjustified lines with columns spaced 6 points

This survey was divided into two sections. Using the above pages, interviewees were first asked to select the page they felt they could read more rapidly when shown to them in pairs. Second, the interviewees were then asked to select the page they "liked best," viewing the pages at the same time.

Although the survey included interviews made in several communities, principal newspapers in the area used justified composition with column rules. This possibly affected the results of the survey.

Reading Speed: On the basis of opinions as to which page could be read more rapidly, the following preferences were shown:

1. Justified lines were preferred in each instance when compared with page formats using unjustified composition.
2. Column rules were preferred in comparisons of pages employing
the same style of composition. Between the two pages using justified type, the page with rules was preferred, and among the three pages using unjustified type, the page with rules was preferred.

3. On the basis of the high school, junior college and adult groups individually, there was no significant difference in preference between the two justified pages, one using column rules and the other 12-point spacing (Pages A and B). When these three groups were combined, however, the preference of Page A over Page B became statistically significant at the .05 level.

4. On the basis of the adult and high school groups, the survey revealed little difference between the two unjustified pages which omitted column rules—one using 12 points space between columns and the other using 6 points space.

_Best Liked Page:_ When interviewees were asked to select the page format they "liked best," results were very close to those obtained under the "rapid reading" question. The pages were preferred in the following order:

1. Justified composition with column rules
2. Justified composition with columns spaced 12 points
3. Unjustified composition with column rules
4. Unjustified composition with columns spaced 12 points
5. Unjustified composition with columns spaced 6 points
Under this question, however, the margin of preference was not significant between the two justified composition formats (Pages A and B), and between the first two unjustified formats, one using column rules and the other 12 point spacing (Pages C and D).

Demographic Variants: Sex of the reader, his age or education appeared to have little significance in the choices made. Results also were not affected by the subject's ability to read rapidly, or by the number of newspapers he was in the habit of reading.

Conclusions

The following tentative conclusions may be drawn from the results of the survey:

1. This survey has shown only that a preference for justified composition and column rules exists at the present time in an area where readers are most familiar with this format. It does not indicate what readers who have become accustomed to omitted column rules would prefer.

2. This survey has shown only that a preference does exist, but does not indicate in any way the strength of this preference, in resisting change to unjustified composition. Further surveys in depth might be required to measure the strength of this preference.

3. Preference for the justified format does not appear to be overwhelming. Before the survey was begun, a preference for justified composition was expected on the basis of familiarity. Opinions on the meaning of the results may vary, but it
would appear that the survey does not indicate complete 
rejection of unjustified lines. Roughly, one-fourth of those 
terviewed selected the unjustified style. When it is 
remembered that readers were comparing the familiar with the-
at the moment-unfamiliar this conceivably may not be a 
decisive margin.

4. This survey would appear to indicate that there would be 
some resistance to the change to unjustified composition.

Consequently, a newspaper contemplating this change should 
do so gradually, or after conducting an educational campaign 
as is usually done by newspapers adopting a new body type.

5. More study and experimentation is needed. A change to un-
justified composition might be regarded as a major change in 
newspaper style requiring an entirely different makeup 
technique. Experimentation might include the following:

a. Further experimentation with front page makeup. The 
"horizontal" style might be more suitable for unjusti-
fied composition than "vertical" makeup, or possibly 
something entirely new.

b. Experimentation with headlines should also be done. 
Are flush left, centered, flush right, or indented 
heads best for unjustified body composition?

c. Further experimentation with column rules. Perhaps 
use of rules around a news story but not within it 
may be more appropriate than use of rules between all
columns or complete omission of rules. This survey tended to show that presence of column rules makes unjustified type more palatable to the reader.

d. Experimentation should be done with line lengths. Perhaps a longer measure, such as 15 pica, might be more acceptable in the unjustified form than the standard 11-pica column.

Observations

1. In interpreting this survey, observation should not be ruled out entirely in favor of statistical results. Although no record was kept, a noticeable number of subjects were puzzled when shown the pages—they could see no difference in the pages. As a result, perhaps unconsciously, they tended to select the page which was more familiar. This would indicate some newspaper readers would not notice the change to unjustified composition, nor be disturbed by it.

