

THE EFFECT OF NEWSPAPER DESIGN
COMPLEXITY ON READERSHIP,
COMPREHENSION, INTERESTINGNESS
AND PLEASINGNESS

Thesis For The Degree Of Ph. D.

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HENRY THOMAS PRICE

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This is to certify that the
thesis entitled

THE EFFECT OF NEWSPAPER DESIGN COMPLEXITY
ON READERSHIP, COMPREHENSION,
INTERESTINGNESS AND PLEASINGNESS

presented by

Henry Thomas Price

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Communication

A handwritten signature in dark ink, appearing to read "V.C. Folsom", written over a horizontal line.

Major professor

Date October 16, 1972

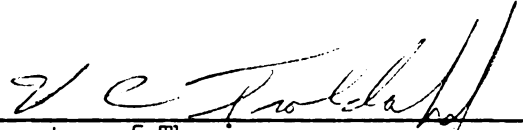


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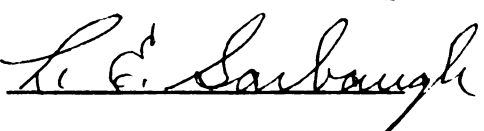

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ABSTRACT

THE EFFECT OF NEWSPAPER DESIGN COMPLEXITY ON READERSHIP, COMPREHENSION, INTERESTINGNESS AND PLEASINGNESS

By

Henry Thomas Price

This experiment attempted to provide some initial insights into the effect of three newspaper design complexity variables on the readership and comprehension of news stories and on judgments of the interestingness and pleasingness of the page designs using the various complexity variables. The three design complexity variables used were: horizontal and vertical headline pattern, horizontal and vertical picture pattern, and vertical, narrow measure (11-picas, or almost two inches, wide) body type setting and horizontal, wide measure (varying from 17-picas, or almost three inches, wide to 23-picas, or almost four inches, wide) body type setting.

The experimental vehicle was a four-page tabloid newspaper, page 3 of which was the experimental page with the other three pages being identical for all subjects. The three independent variables were manipulated in all possible combinations resulting in eight different versions of the experimental page. The content of the headlines, stories and picture on the experimental page were the same across all eight versions. The manipulations were restricted to those that affected the pattern of the display elements--either horizontal or vertical.

The tabloid newspapers containing the eight versions of the experimental page were randomly ordered and given to the 144 subjects (58 men and 86 women recruited from classes at the University of South Carolina). The subjects were given 10 minutes to read the newspaper and then were asked to mark how much of each story and picture in the paper they had read and to answer comprehension questions about the stories and picture on the experimental page.

Each subject was also asked to rate each page of his newspaper in terms of complexity, pleasingness and interestingness by use of a seven-point scale with either "simple-complex," "pleasing-displeasing" or "interesting-uninteresting" as anchors.

Based on D. E. Berlyne's conceptualization of the complexity variable and the research findings of F. Attneave, H. Day, A. C. Hall and others, 12 hypotheses were tested. Vertical headlines, vertical pictures and narrow measure, 11-pica wide body type setting were expected to result in increased readership and comprehension and to lead to higher ratings of interestingness but lower ratings of pleasingness. None of these 12 hypotheses, as worded, received support. There were, however, three significant interactions found in the analyses of variance for the readership of the six display elements used on the experimental page. Verticality of headline display seems to interact with verticality of body type setting and horizontalness of headline display with wide measure body type setting to increase readership. Vertical headline pattern appears to interact with horizontal picture pattern and horizontal headline pattern with vertical picture pattern to increase readership. Likewise, horizontal picture pattern seems to combine with narrow measure body type setting and vertical picture pattern with wide measure body type setting to increase

readership of the picture and its accompanying explanatory material (its cutlines).

The analysis seems to refute Berlyne's findings that interestingness and pleasingness are negatively correlated. In this study interestingness and pleasingness show a moderate positive relationship ($r = .54$). A small positive correlation was found between readership of the experimental page and rated interestingness of the page design ($r = .22$).

A number of possible explanations for the results were presented, and a number of possibilities for future research were discussed.

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CHAPTER I

NEWSPAPER DESIGN AND COMMUNICATION

A prime consideration of communication research--and probably the one most neglected by the professional communicators of the mass media--is the receiver. The researcher is vitally interested in the sources of the receiver's information. He also seeks answers to the problems of increasing the probability that the receiver will attend to a given message and of how the receiver determines what messages he will attend to. How can the receiver be persuaded to take a given course of action once his attention has been gained? These are but a few of the hundreds of interests the researcher has concerning the receiver's relationship to the sea of information in which he is immersed.

Mass media communicators are in the business of contributing to this welter of messages. One problem they wrestle with on a minute-by-minute basis is how can they get the receiver to pay attention to the information they offer him. There are literally thousands of daily and weekly newspapers that face this situation, and for them it often boils down to a question of dollars and cents--and survival. The paper that fails to gain attention loses readers, a loss of readers causes a loss of advertising revenue, and a loss of advertising income means extinction.

Over the past decade these newspapers have watched their sizable lead over others of the mass media, and particularly television, steadily erode to the point where television now enjoys a 2-to-1 edge in the

percentage of respondents rating it as the more credible of the two media.¹ Burns Roper, whose report for the Television Information Office of the National Association of Broadcasters provides the information concerning this 2-to-1 margin, also says that his data indicate that in 1963 television replaced newspapers as the source of most news for the general public. Harvey K. Jacobson has generally supported Roper's findings on media credibility and adds to the problem of the professional newspaperman by saying that television news reports are seen as significantly more complete than either newspaper or radio reports.²

A few newspapers, coupling these findings with the results of rare readership studies that show readers pay scant attention to their paper's information offerings, have made changes in their reporting and writing styles such as investigative reporting and team reporting. Others have tried to meet the growing problem by increasing their circulation efforts. Only a few have been concerned about the design of their publications, and they have trusted the "gut feeling" preachments of such layout luminaries as Edmund Arnold and Howard Taylor. This is not to denigrate "gut feeling" as a means of obtaining insight into the problem of developing new and more effective methods of newspaper design nor is it intended to belittle the efforts of the aforementioned gentlemen, but it is to point out that little attempt has been made to examine scientifically the potential of newspaper design as a form of nonverbal communication.

¹Burns Roper, Report for the Television Information Office of the National Association of Broadcasters (July, 1969).

²Harvey K. Jacobson, "Mass Media Believability: A Study of Receiver Judgments," Journalism Quarterly, Vol. 46 (1969), 20-28.

This study proposes to offer a starting point in this area by examining certain elements of newspaper design in an attempt to determine if manipulation of these elements can increase the probability that a given story will be read and comprehension of that story's content increased. The importance of the study to print journalism is evident. Every day millions of Americans voluntarily subscribe to newspapers and at least the potential exists for them to expose themselves to more of the information carried in these newspapers. If readership can be increased through attention to certain design elements, then the newspaper is well on the way to assuring itself of an audience and accomplishing its primary function--that of informing the public. *DISSENT?*

The value of the study to communication theory is essentially the same. Given that one of the goals in the development of communication theory is to discover ways by which the receiver can be induced to increase the amount of his meaningful information intake, and given that the newspaper is a major potential source of that information, then the urgent need for understanding the role of newspaper design in reaching that receiver and claiming his attention becomes obvious. Admittedly a great deal of the information in the typical newspaper is irrelevant (probably because most papers try to be all things to all people) and serves to clog the flow of more important items, but this consideration merely serves to heighten the need for greater understanding of the non-verbal communication role of newspaper design. Perhaps there are elements of typographical design and page layout that will enable the professional communicator to ensure that his really important messages surface through the irrelevant.

That design is a consideration in day-to-day newspaper production requires no debate. Anyone who has been exposed to a number of different

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newspapers knows that aside from their local news and editorial policy, they differ most in their appearance. Some, such as the New York Times, the Baltimore Sun and the Kansas City Star, follow a basically vertical design and display pattern. Others, such as the Cleveland Plain Dealer, the Christian Science Monitor and the National Observer are more horizontal in their design approach. Some, such as the Miami Herald, the Detroit Free Press and the Louisville Courier-Journal combine some of the elements of both design concepts. The important point to be made here is: Do these various approaches to newspaper layout really make any difference in the ultimate measurements, readership and comprehension?

Complexity as a Variable

One researcher, D. E. Berlyne, probably more than any other, has devoted much of his work to attempting to gain insight into the effect of different variables on attention in terms of looking behavior. One variable of particular interest to Berlyne is stimulus complexity. He says that roughly "it refers to the amount of variety or diversity in a stimulus pattern."³ He lists some of the most obvious properties of complexity as: (1) other things being equal, complexity increases with the number of distinguishable elements; (2) if the number of elements is held constant, complexity increases with dissimilarity between elements; and (3) complexity varies inversely with the degree to which several elements are responded to as a unit.

³D. E. Berlyne, Conflict, Arousal and Curiosity (New York: McGraw-Hill, 1963).

It is obvious from these three criteria that Berlyne recognizes the importance of perception in his conceptualization of complexity. It is entirely conceivable that two different people could be exposed to the same stimulus pattern, and one could rate the pattern as being complex and the other could rate it being simple. It is somewhat analogous to the situation where source credibility is awarded by the receiver. Perhaps we should simply paraphrase an adage and say that "complexity is in the eye of the beholder." Surely, however, we can isolate some area between the extremes of severe complexity and severe simplicity where it can be agreed that relative complexity or simplicity exists.

Berlyne has said that complexity is one of what he calls "collative" variables (others including novelty, surprisingness and incongruity) and suggests that the perception of stimuli high in these characteristics results in the arousal of incompatible response tendencies within the subject and thus mild conflict. This conflict is brought on largely through what psychologists refer to as "redintegration." Simply stated this means that stimulus A is related to stimulus B, and therefore stimulus A elicits not only responses (a) to it, but anticipatory responses (b) to stimulus B; when, however, rather than receiving stimulus B, stimulus X is introduced, the organism responds to stimulus X in the presence of anticipatory responses (b) to stimulus B, and conflict occurs.

Berlyne does not present conflict as a state that a person is either "in" or "not in." It is not a dichotomous situation, but rather one of degree. Berlyne also sees a relationship between complexity and uncertainty. The more complex the figure, the more uncertainty it will generate with this increased uncertainty leading to increased conflict within the organism. Added to these considerations of complexity, conflict

and uncertainty, Berlyne says that increasing complexity will result in increased arousal for the subject. He points out that a subject generally tries to keep his state of arousal as low as possible (which is, for the normal person, moderately high). Subjects in such a state might even welcome the slightly higher levels of arousal likely to result from exposure to more complex stimuli simply for the reward of arousal-reduction. Those subjects, however, who are in a heightened arousal state will seek to decrease their arousal to an acceptable level. The subjects will remain with the more complex pattern until they have received enough information from it to decrease their arousal state.⁴ He says that this desire to decrease arousal to an acceptable level is paralleled by a desire to decrease unacceptable levels of conflict. The point here is that (if, through the complexity of newspaper design, a subject's state of arousal or conflict can be increased, that subject will attempt to decrease these unacceptable levels through his looking behavior. Therefore, he will expose himself to more of the page which should result in more reading of the information on the page and ultimately in more comprehension of the page's information.

/ DOESN'T FOLLOW!

Review of Past Research

If one sets out to find any meaningful research in the area of newspaper design, he should be prepared for some disappointment. Experimental reports can be found on the content of newspapers such as studies

⁴D. E. Berlyne and J. Lewis, "Effects of Heightened Arousal on Human Exploratory Behavior," Canadian Journal of Psychology, Vol. 17 (1963), 398-411.

of bias or the lack of it, but even something as basic as the effect of various writing styles has been relatively ignored. Occasionally one can unearth a study on headline connotations or some such, but most studies of newspapers are of the qualitative, historical variety. The field is not completely fallow, however. Researchers such as Jean Kerrick, Percy Tannenbaum and Merald Wrolstad have made important contributions to the area. For instance, Kerrick has reported several studies concerning the effect of picture captions on the judgments of the pictures they accompany.⁵ Tannenbaum has shown a continuing interest in the effects of newspaper headlines on respondent perceptions of the stories that accompany those headlines. The research sparked by this interest, in part, led to his formulation of the concept of the "indexing process" which says essentially that by altering a part of the whole we can influence the perception of the whole. He carefully points out, however, that an index is an index only if the receiver perceives it as such—it must have meaning for the receiver.⁶ Wrolstad, in viewing typographic design as a form of non-verbal communication, experimented with five design principles--balance, contrast, proportion, rhythm and unity. He found that his group of adult subjects made no preference distinction between good examples and poor examples of typographic design. Even though the design differences in his study were readily evident to a group of typographer-judges, they were not so to his subjects.⁷ It should be pointed out, however, that

⁵Jean S. Kerrick, "The Influence of Captions on Picture Interpretation," Journalism Quarterly, Vol. 32 (1955), 177-182 and "News Pictures, Captions and the Point of Resolution," Journalism Quarterly, Vol. 36 (1959), 183-188.

⁶Percy H. Tannenbaum, "The Indexing Process in Communication," Public Opinion Quarterly, Vol. 19 (1955), 292-302.

* ⁷Merald E. Wrolstad, "Adult Preferences in Typography: Exploring the Function of Design," Journalism Quarterly, Vol. 37 (1960), 211-223.

Wrolstad was using book title pages and not newspaper pages as his stimuli.

But, with these few exceptions, the only people who seem to have been interested in studying complexity of pattern and its influence on looking behavior appear to have been the psychologists. One must admit that any inferential leap from studies dealing with the nonsense pattern preferences of rats, baby chicks and children to an investigation of the effects of newspaper layout and design on the reading habits of adults requires that the investigator place himself on the extreme end of a wind-tossed branch. Hopefully what follows will allow this investigator and others to edge just a little closer to the solid trunk of communication theory.

For instance, Berlyne says that "tachistoscopic experiments show that, at least in some conditions, subjects first identify the general class to which a perceptual figure belongs and then gradually narrow down its specific nature and minor details,"⁸ and adds that the less complex figure involves less conflict because the number of alternatives for its general class are fewer. If one conceives of a newspaper page as a perceptual figure, this would seem to offer some support for the idea of the reader noting page design first, then reading the headline, then reading the story, hence pointing out the potential importance of page design on readership, and, ultimately, comprehension.

Berlyne has also found that, at least as far as infants are concerned, complexity of design in pattern is a recognizable variable, and infants seem to prefer the complex design to the simple.⁹ This preference

⁸Berlyne, Conflict, Arousal...., p. 41.

⁹D. E. Berlyne, "The Influence of the Albedo and Complexity of Stimuli on Visual Fixation in the Human Infant," British Journal of Psychology, Vol. 49, 1948), 315-318.

seems to stem from the fact that the complex design has more contours than the simple and thus produces more excitations of the eye. Some of the early, basic work dealing with the relationship between complexity and contours was performed by Attneave. In the study that established his linkage of complexity and the number of contours present in a given figure, he points out that in most patterns, information is concentrated along contours at those points on a contour where its direction changes most rapidly.¹⁰ He wrote that in his study of the judgments of complexity of 72 shapes "about 90 per cent of the variance of ratings was explained by (a) the number of independent turns (angles or curves) in the contour, (b) symmetry, and (c) the arithmetic mean of algebraic differences, in degrees, between successive turns in the contour," and that the contour variables explained 73.7 per cent of the variance accounted for. He said that the increased contour triggers increased excitation of the eye cells that respond to the onset or termination of illumination. Attneave supported this linkage in another and later study where he reported that there is a positive and significant correlation between the number of independent turns in a figure and its rated complexity.¹¹ More recently Hall has found that the number-of-turns variable accounts for about 72 per cent of the variance in subjective complexity which fits nicely with Attneave's result for his stimuli.¹² Robeck has also found

¹⁰F. Attneave, "Some Informational Aspects of Visual Perception," Psychological Review, Vol. 61 (1954), 183-193.

¹¹F. Attneave, "Physical Determinants of the Judged Complexity of Shapes," Journal of Experimental Psychology, Vol. 53 (1957), 221-227.

¹²A. C. Hall, "Measures of the Complexity of Random Black and White and Coloured Stimuli," Perceptual and Motor Skills, Vol. 29 (1969), 773-774.

that designs with more contour angles were judged more complex than designs with fewer angles.¹³

Other researchers offer support for Berlyne's findings concerning the preference for complexity among infants. Fantz, for instance, found that infants are born with an interest in objects and they show a definite preference for the more visually complex objects, prompting Fantz to state that infants have an inborn form perception.¹⁴ Caron has also found this preference among human infants for the more complex visual stimuli.¹⁵ Faw and Nunnally add to the evidence with their findings from two studies that eye fixations of children are dominated by more complex figures as compared to less complex figures.¹⁶ Cantor, Cantor and Ditrichs worked with preschool children and found that children spend more time with more complex designs and that their subjects preferred "high complexity" patterns to either "medium" or "low" complexity patterns.¹⁷ Eisenman, Grove, Coyle and Redick have reported that children between the ages of 6 and 12 seem to have a greater tolerance for complexity than do college students;

¹³George B. Robeck, "The Influence of Design Symmetry and Contour on Eye Fixations and Judgments of Perceived Complexity, Interestingness and Pleasingness," (unpublished Ph.D. thesis, Department of Communication, Michigan State University, 1970).

¹⁴R. Fantz, "The Origin of Form Perception," Scientific American, Vol. 204 (1961), 66-72.

¹⁵Rose F. Caron, "Degree of Stimulus Complexity and Habituation of Visual Fixation in Infants," Psychonomic Science, Vol. 14 (1969), 78-79.

¹⁶Terry T. Faw and Jum C. Nunnally, "The Influence of Stimulus Complexity, Novelty, and Affective Value on Children's Visual Fixations," Journal of Experimental Child Psychology, Vol. 6 (1968), 141-153, and "The Effects on Eye Movements of Complexity, Novelty, and Affective Tone," Perception and Psychophysics, Vol. 2 (1967), 263-267.

¹⁷G. Cantor, J. Cantor, and R. Ditrichs, "Observing Behavior in Preschool Children as a Function of Stimulus Complexity," Child Development, Vol. 34 (1963), 683-689.

they also found that preference for complexity tends to be associated with a more open life-style, less defensiveness and a more creative approach to life with preference for simplicity and/or symmetry being associated with a more rigid, simpler outlook.¹⁸ Rabinowitz and Robe tested some of Berlyne's theories and findings and found, among other things, support for his findings concerning a preference for complexity.¹⁹ Not all evidence, however, points in the same direction. Karmel has found, experimenting with rats, chicks and human infants, that definite preferences can be found across the three types of subjects for patterns containing greater amounts of contour. He, however, makes a distinction between amount of contour and complexity and finds that no clear preference can be found across the species for the more complex design.²⁰ Based on the combined findings of Berlyne, Attneave and Hall concerning the relationship between contour and complexity, however, one must view Karmel's distinction between the two with at least a modicum of caution.

Other studies dealing with complexity as a variable include Francis' findings that complexity had more distinctly differentiating effects for his subjects (workers and students) than did preference and

¹⁸Russell Eisenman, Michael Grove, F. A. Coyle, Jr., and Lenice L. Redick, "Studies in Complexity-Simplicity: I. Children's Preferences; II. Personality Correlates in College Students," Proceedings of the 77th Annual Convention of the American Psychological Association, Vol. 4 (1969), 473-474.

¹⁹F. Michael Rabinowitz and Charlotte V. Robe, "Children's Choice Behavior as a Function of Stimulus Change, Complexity, Relative Novelty, Surprise and Uncertainty," Journal of Experimental Psychology, Vol. 78 (1968), 625-633.

²⁰Bernard C. Karmel, "Complexity, Amounts of Contour, and Visually Dependent Behavior in Hood Rats, Domestic Chicks, and Human Infants," Journal of Comparative and Physiological Psychology, Vol. 69 (1969), 649-657.

interest. He also found that his student subjects had more tolerance for complexity than did the workers, and they associated preference and interest less frequently than did the workers for the same perceptual figure.²¹ Lowenthal has reported that his subjects preferred intermediate amounts of complexity and that experience with complexity above the optimum produced the most systematic change in preferences toward greater complexity.²² Minton replicated some of Berlyne's work and found confirmation for the results of positive correlation between stimulus complexity and perceptual curiosity.²³ Bryson and Driver have also supported other of Berlyne's findings that increased complexity results in increased internal arousal.²⁴ Dember and Earl have presented probably the most cogent argument for the consideration of complexity as a psychological variable by defining it in terms of change in stimulation and adding that complexity involves spatial heterogeneity.²⁵ Again, however, there is scholarly dissent. McCall and Melson question whether complexity as a

²¹R. Francès, "Interet et Preference Esthetique Pour des Stimuli de Complexite Variable," Journal de Psychologie Normale et Pathologique, Vol. 67 (1970), 207-224.

²²Alan S. Lowenthal, "Stimulus Variability, Preference, and Perceptual Change," (Ohio State University), Dissertation Abstracts, 1968, 28(9-B), pp. 3867-3868.

²³H. Minton, "A Replication of Perceptual Curiosity as a Function of Stimulus Complexity," Journal of Experimental Psychology, Vol. 65 (1963), 522-524.

²⁴Jeff B. Bryson and Michael J. Driver, "Conceptual Complexity and Internal Arousal," Psychonomic Science, Vol. 17 (1969), 71-72.

²⁵W. N. Dember and R. W. Earl, "Analysis of Exploratory, Manipulatory, and Curiosity Behaviors," Psychological Review, Vol. 64 (1957), 91-96.

visual stimulus has been sufficiently defined to allow conclusions to be drawn from experiments using it.²⁶ They, however, ignored Berlyne's three elements of complexity in their discussion of its definition or lack of it. The studies reported here might serve to somewhat quiet their discord. A sufficient number of studies would appear to have been done investigating complexity and its relationship to looking behavior. Further, the results of these studies seem sufficiently promising to warrant the preliminary acceptance of complexity as a variable.

Complexity and Readership

Before a link can be established between complexity and page design, a few definitions are in order. Horizontal page design is defined as that design which used predominantly multicolumn headlines ("multicolumn" taken to be three-column headlines or wider, multicolumn pictures and body-type setting wider than the standard 11 picas (a little less than 2 inches wide) found in most contemporary newspapers. Vertical design is defined as that design which uses predominantly one- and two-column headlines and pictures, and body-type setting of the standard 11 picas.

Since a vertical page generally has more angles than a horizontal page, the vertical design would be considered more complex than the horizontal design. This deduction finds support in the findings of Attneave and Hall that the more complex a pattern, the more contours it will have. The fact that the vertical design uses more 11-pica wide setting of body type and therefore contains more columns of body type than the horizontal

²⁶Robert B. McCall and William H. Melson, "Complexity, Contour, and Area as Determinants of Attention in Infants," Developmental Psychology, Vol. 3 (1970), 343-349.

design serves to increase the number of angles in the vertical design and hence, its complexity. The larger number of columns of type present in the vertical design serves to increase the number of eye cell excitations discussed by Attneave.