2. In administering the survey, observation appeared to reveal two types of subjects: those who made rapid, first impression choices, and those who attempted to make a studied, meaningful response. The former group tended to favor the justified format. The second group switched back and forth and tended to favor the unjustified format, with such comments as, "There appears to be more space between the lines," and "I can see more words in my narrow eye span." No statistics were kept to verify this, however.
LITERATURE CITED


APPENDIX I
Table 1. Tabulation of Reader Estimates of Reading Speed

<table>
<thead>
<tr>
<th>Age Group*</th>
<th>Education*</th>
<th>Reading Rate</th>
<th>Newspapers Read</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age to 36</td>
<td>36 to Over</td>
<td>8th Sr. Jr. Sr. Under</td>
<td>Av.</td>
</tr>
<tr>
<td>A</td>
<td>50</td>
<td>50</td>
<td>18</td>
</tr>
<tr>
<td>B</td>
<td>45</td>
<td>45</td>
<td>13</td>
</tr>
<tr>
<td>C</td>
<td>73</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td>A</td>
<td>22</td>
<td>31</td>
<td>5</td>
</tr>
<tr>
<td>D</td>
<td>73</td>
<td>75</td>
<td>24</td>
</tr>
<tr>
<td>B</td>
<td>22</td>
<td>30</td>
<td>7</td>
</tr>
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<td>87</td>
<td>23</td>
</tr>
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<td>18</td>
<td>8</td>
</tr>
<tr>
<td>B</td>
<td>53</td>
<td>67</td>
<td>19</td>
</tr>
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<td>C</td>
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<td>12</td>
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<td>81</td>
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</tr>
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</tr>
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<td>73</td>
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</tr>
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<td>32</td>
<td>5</td>
</tr>
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<td>E</td>
<td>39</td>
<td>43</td>
<td>14</td>
</tr>
</tbody>
</table>

*These categories do not include high school and junior college students.
Table 2. Reader Selections of Best Liked Pages (Number of First Choices)

<table>
<thead>
<tr>
<th>Page</th>
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<th>55</th>
<th>55</th>
<th>Gr. HS</th>
<th>Col. Col.</th>
<th>Reading Rate</th>
<th>Newspapers Read</th>
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</thead>
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<td>8</td>
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<td>9</td>
</tr>
<tr>
<td>B</td>
<td>38</td>
<td>35</td>
<td>12</td>
<td>20</td>
<td>5</td>
<td>7</td>
<td>14</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>C</td>
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<td>5</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>11</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>D</td>
<td>11</td>
<td>10</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>0</td>
<td>2</td>
</tr>
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<td>4</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

*These categories do not include high school or junior college students.*
Table 3. Choices of 50 Junior College Students

<table>
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<th>Page</th>
<th>Sex</th>
<th>Reading Speed</th>
<th>Reading Extent</th>
</tr>
</thead>
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<td></td>
<td></td>
<td>Below Av. Age Above</td>
<td>Below Av. Age Above</td>
</tr>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>12</td>
<td>4 21 5</td>
<td>9 20 1</td>
</tr>
<tr>
<td>B</td>
<td>9</td>
<td>4 12 4</td>
<td>5 14 1</td>
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<tr>
<td>C</td>
<td>3</td>
<td>1 8 7</td>
<td>2 9 0</td>
</tr>
<tr>
<td>D</td>
<td>20</td>
<td>5 23 7</td>
<td>12 26 2</td>
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<tr>
<td>E</td>
<td>5</td>
<td>1 2 3</td>
<td>1 5 0</td>
</tr>
<tr>
<td>B</td>
<td>17</td>
<td>7 26 5</td>
<td>12 24 2</td>
</tr>
<tr>
<td>C</td>
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<td>1 7 4</td>
<td>2 10 0</td>
</tr>
<tr>
<td>B</td>
<td>19</td>
<td>8 29 8</td>
<td>12 26 2</td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>1 4 0</td>
<td>1 2 0</td>
</tr>
<tr>
<td>B</td>
<td>20</td>
<td>8 30 9</td>
<td>13 32 2</td>
</tr>
<tr>
<td>E</td>
<td>1</td>
<td>0 3 0</td>
<td>1 2 0</td>
</tr>
<tr>
<td>C</td>
<td>14</td>
<td>4 24 7</td>
<td>11 22 2</td>
</tr>
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<td>D</td>
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<td>3 12 0</td>
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<td>C</td>
<td>19</td>
<td>4 27 6</td>
<td>12 26 2</td>
</tr>
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<td>E</td>
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<tr>
<td>D</td>
<td>15</td>
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</tr>
<tr>
<td>E</td>
<td>6</td>
<td>3 9 2</td>
<td>5 8 1</td>
</tr>
</tbody>
</table>

LGKED BEST

|        | 7   | 13 2 15 3 | 8 11 1 | 20 |
|        | 11  | 13 4 14 5 | 4 19 1 | 24 |
|        | 2   | 1 2 0 2 1 | 0 3 0 | 3 |
|        | 1   | 2 0 2 1 | 0 3 0 | 3 |
|        | 0   | 0 0 0 0 | 0 0 0 | 0 |
Table 4. Choices of 50 High School Students

<table>
<thead>
<tr>
<th>Page</th>
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<th>Reading Speed</th>
<th></th>
<th></th>
<th>Reading Extent</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Below Av.</td>
<td>Above Av.</td>
<td>Below Av.</td>
<td>Above Av.</td>
<td>Total</td>
</tr>
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<td>B</td>
<td>9</td>
<td>13</td>
<td>3</td>
<td>17</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>C</td>
<td>14</td>
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SURVEY OF READERS' OPINIONS ON NEWS TYPOGRAPHY

DATE ........................................ CITY ........................................