Berlyne, whose linkage of complexity and conflict was discussed earlier, says that "it would seem plausible that simpler figures would entail less prolonged and less intense conflict." He continues, "Further possibilities of conflict, increasing with complexity, come from eye movements. The assumption that visual patterns with more distinct parts arouse more numerous visual adjustments is central to both Birkhoff's and Rashevsky's theories of aesthetic value."²⁷ He has also found that once conflict is established within the individual, arousal is said to occur. It would seem that this arousal, or attention, is a prerequisite to readership.

In an experiment with rats that dealt with vertical and horizontal designs, Dember, Earl and Paradise found their rat subjects invariably displayed greater voluntary preference for the more complex design when offered a choice. The rats preferred to explore a horizontally striped pathway in preference to an all-white or all-black pathway, and preferred a vertically striped pathway to any of the other three. The authors' decision as to the relative complexity of the four designs was based on the fact that, physically, there were more elements such as stripes or within-stimulus brightness changes in the vertical stimulus than in the horizontal stimulus.²⁸ In yet another study using infants as subjects,

²⁷Berlyne, Conflict, Arousal...., p. 50.

²⁸W. N. Dember, R. W. Earl and N. Paradise, "Response by Rats to Differential Stimulus Complexity," Journal of Comparative and Physiological Psychology, Vol. 50 (1947), 514-518.

Moffett found that the older an infant is, the more it prefers complex visual stimuli. The subjects looked longer at patterns with a greater number of lines, regardless of arrangement, and the number of white rectangular spaces was a major determinant of visual attention.²⁹ This would seem to be another reason to expect increased attention to a vertical page since the narrow measure setting requires more rectangles of white space to separate the blocks of body type than are found in more horizontal designs using wider measure setting of body type.

Berlyne has found that subjects spend more time with more complex figures as compared to simpler ones. He approaches this finding from two directions, information theory and behavior theory. He says the human being requires more time to absorb more information and that complex figures have more information in them. From theory, he draws on Pavlov's "investigatory reflect." Berlyne says, "We should have to conclude that 'more complex' stimuli elicit the investigatory reflex more strongly than others..." He also talks in terms of a link between perceptual curiosity and attention.³⁰ Likewise, in examining the influence of stimulus complexity on free looking time and inspective exploration, Gaschk, Kintz and Thompson found that looking time increased with complexity.³¹ This tends to support the notion that more complex page design will increase the time spent with that page and, in turn, increase readership. Wohlwill

²⁹Adrienne Moffett, "Stimulus Complexity as a Determinant of Visual Attention in Infants," Journal of Experimental Child Psychology, Vol. 8 (1969), 173-179.

³⁰D. E. Berlyne, "The Influence of Complexity and Novelty in Visual Figures on Orienting Responses," Journal of Experimental Psychology, Vol. 55 (1958), 289-296.

³¹Judith A. Gaschk, B. L. Kintz and Richard W. Thompson, "Stimulus Complexity, Free Looking Time, and Inspective Exploration," Perception and Psychophysics, Vol. 4 (1968), 319-320.

was interested in taking the work of Berlyne, Day, Dember and others which relied on basically nonsense patterns and relating it to "more meaningful and aesthetically relevant ones." He found it could be done with virtually the same results. He also found that visual exploration increased with complexity.³²

Berlyne has suggested that as complexity increases, so does interest in the design. Evans supports Berlyne and says that increased complexity results in increased viewing time, which indicates epistemic, or knowledge-seeking, behavior in the form of directed thinking.³³ It would seem logical that if the subjects' state of arousal is increased by vertical design, his knowledge-seeking behavior may be to read the stories on the page in lieu of asking questions (a result suggested by both Berlyne and Evans). Therefore, if a vertical design is more complex than a horizontal design, and if interest increases with increased complexity, then readership of a vertical page will be greater than readership of a horizontal page. This points to the general hypothesis that complexity leads to greater attention and, hence, to increased readership, and, in turn, to the following specific hypotheses:

- H₁: Vertical headline display in a page design will result in greater readership of the stories on that page than of the same stories displayed with horizontal headlines.
- H₂: The use of 11-pica wide setting of body type in a page design will result in greater readership of the stories on that page than of the same stories displayed with wider measure setting.

³²Joachim F. Wohlwill, "Amount of Stimulus Exploration and Preference as Differential Functions of Stimulus Complexity," Perception and Psychophysics, Vol. 4 (1968), 307-312.

³³David R. Evans, "Conceptual Complexity, Arousal, and Epistemic Behaviour," Canadian Journal of Psychology, Vol. 24 (1970), 249-260.

- H₃: Vertical picture layout in a page design will result in greater readership of the stories on that page than of the same stories displayed with horizontal pictures.

Complexity and Interestingness/Pleasingness

In addition to the findings that as complexity increases so does interest in the design, Berlyne has stated that as complexity increases, the pleasingness of the design decreases. In one study he found that his subjects seemed to indicate that the more irregular patterns presented to them were more interesting and more arousal-raising. The less irregular patterns on the other hand were seen as more pleasing and arousal-reducing.³⁴ In yet another study involving semantic space, he established the idea that interestingness and pleasingness are both major elements in the complexity space and that complexity is a major determinant of these properties.³⁵ Day has also found that interest is directly related to complexity and that pleasingness is inversely related to complexity.³⁶ He also reports that as complexity increases, pleasingness decreases such that pleasingness is high at extremely low levels of complexity and low at extremely high levels of complexity. He points out, moreover, that interest increases with complexity to a peak and remains at a high level thereafter. He supports Berlyne's contention that pleasingness reflects arousal-reducing

³⁴D. E. Berlyne, "Complexity and Incongruity Variables as Determinants of Exploratory Choice and Evaluative Ratings," Canadian Journal of Psychology, Vol. 17 (1963), 274-290.

³⁵D. E. Berlyne, J. Ogilvie and L. Parham, "The Dimensionality of Visual Complexity, Interestingness and Pleasingness," Canadian Journal of Psychology, Vol. 22 (1969), 376-387.

³⁶H. Day, "The Importance of Symmetry and Complexity in the Evaluation of Complexity, Interest and Pleasingness," Psychonomic Science, Vol. 10 (1969), 339-340.

stimulus properties while interestingness reflects arousal-raising stimulus properties.³⁷ Eisenman's findings support Berlyne's that the more complex figures will also be judged more interesting, but he did not confirm Berlyne's findings that complexity and pleasingness vary inversely.³⁸ The same results were also found by Robeck.³⁹

However, in a later study Eisenman and Robinson found support for the negative correlation between complexity and pleasingness although they did find that their findings apply to high complexity.⁴⁰ In still another study by Berlyne it was found that the duration of exploratory behavior increases with complexity variables, and even though the subjects spent more time with the more complex figures, there was a tendency for the less complex figures to receive more verbally expressed preferences than the more complex figures.⁴¹ He was concerned at one time that perhaps his subjects spent more time with the more complex figures simply because they took longer to identify; in a replication of an earlier experiment he

³⁷H. Day, "Evaluation of Subjective Complexity, Pleasingness and Interestingness for a Series of Random Polygons Varying in Complexity," Perception and Psychophysics, Vol. 2 (1967), 281-286.

³⁸R. Eisenman, "Pleasing and Interesting Visual Complexity: Support for Berlyne," Perceptual and Motor Skills, Vol. 23 (1966), 1167-1170.

³⁹Robeck, "The Influence of Design Symmetry....," p. 47.

⁴⁰R. Eisenman and N. Robinson, "Complexity-Simplicity, Creativity, Intelligence, and Other Correlates," Journal of Psychology, Vol. 67 (1967), 331-334.

⁴¹D. E. Berlyne and G. Lawrence, "Effects of Complexity and Incongruity Variables on GSR, Investigatory Behavior and Verbally Expressed Preference," Journal of General Psychology, Vol. 71 (1964), 21-45.

lengthened exposure time from 10 seconds to two minutes with the same results--the subjects still spent more time with the more complex figures.⁴² Cizkova has also found that search time varies with complexity and the number of stimuli, or that the subjects spent more time with complex stimuli, thus indicating a greater interest in them.⁴³

These statements suggest the general hypothesis that vertical design of pages will be judged more interesting, but less pleasing than horizontal pages. This leads to the following hypotheses:

- H4: A page using vertical headline display will be judged more interesting than one using horizontal headline display.
- H5: A page using 11-pica wide setting of body type will be judged more interesting than one using body-type setting wider than 11 picas.
- H6: A page using vertical picture display will be judged more interesting than one using horizontal picture display.

Since both Berlyne and Day have pointed out that pleasingness is negatively correlated with interestingness in the presence of complexity, the following specific hypotheses are offered:

- H7: A page using vertical headline display will be judged less pleasing than one using horizontal headline display.
- H8: A page using 11-pica wide setting of body type will be judged less pleasing than one using body-type setting wider than 11 picas.
- H9: A page using vertical pictures will be judged less pleasing than one using horizontal pictures.

⁴²D. E. Berlyne, "Supplementary Report: Complexity and Orienting Responses with Longer Exposures," Journal of Experimental Psychology, Vol. 56 (1958), 183.

⁴³Jitka Cizkova, "Effect of the Quantity and Complexity of Visual Stimuli on Operator's Search Activity," Studia Psychologica, Vol. 9 (1967), 241-247.

Although there are no research findings to offer as support, it is felt that the increased attention and increased readership resulting from vertical page design will lead to greater comprehension of the stories read. This general hypothesis suggests the following specific hypotheses:

- H₁₀: Vertical headline display in a page design will result in greater comprehension of the stories on that page than the same stories displayed with horizontal headlines.
- H₁₁: The use of 11-pica wide setting of body type in a page design will result in greater comprehension of the stories on that page than the same stories displayed with wider measure setting.
- H₁₂: Vertical picture layout in a page design will result in greater comprehension of the stories and pictures on that page than the same stories and pictures displayed with horizontal pictures.

CHAPTER II

THE EXPERIMENT

The most realistic vehicle for studying the relationship between newspaper design complexity and other variables, of course, would be a newspaper specially designed for the purpose. In the fall of 1971 the College of Journalism at the University of South Carolina began publication of an experimental laboratory newspaper, the Carolina Reporter. The newspaper generally appears in tabloid format and has a limited circulation to campus departmental offices and various departments, schools and colleges of journalism across the country. Because of this limited circulation it was felt that while the student subjects might have heard of the paper they would not be likely to be too familiar with the Reporter and would lack any predisposition toward the newspaper. Therefore it was decided that the experimental vehicle would use the nameplate of the Reporter and would be a tabloid format as opposed to a full-sized, eight-column newspaper. Although it was of no particular scientific value, the tabloid format was useful in another area as well since it enabled the experimenter to personally set all copy for the experimental pages and to avoid as much as possible the occurrence of typographical errors with their potentially contaminating influence. The experimenter was required to set only about one-half the copy it would have taken to fill a full-sized page.

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The offset process was used for the experimental vehicle because it offered superior quality of reproduction and allowed the use of typesetting and pasteup facilities at the College of Journalism. As with the typesetting, the experimenter performed the pasteup operation of the experimental pages to assure standardization of quality across all experimental versions.

As for contents, it was felt that the subject matter of the stories on the experimental page should be of such a nature that they could compete successfully with the stories on the three non-experimental pages of the tabloid newspaper. This was accomplished by asking a group of university students to indicate what contemporary areas of news were of the most interest to them. Using this information, the experimenter prepared the stories appearing on the experimental page of the newspaper. The pictures were taken by College of Journalism photography students and were arbitrarily selected on the basis of their general interest from among approximately 200 possibilities. The stories appearing on the three non-experimental pages of the tabloid newspaper were the products of various writing classes in the College of Journalism.

Overall Procedure

The overall procedures to be described hereafter were found to be viable through pre-test with a group of 45 subjects, divided into three subgroups of 15 subjects each. The prime task in the pre-test was to establish the optimum exposure time to the experimental newspaper. Each of the three subgroups involved in the pre-test was given different amounts of viewing time. Group I was allowed 20 minutes, Group II 15 minutes and Group III 10 minutes. It was determined that both the 20-minute and 15-minute reading periods allowed the subjects to proceed through the

newspaper once and then to go back into the paper for additional reading. The 10-minute reading period, on the other hand, allowed sufficient time for perusal of the four pages without permitting additional reading. Also, the experimental page's percentage of the total readership of the four pages was virtually unchanged across the three different reading periods--27.05 per cent for the 10-minute version, 23.91 per cent for the 15-minute version, and 27.41 per cent for the 20-minute reading period. Therefore, it was decided to allow a 10-minute exposure period in the actual experimental situation.

It was felt that since this study involved newspaper design, journalism students should be excluded from the experiment because their obvious interest in newspapers and newspaper layout could influence results. Therefore subjects for the experiment came from two sections of a course in contemporary fiction and three sections of a course in introductory psychology. This resulted in obtaining 144 subjects, 58 men and 86 women. A description of the subjects is in Table 1.

The experiment was performed in a classroom situation. The subjects were allowed to select their own seats and were given randomly ordered copies of the experimental newspaper. They were allowed 10 minutes in which to read the paper as established in pre-test. At the end of the 10-minute reading period, the subjects were told to stop reading and were provided with marking pencils. They were instructed to indicate their readership of each item on each page in their newspaper by marking a line through those portions read and to make no mark on those items they did not read. These marking instructions were not limited to the experimental page in an effort to avoid alerting the respondents to

the fact that this was the only page in which the experimenter was interested. It was felt that this would allow a more normal response to the experimental page.

When they had completed their marking tasks, the subjects were given instructions on the use of semantic differential-type rating scales and provided with a booklet of four 8-inch by 5-inch sheets of paper on each of which was a 7-point scale ranging from COMPLEX to SIMPLE. They were told to use sheet 1 of the booklet for page 1 of their newspaper, sheet 2 for page 2, etc. Ratings were also obtained in the same manner on each page of the paper on the PLEASING-DISPLEASING continuum and the INTERESTING-UNINTERESTING continuum.

On completion of this stage of the experiment, the newspapers were gathered from the subjects as were the three completed sets of rating scales, and subjects were provided with and instructed to respond to 18 multiple choice questions dealing with the five stories and one picture on the experimental page. Finally the subjects were asked to provide brief information of a personal, demographic nature. (See Appendix A.)

At this point, the nature of the study was discussed, the subjects were asked not to talk about the experiment with others, and then dismissed.

Construction of Experimental Vehicle

As mentioned earlier, it was decided to create a four-page tabloid newspaper to serve as the experimental vehicle. It was further established that the newspaper could contain no advertisements so as to control for the possible competition for attention between ads and news. Three of the four pages in the newspaper (pages 1, 2, and 4) were the

same for all subjects. In order to test the various hypotheses eight versions of the experimental page (page 3) were created, ranging from an all-horizontal version to an all-vertical version varying the three experimental stimuli (headlines, width of body copy setting, and picture shape) one at a time. It was decided to use page 3 as the experimental page rather than, for instance, page 1 in order to avoid any possible sensitization as to the purpose of the experiment. The experimental stimuli in each version were as follows:

Version 1--horizontal headlines

horizontal picture

wide-measure setting

Version 2--horizontal headlines

vertical picture

wide-measure setting

Version 3--vertical headlines

vertical picture

wide-measure setting

Version 4--vertical headlines

horizontal picture

wide-measure setting

Version 5--horizontal headlines

horizontal picture

11-pica setting

Version 6--horizontal headlines

vertical picture

11-pica setting

Version 7--vertical headlines

vertical picture

11-pica setting

Version 8--vertical headlines

horizontal picture

11-pica setting

As outlined in Chapter I, the basic assumption is that the vertical versions of the page will be more complex in their design than the horizontal versions. To ensure that the only variables having an effect in the experiment would be those intended to do so by the experimenter, it was necessary to include certain controls. It has already been pointed out that pages 1, 2, and 4 were the same in content and appearances for all of the 144 subjects. It was also necessary to exercise control over the stories and headlines used on the experimental page. The stories in the eight versions of the experimental page are identical from page-to-page, both in content and length, as is the wording and type size of the headlines under which they appear. The only thing varied is the verticalness or horizontalness of the display of the story and its headline. Thus, a four-column wide, 36-point, one-line headline (a horizontal display) can be made into a vertical element by cutting the headline in two and making it into a two-column, 36-point, two-line headline. Likewise, a five-column, 36-point, one-line headline (again, a horizontal display) can be transformed into a vertical element by cutting it into two parts and displaying it as a three-column, 36-point, two-line headline or by cutting it into three parts and letting it be a two-column, 36-point, three-line headline. In each instance the same words are used for the headline and in the same order. In this manner the verticalness or horizontalness

of the headline and story display can be varied while holding constant the content.

The body type used throughout the experimental vehicle was 9-point Bodoni Book with 1 point of leading. Width of body-type setting was varied between the vertical and horizontal versions of the experimental page with the horizontal versions using more wide-measure setting. For instance, the typical typewritten page of newspaper copy will provide a block of type approximately seven inches deep when it is set on a line of 11 picas width. The same page of typewritten copy will yield a block of type approximately three-and-a-half inches deep when it is set on a line of 22 picas width. The narrower setting appears more vertical than the wider setting. If one were to place this type in the same two-column wide by three-and-a-half inches deep hole on a page, he would have one block of type on the wider measure setting, but two blocks of type on the narrow, 11-pica setting. This treatment contributes to the increased complexity of the vertical display of the narrow, 11-pica setting both because more contour angles are created and because of the white space between the blocks of type. The wide-measure settings used varied from 17-picas width (almost three inches) to 23-picas (almost four inches) depending on the particular layout situation involved. (See experimental pages in Appendix B.)

As with headlines and body type, picture width was varied while holding content constant. The picture on the experimental page was actually two pictures, a two-column wide picture and a one-column wide picture. For horizontal display the pictures were placed side-by-side, and for vertical display the one-column picture was placed underneath the two-column picture.

The readership marking method of having subjects indicate what they have read by extending a line from the top of the headline through the last paragraph of the story they read has already been explained. The "seen," "read any" and "read all" method was considered, but it was felt that, by definition, the system was too gross for this study. "Read any" readership is defined as reading the headlines of an item and at least the lead paragraph. "Read all" is defined as complete or virtually complete readership of the item.⁴⁴ The gap between reading the lead paragraph and reading the complete story is too wide to be useful here. Therefore it was decided to count each headline as one unit of readership, each paragraph as one unit of readership, each picture as one unit (the two-column portion of the picture and the one-column portion taken together as one unit), each headline on the cutlines for the picture as one unit, and the cutlines as one unit.

As mentioned earlier, each subject was required to rate his version of the experimental page on the three continuums of COMPLEX-SIMPLE, PLEASING-DISPLEASING and INTERESTING-UNINTERESTING. Again, to mask at this stage of the experiment that the experimenter was interested only in their judgments concerning page 3 of their newspaper, the subjects rated all four of the pages in their paper on the three continuums.

An eighteen-question multiple choice comprehension test was designed for the elements on the experimental page. Each of the five stories and the picture were represented with three questions. On each

⁴⁴Robert L. Jones and Leslie A. Beldo, "Methodological Improvements in Readership Gathering," Journalism Quarterly, Vol. 30 (1953), 345-353.

question the respondent was required to select from four possible answers, including a "don't know" option. The three comprehension questions used on each news story and the picture were summed for a total "story comprehension index."

The data on complexity, interestingness, pleasingness, readership and comprehension were analyzed through multivariate analysis of variance.

CHAPTER III

FINDINGS

As outlined in Chapter I, this study attempts to measure the effect of Berlyne's complexity variable, represented by three independent variables--headline pattern (either horizontal or vertical), picture pattern (either horizontal or vertical), and body type setting width (either the vertical 11-pica width or the more horizontal wide-measure width)--on the four dependent variables of readership, comprehension, interestingness and pleasingness.

Data on Hypotheses Tests

Twelve hypotheses were formulated, and the data analyzed to determine whether or not these hypotheses were supported by the findings of the study. Discussion of these 12 hypotheses follows with the hypotheses grouped according to the dependent variable involved.

Page Design and Readership

It was predicted that the use of vertical headline patterns, vertical picture patterns and narrow measure (11-pica) setting width for body type would each result in higher readership of the stories on the pages so treated. None of the three hypotheses dealing with these predictions was supported by the data. The overall mean page readership scores for these different display versions were as follows:

Headline Pattern	Horizontal (19.0)	Vertical (19.3)
Picture Pattern	Horizontal (19.0)	Vertical (19.4)
Column Width	Wide (18.5)	Narrow (20.0)

Although the page readership mean scores were in the right direction, the use of analysis of variance showed that the F values of all main and interaction effects were non-significant.

Page Design and Interestingness

The hypotheses of Chapter I predicted, based on the findings of Berlyne and others that more complex designs are rated as more interesting than less complex designs, that those pages incorporating vertical headlines, vertical pictures, and narrow measure (11-pica) setting width for body type would be rated as more interesting than those pages using horizontal elements. None of the three hypotheses dealing with these predictions was supported by the data. The mean interestingness scores for these different display versions were as follows:

Headline Pattern	Horizontal (4.7)	Vertical (4.7)
Picture Pattern	Horizontal (4.5)	Vertical (4.3)
Column Width	Wide (4.5)	Narrow (4.4)

Using analysis of variance, the F values of all main and interaction effects were non-significant.

Page Design and Pleasingness

It was also predicted in Chapter I, again in keeping with the findings of Berlyne and others, that the vertical, more complex page designs would be rated by the subjects as less pleasing than the horizontal, more simple pages. None of the three hypotheses dealing with these predictions was supported by the data. The mean pleasingness scores for these different display versions were as follows:

Headline Pattern	Horizontal (4.3)	Vertical (4.4)
Picture Pattern	Horizontal (4.5)	Vertical (4.2)
Column Width	Wide (4.3)	Narrow (4.4)

Using analysis of variance, the F values of all main and interaction effects were non-significant.

Page Design and Comprehension

It was predicted in Chapter I that, even though there were no research findings to support such an inferential leap, the more vertical and complex page designs would lead to higher readership, and this higher readership would lead to greater comprehension of the stories so displayed. None of the three hypotheses dealing with these predictions was supported by the data. The mean comprehension scores (with the maximum possible comprehension score equalling 18.0) for these different display versions were as follows:

Headline Pattern	Horizontal (7.4)	Vertical (7.1)
Picture Pattern	Horizontal (7.2)	Vertical (7.2)
Column Width	Wide (7.1)	Narrow (7.3)

Using analysis of variance, the F values of all main and interaction effects were non-significant.

Data on Interactions

None of the overall page readership main effect or interaction findings was significant for any of the criterion variables. Further evaluation of the findings indicated that this may be because of the large variability in readership from story to story, as shown in Table 2. The better-read elements generally show the effect of the different page designs utilizing the three independent variables.