1. Please check:
   Male     Female

2. Check your age group:
   15 - 18
   19 - 25
   26 - 35
   36 - 45
   46 - 55
   56 - 65
   Over 65

3. Indicate highest school unit completed:
   Finished 8th grade
   Finished high school
   Finished junior college
   Finished senior college

4. Would you classify yourself as being a reader of
   Below average speed
   Average speed
   Above average speed

5. Would you say that you read:
   Fewer newspapers than most people
   About as many as other people
   More than most people

6. We will now show you pairs of newspaper front pages.
   Please indicate which of each pair you think you could read most rapidly.

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7. You've had a chance to look over each of these pages. Now will you go thru them again and select the one which you like best?

Which do you consider to be the most modern in appearance?

Best        Modern
   A        A
   B        B
   C        C
   D        D
   E        E

No: 001

Questionnaire Used in Survey
Northern Editors Under Fire
As Editor Ochs Pays Visit

CHICAGO—Northern newspapers were reaped by a Southern editor in their own domain for failing to give proper the murder of Martin Luther King Jr. A Southern editor in New York, Chicago, and Los Angeles has six time more than before.

“Know what a city now knows the North should have read the opinion of the gradually increasing Negro migration northward and if newspapers should have given their readers this meaning and the background.”

“Long before the summer of 1968 a Philadelphia editor told me that racism seemed in hot and at all times to avoid the subject. “I have never seen the like of it in the South.”

Ochs recalled that Secretary of State Dean Rusk said in August 1968 that “the biggest single problem we face is the problem of racial discrimination here at home.”

Inside the Aus:
Idaho Press Assn. Page 4
Kentucky Press Page 5
Published by the Detroit Free Press

Federals Plan Treasure Hunt of Detroit

WASHINGTON—The House of Representatives has unanimously passed a joint resolution to establish a federal commission to investigate the security hazards of the Detroit treasure hunt.

The measure, sponsored by Rep. John B. Handlin (R-Mass.), was designed to prevent the city from becoming a target for criminal activity.

"This resolution will provide for the protection of the city and its citizens," said Handlin. "We must take steps to ensure that Detroit will not become a haven for criminals."
The FTC hopes to eliminate propaganda or statements made by cigarette advertisers that smoking contributes to health, maturity or social prestige.

The commission which believes it has authority to force such a change plans to file a petition asking that Congress give it additional authority to police cigarette advertising on labeling. It has, of course, no intention if Congress wants to make the authority specific.

For this reason it has already been set in motion by Dr. C. H. Blomgren, city editor of the Mirror, a small city which has repeatedly won national honors for its safety program.

"We've done our best, but there seems to be a new look in advertising," said Everett C. Blomgren, city editor of the Mirror, a small city which has repeatedly won national honors for its safety program.

"Survive the wrecks on the front page again and again. Don't let them ever forget." With this philosophy, Editor Blomgren frequently runs a column in the Mirror. "Highway safety is also the newspaper's business," he believes. The worst column the better propaganda it makes, he says.

Northern Editors Under Fire
As Editor Ochs Pays Visit

The daily circulation of newspapers in the United States and Canada was 112,818,891 in 1960, according to the Audit Bureau of Circulations. The circulation figure was the lowest in the history of the newspaper industry.

The current study included data from 16,783 daily newspapers in the United States and Canada, and 2,385,591 Sunday newspapers. For a total of 1,437,682 difference between the two studies, there will be little change in the number of non-ABC papers.

The response of newspaper editors was probably due to a line taken by the American Newspaper Publishers' Association at its annual convention last month.

"Go to Court"

The FTC has asked the Justice Department to seek a court order that would prevent the tobacco companies from advertising on radio and television.

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Northern Editors Under Fire
As Editor Ochs Pays Visit
Los Angeles has six times more than New Orleans, is community lecture audience here that the more objective and lem. He said that Chicago has "played down the trouble (ra-

Page D. Unjustified Type, Columns Spaced 12 Points. (Reduced 50%)
Page E. Unjustified Type, Columns Spaced 6 Points. (Reduced 50%)