TABLE 2.--Mean page readership for each of four pages in experimental vehicle

Item	Mean Readership Units Available	Mean Readership Units Read	Percent Available Units Read
Page 3:			
"GRAVATT" Story	10	1.8	18.0
"POLICE" Story	7	4.8	68.6
"SCPIRG" Story	5	1.7	34.0
"WOMEN'S LIB" Story	8	5.1	63.8
"HEALTH CENTER" Story	11	4.0	36.4
"SPIRES" Picture	3	1.8	60.0
TOTAL....Page 3	44	19.2	43.6
TOTAL....Page 1	45	28.0	62.2
TOTAL....Page 2	48	18.0	37.4
TOTAL....Page 4	46	16.7	36.4

Total N for each page = 144

These effects are shown through several significant interactions that will be discussed later. One of these significant interactions was found in the analysis of the readership of the "WOMEN'S LIB" story (percentage readership of 63.8%), one in the analysis of the "SPIRES" picture readership (percentage readership of 60.0%) and one in the "GRAVATT" story readership analysis (percentage readership of 18.0%). As seen in Table 2, the "POLICE" story had the highest percentage readership of any of the elements on the experimental page, but the analysis of the readership data for that story showed no significant effects for either the main effects variables or for first- and second-level interactions. Although the main effect of headline treatment and the interaction of

headline and picture treatment approached the .05 level of significance (.065 and .057, respectively), it is felt that the lack of significance can be explained by the fact that the story had such high reader interest that it was well-read regardless of its experimental treatment.

The data seem to suggest that the 12 hypotheses in Chapter I are too simple. All of them deal with the main effects of the three independent variables and it would appear that one cannot look at the effect of one of these variables without taking into consideration the effect of the other variables.

Readership scores were obtained and analyzed for each story on each version of the experimental page. In this analysis some significant results were found. In every case there was interaction between two of the three manipulated variables.

Headline Pattern, Width of Body Type Setting and Readership

As mentioned above, several significant first-level interactions appeared in the analysis of the readership data for the display elements on the experimental page. The first of these significant interactions occurred in the analysis of variance of the readership of the "GRAVATT" story between headline pattern and width of body type setting as shown in Table 3. An examination of the mean readership scores for the two variables (maximum possible readership score is 10.0) seems to explain the interaction (see Table 4). The significant interaction found in the "GRAVATT" analysis would seem to suggest that the interaction of headline pattern with body type setting width is a strong one. As shown in Table 2, the mean readership for the story is the lowest of any of the display elements on the experimental page (18.0%), yet the significant

TABLE 3.--Analysis of variance of "GRAVATT" story readership.

Source of Variance	Sum of Squares	d.f.	Mean Square	F
Horizontal vs Vertical Headlines Error	5.44 1289.86	1 143	5.44 9.02	-
Horizontal vs Vertical Pictures Error	9.00 1289.86	1 143	9.00 9.02	-
11-Pica vs Wide Measure Body Type Setting Error	3.36 1289.86	1 143	3.36 9.02	-
Hori. vs Vert. Heads/Hori. vs Vert. Pics. Error	1.36 1289.86	1 143	1.36 9.02	-
Hori. vs Vert. Pics./11-Pica vs Wide Measure Error	32.11 1289.86	1 143	32.11 9.02	-
Hori. vs Vert. Heads/11-Pica vs Wide Measure Error	53.78 1289.86	1 143	53.78 9.02	5.96*
Hori. vs Vert. Heads/Hori. vs Vert. Pics/ 11-Pica vs Wide Measure Error	.25 1289.86	1 143	.25 9.02	-
Remaining Error	1226.44	136	9.02	

*Significant beyond the .05 level.

TABLE 4.--Mean readership scores on "GRAVATT" story for horizontal vs vertical headlines and 11-pica vs wide measure body type setting (maximum readership score = 10.00)

		Headlines		
		Horizontal	Vertical	Mean
Width of Body Type Setting	Wide Measure	2.75	1.14	1.95
	11-Pica	1.22	2.06	1.64
	Mean	1.99	1.60	
N per cell = 36				

interaction appeared. The data (Table 4) indicate that verticality of headline display works with verticality (narrow measure setting) of body type to increase readership, and that horizontalness of headline display works with horizontalness (wide measure setting) of body type to increase readership of the story so displayed. The mean readership scores also suggest that, for a top-of-the-page story, horizontal headline and wide measure body type display will serve to increase readership over any other combination of headline and body type display. It should be noticed that the horizontal headline display on the experimental pages used in this study places the headline and lead paragraphs of the "GRAVATT" story in what has been traditionally accepted as the primary optical area of a page, the upper left corner (see Appendix B).

Headline Pattern, Picture Pattern and Readership

Another significant interaction was found in the analysis of variance of the readership of the "WOMEN's LIB" story between headline pattern and picture pattern. This significant interaction can be seen in Table 5 and is explained in Table 6 where the maximum possible readership score is 8.0. Unlike the interaction in the "GRAVATT" story where like element went with like element, here an opposite kind of interaction was found. In this interaction the readership means indicate that vertical headline pattern interacts with horizontal picture pattern to increase readership and horizontal headline pattern interacts with vertical picture pattern to provide higher readership.

Picture Pattern, Width of the Body Type Setting and Readership

The third significant interaction is to be found in the analysis of variance of the readership of the "SPIRES" picture and can be seen in Table 7. The mean readership scores in Table 8, where the maximum possible readership score is 3.0, seem to explain the interaction. Again, as in the two previous significant interactions, the effects are reversed. Also, as in the previous interaction of headline pattern and picture pattern and its effect on the readership of the "WOMEN'S LIB" story, the pairing of unlike elements seems to enhance readership. The vertical picture in conjunction with wide measure body type and the horizontal picture used with narrow measure body type appear to result in increased readership.

TABLE 5.--Analysis of variance of "WOMEN'S LIB" story readership.

Source of Variance	Sum of Squares	d.f.	Mean Square	F
Horizontal vs Vertical Headlines Error	4.69 1697.41	1 143	4.69 11.87	-
Horizontal vs Vertical Pictures Error	3.36 1697.41	1 143	3.36 11.87	-
11-Pica vs Wide Measure Body Type Setting Error	8.03 1697.41	1 143	8.03 11.87	-
Hori. vs Vert. Heads/Hori. vs Vert. Pics Error	58.78 1697.41	1 143	58.78 11.87	4.95*
Hori. vs Vert. Pics/11-Pica vs Wide Measure Error	2.78 1697.41	1 143	2.78 11.87	-
Hori. vs Vert. Heads/11-Pica vs Wide Measure Error	13.44 1697.41	1 143	13.44 11.87	-
Hori. vs Vert. Heads/Hori. vs Vert. Pics/ 11-Pica vs Wide Measure Error	6.25 1697.41	1 143	6.25 11.87	-
Remaining Error	1614.22	136	11.87	

*Significant beyond the .05 level.

TABLE 6.--Mean readership scores on "WOMEN'S LIB" for horizontal vs vertical headlines and horizontal vs vertical pictures (Maximum readership score = 8.0)

Headlines			
	Horizontal	Vertical	Mean
Horizontal	4.44	5.36	5.40
Picture			
Vertical	6.03	4.39	5.21
Mean	5.24	5.38	
N per cell = 36			

TABLE 7.--Analysis of variance of "SPIRES" picture readership.

Source of Variance	Sum of Squares	d.f.	Mean Square	F
Horizontal vs Vertical Headlines Error	.17 235.95	1 143	.17 1.65	-
Horizontal vs Vertical Pictures Error	2.01 235.95	1 143	2.01 1.65	-
11-Pica vs Wide Measure Body Type Setting Error	5.06 235.95	1 143	5.06 1.65	-
Hori. vs Vert. Heads/Hori. vs Vert. Pics Error	1.56 235.95	1 143	1.56 1.65	-
Hori. vs Vert. Pics/11-Pica vs Wide Measure Error	6.67 235.95	1 143	6.67 1.65	4.06*
Hori. vs Vert. Heads/11-Pica vs Wide Measure Error	1.56 235.95	1 143	1.56 1.65	-
Hori. vs Vert. Heads/Hori. vs Vert. Pics/ 11-Pica vs Wide Measure Error	1.56 235.95	1 143	1.56 1.65	-
Remaining Error	223.72	136	1.65	

*Significant beyond the .05 level.

TABLE 8.--Mean readership scores on "SPIRES" picture for horizontal vs vertical picture and 11-pica vs wide measure body type setting (maximum readership score = 3.00).

		Picture		
		Horizontal	Vertical	Mean
Width of Body Type Setting	Wide Measure	1.50	1.69	1.60
	11-Pica	2.31	1.64	1.98
	Mean	1.91	1.67	

N per cell = 36

CHAPTER IV
DISCUSSION AND FUTURE IMPLICATIONS

Summary of the Study

This study could be viewed as the natural outgrowth of almost a decade of frustration and doubt in the teaching of newspaper layout and design at various institutions of higher education. Any teacher of future mass media practitioners who has been fortunate enough to have even minimal exposure to the theory and findings of communication research must admit that he is at times plagued with uncertainty about the quality of the information and techniques he is passing on to his students. Those who instruct in newspaper design are doubly afflicted because the skills they teach will be used as the culmination of the combined efforts of an entire newspaper staff in trying to reach its audience with information. What they teach determines in large measure how the product, the news, will be packaged. Since they are competing with an enormous variety of stimuli for the attention of their audience and for that audience's time, packaging assumes increased importance.

For such teachers, the problem ultimately boils down to a relatively simple question: "Do the design techniques I am passing along as 'gospel' really make any difference at all?" The experiment reported here attempted to provide some initial insights in the area of newspaper design. Three design variables were selected for study--horizontal and vertical headline pattern, horizontal and vertical picture pattern, and 11-pica (almost two inches) and wide measure body type setting width.

The wide measure setting width varied from 17 picas (almost three inches) to 23 picas (almost four inches). Various combinations of these three variables were examined for their effect on readership, comprehension, rated interestingness and rated pleasingness.

The basic theoretical framework for the study evolved from the work of psychologist D. E. Berlyne with a stimulus variable he identified as complexity. Essentially Berlyne says that increased pattern complexity leads to increased uncertainty which in turn produces increased conflict and arousal for the subject. The subject, finding himself with these unacceptable levels of conflict and arousal, will attempt to decrease them to an acceptable point. It was felt in the present study that the subjects would try to lower these high levels of conflict and arousal through increased looking behavior. It was anticipated that this increased looking behavior would result in increased readership and ultimately in greater comprehension of the material on the experimental page.

Berlyne's considerable efforts in coming to grips with the complexity variable have been supported and expanded upon by Attneave who offers strong evidence that one of the key components of complexity is the number of contours in the design. For instance, in one study of the judgments of complexity he reported that contour variables explained 73.7 per cent of the variance accounted for.⁴⁵ He suggested that a higher number of contours and angles in a design causes more excitations of the eye cells that respond to the onset or termination of

⁴⁵Attneave, "Some Informational Aspects . . ."

illumination. Later studies by Hall⁴⁶ and Robeck⁴⁷ have offered further support for the findings of Berlyne and Attneave concerning the positive relationship between design contour and rated complexity.

The research work of Berlyne and others has also indicated a linkage between complexity of design and rated interestingness and pleasingness. For instance, Day⁴⁸ has offered support for Berlyne's findings⁴⁹ that interestingness is directly related to design complexity and pleasingness is inversely related to complexity.

In order to test the effect of newspaper design complexity on readership, comprehension, interestingness and pleasingness, a four-page tabloid newspaper was constructed. Three of the four pages (pages 1, 2 and 4) were the same for all 144 subjects. Page 3 was selected as the experimental page so as to avoid as much as possible the problem of sensitization of the subjects as to the purpose of the study. There were eight versions of the experimental page on each of which complexity was manipulated through varying the combinations of the three independent variables one at a time from an all-horizontal page design (i.e., horizontal headlines, horizontal picture and wide measure body type setting) to an all-vertical page (i.e., vertical headlines, vertical picture and 11-pica body type setting). It was felt that the all-vertical experimental page version offered the maximum in complexity since it contained

⁴⁶Hall, "Measures of the Complexity . . ."

⁴⁷Robeck, "The Influence of Design Symmetry . . ."

⁴⁸Day, "The Importance of Symmetry . . ."

⁴⁹Berlyne, et al., "The Dimensionality of Visual . . ."

the largest number of layout blocks (one of Berlyne's criteria for complexity) and the largest number of contours. Through a series of procedures outlined in Chapter II the subjects provided responses as to the readership and comprehension of the six display elements on their version of the experimental page as well as their ratings of the complexity, interestingness and pleasingness of the version of page 3 to which they were exposed.

Based on the research findings of Berlyne, Attneave, Day, Hall and others, 12 hypotheses were formulated and tested. Vertical headlines, vertical pictures and 11-pica wide body type setting were expected to result in increased readership and comprehension and to lead to higher ratings of interestingness but lower ratings of pleasingness. None of these 12 hypotheses were supported by the data. There were, however, three significant interactions found in the analyses of variance for the readership of the six display elements used on the experimental page. Before these significant interactions are discussed, some effort should be made to explain just why the hypotheses of Chapter I failed to receive support. Given the benefit of hindsight, it would appear that the 12 hypotheses were too simple. Each of them deals with a main effect of the three independent variables. The data suggest that these variables, taken by themselves, are simply not strong enough to produce any significant effect on the four dependent variables. The significant interactions seem to indicate that none of the three main effects variables can be considered in isolation, but rather must be viewed in conjunction with the other variables. They do not work alone to produce a significant effect, but they can and do work together. The reversal of effects as shown in Tables 4, 6 and 8 serves to strengthen the notion that

the problem is much more complicated than originally thought.

Headline Pattern, Width of Body-Type
Setting and Readership

An analysis of variance for the readership of the "GRAVATT" story revealed a significant interaction between headline pattern, either horizontal or vertical, and width of body type setting, either wide measure or narrow measure (11-pica). As mentioned in Chapter III, this interaction seems to be a strong one since it came from a story that had the lowest readership of any display element on the experimental page. It also should be pointed out that the "GRAVATT" story was the lead story on the page across all versions. In the horizontal versions it was spread across the top of the five-column page, and in the vertical version it occupied the upper-right three columns. The data indicate that verticality of headline display interacts with verticality of body type setting (11-pica width), and horizontalness of headline display works with wide measure setting (19-pica width in this case) to increase readership. The mixing of these elements tends to impede readership (i.e., horizontal headline with vertical body type setting and vice versa).

An examination of the different versions of the experimental page (see Appendix B) offers some points of conjecture as to why this particular interaction of variables might have occurred. For instance, in versions 1, 2, 5 and 6 the "GRAVATT" story is displayed horizontally thus placing the beginning of its headline and its lead paragraph in what has traditionally been the primary optical area of a page, the upper left corner. In versions 3, 4, 7 and 8 the "GRAVATT" story receives a more vertical display and is not located in the upper left corner, but in the upper right. The four horizontal display versions had a mean readership

score of 2.0 while that of the four vertical display versions was 1.6. When the "GRAVATT" story was displayed vertically, the upper left corner was occupied by another story and headline, "POLICE." In the horizontal displays, the "POLICE" story was under the "GRAVATT" story on a five-column headline. The mean readership score for the four vertical display versions of "POLICE" where the headline and story were in the upper left corner was 5.3 while the horizontal mean readership score was 4.4. This would seem to indicate that placing a story in the upper left corner of a newspaper page can influence its readership.

There is another characteristic of the various "GRAVATT" display forms that seems to offer some insight into just what is operating in this interaction. As can be seen in page versions 1 and 2 in Appendix B, the "GRAVATT" display offers the reader three wide, shallow blocks of body type while versions 5 and 6 present him with five narrow, shallow blocks. To the experimenter's eye, the three blocks seem to be less forbidding than the five blocks. Table 9 indicates that the mean readership scores of the "GRAVATT" story for versions 1 and 2 are higher than those for versions 5 and 6 (2.2 and 3.3 as opposed to 1.5 and 0.9, respectively). In vertical version 4, the "GRAVATT" story is presented in two wide, equally deep blocks of type while in vertical version 8 it is displayed in three narrow, equally deep blocks with the three narrow blocks receiving a better mean readership score (2.2) than the two wide blocks (0.3). This would seem to indicate that the subjects prefer their wide measure type in shallow blocks and their narrow measure type in deep blocks.

TABLE 9.--Mean experimental page display elements readership scores for each experimental page version.

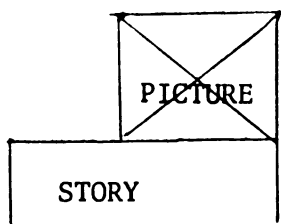
Experimental Page Version	Mean Element Readership Scores						
	GRAVATT	POLICE	SCPIRG	WOMEN'S LIB	HEALTH CENTER	SPIRES	Mean Page Readership
1	2.2	3.4	1.3	4.4	3.5	.1	16.0
2	3.3	.5	1.4	6.2	5.0	1.8	23.0
3	2.0	4.3	1.6	3.5	4.2	1.6	17.2
4	0.3	5.4	2.1	5.2	3.0	1.8	17.8
5	1.5	4.2	1.8	4.4	4.7	2.4	19.1
6	0.9	4.6	1.6	5.9	2.9	1.8	17.7
7	1.9	5.6	1.2	5.3	4.3	1.5	19.8
8	2.2	5.8	2.6	5.6	4.6	2.2	23.0
Mean	1.8	4.8	1.7	5.1	4.0	1.8	

While the differences in readership are not great, the same principle seems to be operating in the other longer stories on the experimental page where the body type is presented in equally deep blocks (i.e., the "HEALTH CENTER" story in versions 4 and 8; "WOMEN'S LIB" in versions 1 and 2 versus versions 5 and 6, version 3 versus version 7, and version 4 versus version 8; etc.).

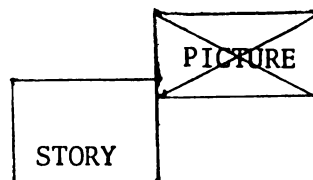
Headline Pattern, Picture Pattern and Readership

Unlike the above significant interaction between headline pattern and body type setting width in the readership of the "GRAVATT" story which indicated that like pattern went with like pattern, the significant interaction in the readership of the "WOMEN'S LIB" story between headline pattern and picture pattern shows an opposite effect. Here it seems that combinations of "unlike" patterns work best to increase readership. In other words, vertical headline pattern interacts with horizontal picture pattern and horizontal headline pattern with vertical picture pattern when a high readership score is produced.

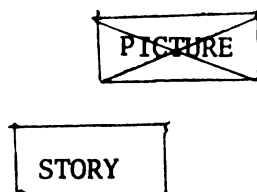
It appears that how the story is placed on the page in relation to the picture has an influence on the story's readership (see Figure 1). For instance, the highest mean readership scores for the "WOMEN'S LIB" story occur in versions 2 and 6 of the experimental page. In these two versions the picture impinges on the top of the story's headline suggesting that perhaps the eye sees the picture, reads the accompanying explanatory material (the cutlines) and then is led into the headline of the story. By comparison, in versions 3 and 7 the story is separated from the cutlines of the picture by a portion of the picture itself. Table 9 shows that the mean readership scores for the story in these two versions are lower



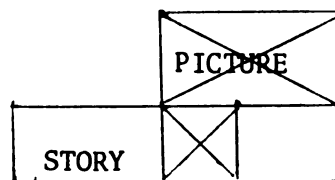
Experimental Page
Versions 2 and 6



Experimental Page
Versions 4 and 8



Experimental Page
Versions 1 and 5



Experimental Page
Versions 3 and 7

Figure 1.--Placement of picture in relation to "WOMEN'S LIB" story by
experimental page version.

than the scores for page versions 2 and 6. Similarly, it can be seen that whenever the "WOMEN'S LIB" headline impinges in any way on the cutline material for the picture, whether under it (as in versions 2 and 6), or beside it (as in versions 4 and 8), the story has better readership than when the headline is separated from the cutline material as in versions 3 and 7 (separated by picture itself) and versions 1 and 5 (separated by another story).

It seems that another phenomenon is operating here as well. Those pages that offer a horizontal headline/vertical picture combination appear to offer more visual contrast between their horizontal and vertical rectangles than do the "like" combinations, thus contributing to higher readership.

Picture Pattern, Width of Body
Type Setting and Readership

Picture pattern and the width of body type setting interacted significantly in the readership of the "SPIRES" picture, but as with the "WOMEN'S LIB" story there was a reversal of effect. Horizontal picture pattern combined with vertical body type setting (11-pica width) and vertical picture pattern with horizontal body type setting (wide measure width) seem to increase readership of the picture and its accompanying explanatory material (its cutlines). As with the readership of the WOMEN'S LIB" story, it is felt that contrast is involved in this effect. The horizontal picture pattern appears to contrast well with the vertical, narrow blocks of 11-pica wide type as does the vertical picture shape with the wide measure setting. Although there were no significant findings in the analysis of variance of total page readership, one of the interactions did approach significance (.086)--that of picture pattern and width of

body type setting. This, too, showed a reversal of effect. This particular interaction very nearly overcame the weakening effect of the low readership received by some of the elements on the experimental page.

Theoretical Implications

When, after careful and painstaking construction and execution of an experiment, it is found that none of the thoughtfully formulated hypotheses was supported by the data, there is a compelling need to pause, to reconsider. Were there lapses in theoretical construction? Was there faulty reasoning involved? In short, what happened?

It has already been pointed out that one of the most basic problems with the 12 hypotheses of Chapter I is that they are too simple. They are written in terms of direct, main effects, but the data indicate the problem is much more complicated than that. The hypotheses should have been written with interaction of variables in mind. Another point that may have contributed to the lack of finding significant direct effects is that simplicity in newspaper design may be harder to come by than the experimenter suspected.

As outlined in Chapter I, one of the goals in the design of this study was to create experimental page layouts that varied in their complexity. Apparently this was an unsuccessful effort since the respondents rated all the pages as being slightly complex. It was stated early in this study that "any inferential leap from studies dealing with the nonsense pattern preferences of rats, baby chicks and children to an investigation of the effects of newspaper layout and design on the reading habits of adults requires that the investigator place himself on the extreme end of a wind-tossed branch." It is felt that this inferential leap represents part of the difficulty of this experiment.

Most of the studies reported in Chapter I were the result of experimentation involving nonsense stimuli. Even in those experiments where other than children or infants were used as subjects, the stimuli were nonsense patterns. It is felt that these nonsense stimuli presented the experimenters with an inherent advantage since the subjects could have no preconceived dispositions toward the stimuli. Such is not the case with newspapers. Most people cut their reading "eye teeth" on the funny papers and have been reading a newspaper with varying regularity since their early childhood years. Indeed, in retrospect, only an extreme optimist could have expected simple manipulation of single variables to cut through this strongly reinforced, built-in predisposition to newspaper design. That the interacting variables were able to show an effect indicates the strength of their combinations.

This study offers no support for Berlyne's conceptualization of complexity as a variable or for the findings of many probings of complexity inspired by Berlyne's work. The fault may not lie in Berlyne's theory, but in the experimenter's failure to provide designs of sufficient simplicity. Although the idea of what design variables to use came from Berlyne's theories, the elements used did not produce the complexity expected on the basis of his definitions. In fact, the version that was considered the most simple by his definitions received the highest "perceived complexity" scores (see Table 10). The complexity ratings might even suggest findings in the opposite direction of those hypothesized. This did not occur. The main effects that were found were not significant and the observed means from hypothesis to hypothesis were very similar and did not show any general direction. One of the reasons for this may be indicated by the fact that the only significant differences found

TABLE 10.--Mean ratings of pleasingness, interestingness and complexity for different levels of designed page complexity.

Degree of Complexity*	Pleasingness	Interestingness	Complexity
0	4.2	4.9	4.8
1	4.4	4.6	4.4
2	4.6	4.7	4.4
3	3.9	3.6	4.3

* Row "0" represents the mean ratings of complexity, pleasingness, and interestingness for experimental page version 1 which has none of those elements of complexity outlined by Berlyne.

Row "1" represents the mean of the means of the ratings of complexity, pleasingness and interestingness for experimental page versions 2, 4, and 5 which have one element of complexity.

Row "2" represents the mean of the means of the ratings of complexity, pleasingness and interestingness for experimental page versions 3, 6, and 8 which have two elements of complexity.

Row "3" represents the mean ratings of complexity, pleasingness and interestingness for experimental page version 7 which has three elements of complexity.

were interactions between two independent variables, which usually tends to neutralize any possible main effect. It is felt that this lack of any real perceived range in the complexity of the experimental pages as far as the subjects were concerned contributed directly to the lack of support for the hypotheses dealing with rated pleasingness and interestingness.

It is felt that another reason for the lack of support by the data for the hypotheses dealing with rated pleasingness and interestingness is that the hypotheses were formulated on the basis of the findings by Berlyne and others that pleasingness and interestingness are negatively correlated. In this study, not only are the two ratings not negatively correlated, but they show a moderate positive relationship ($r = .54$). Thus, while it was anticipated that because of the varying levels of design complexity the subjects would respond in different ways to the pages as being interesting or pleasing, as far as they were concerned the two sets of polar opposite adjectives (pleasing-displeasing and interesting-uninteresting) were measuring substantially the same thing. This positive correlation between rated pleasingness and interestingness would seem to serve as a contradiction to at least a part of Berlyne's theory.

The data also indicate a definite, but small relationship between overall readership of the experimental page and rated interestingness ($r = .22$). Even though this is a low correlation, it still reveals a small, positive relationship. The correlation between readership of the experimental page and rated pleasingness was almost negligible ($r = .11$).

In addition to the problem of using a basically different stimulus than previous studies had used, there is another difficulty involved with its subjects. Most of the early work on complexity, pleasingness and interestingness by Berlyne, Attneave and others was performed using infants and children as subjects. This experiment used college students as subjects,

most studies that have done so have come up with mixed support for Berlyne's findings. As reported in Chapter I, Frances has even found that different types of adults (students and workers) respond differently to complexity. This is not to say that one should allow children and infants to set the standards for complexity. Rather the differentiating limits of complexity, perhaps through age or education or a combination of both, or even other variables, should be established through continuing experimentation. The homogeneity of the subjects used in this study may have served as a restriction on the variability of the rated pleasingness and interestingness scores.

There are at least two other differences between this experiment and those that have been performed earlier in the study of complexity. In the previous studies the subjects have been in a forced exposure situation, while in this investigation exposure to the experimental stimuli was voluntary. This voluntary exposure also involved considerably more time than was used in earlier studies. Most of the previous findings had exposure times of considerably less than one minute, generally in the vicinity of 10 seconds. While no effort was made in the present experiment to check the amount of time the subjects spent with the experimental page, the total exposure time for the four-page tabloid newspaper was 10 minutes, and it is felt that the subjects probably spent in excess of two minutes on page 3. It could also be that a different approach to the experiment using the eye camera techniques described by Robeck⁵⁰ would have resulted in other findings.

From the findings of this study, the following general conclusions appear to be in order in the consideration of newspaper design and its effect on readership:

⁵⁰Robeck, "The Influence of Design Symmetry . . ."

1. In horizontal page display, the combination of horizontal headlines with wide measure body type setting will result in increased readership of the lead story on the page.
2. In vertical page display, the combination of vertical headlines with narrow measure body type setting will result in increased readership of the lead story on the page.
3. The combination in page design of horizontal headlines with vertical pictures will result in increased readership of the elements so displayed.
4. The combination in page design of vertical headlines with horizontal pictures will result in increased readership of the elements so displayed.
5. Stories displayed so that their headlines impinge on the accompanying explanatory material for the pictures on that page will have higher readership than stories that are separated from the pictures' accompanying explanatory material.
6. The combination in page design of wide measure body type setting with vertical pictures will result in increased readership of the display elements on that page.
7. The combination in page design of narrow measure body type setting with horizontal pictures will result in increased readership of the display elements on that page.

Practical Applications of Findings

It was mentioned in Chapter I that current newspaper layout and design principles are largely the result of the "gut feeling" pronouncements of a few men. This study has the advantage of having scientifically checked some of these principles and their effect on readership. The general conclusions listed above offer some potentially useful techniques for the professional newspaper designer. The significant interactions reported in Chapter III also seem to provide some pointers for the practitioner.

For instance, these interaction findings indicate that the professional newspaper designer would do well to take into consideration that design principles work in combination and not singly. What the subjects in this experiment appeared to respond best to, as evidenced by their increased

readership in certain situations, is a contrast in shape between various display elements. It also appears that the upper left corner of a newspaper page is a potent location for a display element insofar as enhancing its probability of readership is concerned.

The pulling power of a picture is another consideration that should not be overlooked if one is interested in increasing the readership of a story. It appears that if the headline of a story impinges on the cutline material for a picture the story will be better read than if it does not. Although picture cutlines are traditionally displayed under the picture, there is really no reason why they must always appear in that position. For instance, if the layout man has an important story that he wishes to display to the right of a picture, the readership of that story might well be increased by placing the cutlines on the right side of the picture--between the picture and the story.

When a decision is being made on how to display a story, there are basically two forms that the display can take. It can either be in wide-shallow or narrow-deep rectangular shape. This study indicates that readership is enhanced if the wide-shallow combination uses wide measure body type setting or if narrow measure setting is used in the narrow-deep situation. The use of narrow measure body type setting in the wide-shallow combination and wide measure setting with the narrow-deep pairing should be avoided. It would also appear that care should be taken in matching picture shape with the width of body type setting around it. As with magnets, opposites attract. Higher reader attention, as indicated by increased readership, seems to be the result of using wide measure setting around vertical pictures or narrow measure setting with horizontal pictures.

The mean readership scores given in Table 2 of Chapter III should sound a note of warning for anyone who sees page design as the ultimate

determiner of readership. It would seem that, generally, subject matter of the story will determine its readership with some potential assistance from careful design. As an example, the "WOMEN'S LIB" story readership was increased when it appeared under the picture on the experimental page. Placement under the picture, however, did not help the readership of the "HEALTH CENTER" story. The readership of the "GRAVATT" story in the different experimental page versions which produced the significant interaction between headline pattern and width of body type setting indicates that display can be of assistance in drawing attention to stories of less interesting subject matter.

Another reason for exercising caution before drawing too many conclusions from the results of this study is that the experiment examines the effect of the different display variables in a tabloid format. It is possible that other results could be obtained if the experimental vehicle were a full-size, eight-column newspaper. There could be a difference in the way the reader responds to the varying size of the two formats.

"If I Had It To Do Again. . ."

Regardless of how carefully one thinks through a problem before tackling it, there always seems to come a time after the deed is done where one says: "If I had it to do again . . ." Such is the case here.

When intact groups are used as subjects, there is a tendency to wish that a more representative sample could have been obtained. It is extremely doubtful that any non-campus newspaper in the world has as its average reader a 19-year-old female who is a rising sophomore in college. Might a sample of subjects that was more nearly typical of the average newspaper reader have produced different results? Research findings reported in Chapter I and alluded to earlier in this chapter suggest that

such might be the case. It could be that the independent variables used in this study are perceived differently in newspaper design by persons of varying age, sex, education, etc.

The fact that the subjects in this study perceived all of the experimental designs as being slightly complex seems to indicate that greater effort is needed in the production of a simple newspaper design. Perhaps it would be useful at the design stage to have the pages being considered for inclusion in the experimental vehicle rated for their perceived complexity. This might serve to ensure a more reasonable testing of Berlyne's theory of complexity and its effect on rated pleasingness and interestingness.

As mentioned earlier, it is felt that the low readership of some of the stories on the experimental page tended to decrease the chance of any significant differences being found in the overall page readership. It is felt that the time lapse between setting the experiment up and the gathering of data caused some of the stories to be of lesser interest than others. It has been pointed out earlier that students were allowed to indicate those areas of news that were of the most interest to them. This information was used in selecting and writing the stories that appeared on the experimental page. Unfortunately, by the time the experiment was run, at least two of the subject areas ("GRAVATT" and "SCPIRG") had largely lost the interest of the students. Perhaps general readership would be increased if the stories used were on longer-lasting interest topics such as the "POLICE" and "WOMEN'S LIB" articles. It is also felt that great care must be taken in the writing of headlines for stories in such an experiment. In retrospect, the headlines "When Police Stumble, Public Often at Fault" and "Praise, Blame Tossed at 'Lib'" seem to possess more inherent interest than "SCPIRG Forming" and "Infirmary Expansion Scheduled." The readership percentages in

Table 2 are considerably higher for the stories under the first two headlines than for the latter two.

Finally, it is obvious that the original hypotheses should have included the notion of potential interaction of variables. As has been mentioned several times already, the relationship between newspaper design and readership is nowhere nearly as simple as originally thought, but involves an intricate and complicated blending of stimulus variables.

Future Research

All one has to do is to check this particular section of most master's and doctoral theses and he realizes that experiments generally tend to provide more questions than answers. This experiment was no exception.

The possibility of linking a study of this sort with the precision of eye camera research is an intriguing one. As mentioned before, the data in this experiment seem to indicate that the relationship of a picture to the display elements around it can have an effect on readership. It would be most interesting to use an eye camera to test the eye-directing power of pictures and their accompanying explanatory material in various combinations. The same approach could be used to check the attention-getting potential of the different combinations of typographical devices available to the designer.

The layout techniques used in this study are fairly standard ones that are used by most newspapers. It is felt that the majority of these techniques evolved out of an attempt to operate within the restrictions of the "hot metal" printing process. There are other techniques, however, that have been made available to newspapers with the advent of offset, or "cold type" printing. Many of the design procedures that were formerly open only to magazines can now be adapted to newspaper production. Much useful research could be performed in the area of comparing newspaper design prin-

ciples with those of magazines in an effort to determine if there is a differential effect on readership. It is commonly held, for instance, among magazine layout practitioners that the eye can be guided through a display by the careful placement of pictures, blocks of type and the use of white space. Can this assumption be supported scientifically? Is it adaptable to newspaper design? Do the relative sizes of magazine pages, tabloid-size newspaper pages and full-size newspaper pages have anything to do with their readership or lack of it. In fact, would there be a differential readership of stories displayed in magazine format as compared with those same stories in standard newspaper layout style?

Earlier in this chapter it was pointed out that the findings indicate that the respondents may have been responding, at least in part, to the shape of the various displays. It would be possible to design a study using offset pasteup that would hold constant the number of angles present in the design but would vary the shapes of the display elements. It could be that contrast of shape is an important variable in the effect of newspaper design on readership. Perhaps the pages that systematically combine horizontal and vertical rectangles in their design are more attention getting than those pages that do not do so. Can the amount of white space in and around display elements heighten the visual perception of contrasting shape? Miles Tinker, for instance, has reported that the amount of leading or white space between lines of type in books can influence the readability of type.⁵¹ If contrasting shapes can influence readership, must they be rectangular shapes or could they perhaps be circles, triangles, squares or curves in various combinations?

Another interesting extension of the present experiment would be to examine newspaper readership as an element of choice behavior. For

⁵¹Miles A. Tinker, Legibility of Print (Ames, Iowa: Iowa State University Press, 1963).

instance, after designing several newspaper pages that are radically different from each other, expose the subjects to the pages in a "newsstand" situation. Once the subjects have made their choice as to which page they prefer, carefully structured interviewing could determine what design elements on the page led them to select it over the other alternatives. As has been mentioned earlier, the design changes involving the independent variables in the present study were apparently too subtle to result in any significantly different effect on the dependent variable of readership. The design differences in a study of this sort would be much more obvious, thus providing the subject with a more readily discernible choice.

Page design is obviously only one of the considerations in what people read in their newspapers. There are also the areas of headlines and writing styles. It is not that these points have not been studied. Tannenbaum, for instance, has investigated the effects of headlines on the "superficial reader."⁵² Griffin,⁵³ Schramm⁵⁴ and Rarick,⁵⁵ among others, have looked into the response of readers to the inverted pyramid style of writing that is the standard mode of presentation for news stories. The problem is that these two areas have not been sufficiently studied. Any program of research that seeks to gain a better understanding of just

⁵²Percy H. Tannenbaum, "The Effect of Headlines on the Interpretation of News Stories," Journalism Quarterly, Vol. 30 (1953), 189-197.

⁵³Philip F. Griffin, "Reader Comprehension of News Stories: A Preliminary Study," Journalism Quarterly, Vol. 26 (1949), 389-396.

⁵⁴Wilbur Schramm, "Measuring Another Dimension of Newspaper Readership," Journalism Quarterly, Vol. 24 (1947), 293-306.

⁵⁵Galen R. Rarick, Field Experiments in Newspaper Item Readership (Eugene, Oregon: Division of Communication Research, School of Journalism, University of Oregon, 1967).

what is involved in newspaper readership must include a careful study of such items. It could be that one must consider the interaction of design, headline content and writing style if true understanding is to be gained.

It is felt that the next research project this investigator should undertake would involve a refinement of the present one. There is a reluctance to abandon the work of Berlyne and others in relation to newspaper design on the basis of this study, particularly because of the problems encountered with perceived complexity. With a restructuring of hypotheses to take into account the influence of interaction of variables, a more representative sample and a careful reworking of some of the page designs, it is possible that more significant and meaningful results could be obtained. The concept of complexity still seems to have much to offer to those interested in newspaper design. It is a question of finding the proper key.

BIBLIOGRAPHY

BIBLIOGRAPHY

- Attneave, F. "Physical Determinants of the Judged Complexity of Shapes." Journal of Experimental Psychology, Vol. 53 (1957), 221-227.
- _____. "Some Informational Aspects of Visual Perception." Psychological Review, Vol. 63 (1954), 183-193.
- Berlyne, D. E. "Complexity and Incongruity Variables as Determinants of Exploratory Choice and Evaluative Ratings." Canadian Journal of Psychology, Vol. 17 (1963), 274-290.
- _____. Conflict, Arousal and Curiosity. New York: McGraw-Hill, 1963.
- _____. "The Influence of the Albedo and Complexity of Stimuli on Visual Fixation in the Human Infant." British Journal of Psychology, Vol. 49 (1958), 315-318.
- _____. "The Influence of Complexity and Novelty in Visual Figures on Orienting Responses." Journal of Experimental Psychology, Vol. 55 (1958), 289-296.
- _____. "Supplementary Report: Complexity and Orienting Responses With Longer Exposures." Journal of Experimental Psychology, Vol. 56 (1958), 183.
- Berlyne, D. E. and Lawrence, G. "Effects of Complexity and Incongruity Variables on GSR, Investigatory Behavior and Verbally Expressed Preference." Journal of General Psychology, Vol. 71 (1964).
- Berlyne, D. E. and Lewis, Jr. "Effects of Heightened Arousal on Human Exploratory Behavior." Canadian Journal of Psychology, Vol. 17 (1963), 398-411.
- Berlyne, D. E., Ogilvie, J., and Parham, L. "The Dimensionality of Visual Complexity, Interestingness and Pleasingness." Canadian Journal of Psychology, Vol. 22 (1969), 376-387.
- Bryson, Jeff B. and Driver, Michael J. "Conceptual Complexity and Internal Arousal." Psychonomic Science, Vol. 17 (1969), 71-72.
- Cantor, G., Cantor, J., and Dittrichs, R. "Observing Behavior in Pre-school Children as a Function of Stimulus Complexity." Child Development, Vol. 34 (1963), 683-689.
- Caron, Rose F. "Degree of Stimulus Complexity and Habituation of Visual Fixation in Infants." Psychonomic Science, Vol. 14 (1969), 78-79.

BIBLIOGRAPHY
(Continued)

- Cizkova, Jitka. "Effect of the Quantity and Complexity of Visual Stimuli on Operator's Search Activity." Studia Psychologica, Vol. 9 (1967), 241-247.
- Day, H. "The Importance of Symmetry and Complexity in the Evaluation of Complexity, Interest and Pleasingness." Psychonomic Science, Vol. 10 (1969), 339-340.
- _____. "Evaluations of Subjective Complexity, Pleasingness and Interestingness for a Series of Random Polygons Varying in Complexity." Perception and Psychophysics, Vol. 2 (1967), 281-286.
- Dember, W. N., Earl, R. W., and Paradise, N. "Response by Rats to Differential Stimulus Complexity." Journal of Comparative and Physiological Psychology, Vol. 50 (1957), 514-518.
- Dember, W. N., and Earl, R. W. "Analysis of Exploratory, Manipulatory, and Curiosity Behaviors." Psychological Review, Vol. 64 (1957), 91-96.
- Eisenman, R. "Pleasing and Interesting Visual Complexity: Support for Berlyne." Perceptual and Motor Skills, Vol. 23 (1966), 1167-1170.
- Eisenman, R., Grove, M., and Coyle, F. A., Jr., and Redick, L. "Studies in Complexity-Simplicity: I. Children's Preferences; II. Personality Correlates in College Students." Proceedings of the 77th Annual Convention of the American Psychological Association, Vol. 4 (1969), 473-474.
- Eisenman, R., and Robinson, N. "Complexity-Simplicity, Creativity, Intelligence, and Other Correlates." Journal of Psychology, Vol. 67 (1967), 331-334.
- Evans, David R. "Conceptual Complexity, Arousal and Epistemic Behaviour." Canadian Journal of Psychology, Vol. 24 (1970), 249-260.
- Fantz, R. "The Origin of Form Perception." Scientific American, Vol. 204 (1961), 66-72.
- Faw, Terry T., and Nunnally, Jum C. "The Influence of Stimulus Complexity, Novelty, and Affective Value on Children's Visual Fixations." Journal of Experimental Child Psychology, Vol. 6 (1968), 141-153.
- _____. "The Effects on Eye Movements of Complexity, Novelty, and Affective Tone." Perception and Psychophysics, Vol. 2 (1967), 263-267.

BIBLIOGRAPHY
(Continued)

- Frances, R. "Interet et Preference Esthetique Pour des Stimuli de Complexite Variable." Journal de Psychologie Normale et Pathologique, Vol. 67 (1970), 207-224.
- Gaschk, Judith A., Kintz, B. L., and Thompson, Richard W. "Stimulus Complexity, Free Looking Time, and Inspective Exploration." Perception and Psychophysics, Vol. 4 (1968), 319-320.
- Griffin, Philip F. "Reader Comprehension of News Stories: A Preliminary Study." Journalism Quarterly, Vol. 26 (1949), 389-396.
- Hall, A. C. "Measures of the Complexity of Random Black and White and Coloured Stimuli." Perceptual and Motor Skills, Vol. 29 (1969), 773-774.
- Jacobson, Harvey K. "Mass Media Believability: A Study of Receiver Judgments." Journalism Quarterly, Vol. 46 (1969), 20-28. ✓
- Jones, Robert L., and Beldo, Leslie A. "Methodological Improvements in Readership Gathering." Journalism Quarterly, Vol. 30 (1953), 345-353.
- Karmel, Bernard Z. "Complexity, Amounts of Contour, and Visually Dependent Behavior in Hood Rats, Domestic Chicks, and Human Infants." Journal of Comparative and Physiological Psychology, Vol. 69 (1969), 649-657.
- Kerrick, Jean S. "The Influence of Captions on Picture Interpretation." Journalism Quarterly, Vol. 32 (1955), 177-182.
- _____. "News Pictures, Captions and the Point of Resolution." Journalism Quarterly, Vol. 36 (1959), 183-188.
- Lowenthal, Alan S. "Stimulus Variability, Preference, and Perceptual Change." (Ohio State University), Dissertation Abstracts, 1968, 28(9-B), 3867-3868.
- McCall, Robert B., and Melson, William H. "Complexity, Contour, and Area as Determinants of Attention in Infants." Developmental Psychology, Vol. 3 (1970), 343-349.
- Minton, H. "A Replication of Perceptual Curiosity as a Function of Stimulus Complexity." Journal of Experimental Psychology, Vol. 65 (1963), 522-524.

BIBLIOGRAPHY
(Continued)

- Moffett, Adrienne. "Stimulus Complexity as a Determinant of Visual Attention in Infants." Journal of Experimental Child Psychology, Vol. 8 (1969), 173-179.
- Rabinowitz, F. Michael, and Robe, Charlotte V. "Children's Choice Behavior as a Function of Stimulus Change, Complexity, Relative Novelty, Surprise and Uncertainty." Journal of Experimental Psychology, Vol. 78 (1968), 625-633.
- Rarick, Galen R. Field Experiments in Newspaper Item Readership. Eugene, Oregon: Division of Communication Research, School of Journalism, University of Oregon, 1967.
- Robeck, George B. "The Influence of Design Symmetry and Contour on Eye Fixations and Judgments of Perceived Complexity, Interestingness and Pleasingness." Unpublished Ph.D. thesis, Department of Communication, Michigan State University, 1970.
- Roper, Burns. Report for the Television Information Office of the National Association of Broadcasters (July, 1969).
- Schramm, Wilbur. "Measuring Another Dimension of Newspaper Readership." Journalism Quarterly, Vol. 24 (1947), 293-306.
- Tannenbaum, Percy H. "The Indexing Process in Communication." Public Opinion Quarterly, Vol. 19 (1955), 292-302.
- _____. "The Effect of Headlines on the Interpretation of News Stories." Journalism Quarterly, Vol. 30 (1953), 189-197.
- Tinker, Miles A. Legibility of Print. Ames, Iowa: Iowa State University Press, 1963.
- Wohlwill, Joachim F. "Amount of Stimulus Exploration and Preference as Differential Functions of Stimulus Complexity." Perception and Psychophysics, Vol. 4 (1968), 307-312.
- Wrolstad, Merald E. "Adult Preferences in Typography: Exploring the Function of Design." Journalism Quarterly, Vol. 37 (1960), 211-223.

APPENDICES

APPENDIX A

SCHEDULE OF ACTIVITIES DURING EXPERIMENT AND DATA-GATHERING INSTRUMENTS

SCHEDULE OF ACTIVITIES DURING EXPERIMENT

Part I

1. Seat subjects and give copies of their version of the experimental four-page tabloid newspaper.
2. Allow subjects 10 minutes for reading the newspaper.
3. Instruct subjects on marking procedures for indicating how much of each story and picture they have read.

Part II

1. Distribute to each subject a set of rating scales with "Complex-Simple" used as scale anchors. Distribute and read the Rating Scale Instruction Sheet.
2. Have subjects rate pages on "Complex-Simple" continuum; collect set of rating scales.
3. Distribute set of rating scales using "Interesting-Uninteresting" as anchors; have subjects perform evaluation; collect set.
4. Distribute set of rating scales using "Pleasing-Displeasing" as anchors; have subjects perform evaluation; collect set and newspapers.

Part III

1. Distribute and read instruction sheet on how to answer multiple-choice questions on the five stories and one picture on the experimental page.
2. Distribute questions and allow subjects time to answer.
3. Have subjects fill out personal information sheets.
4. Collect all materials from subjects.
5. Explain experiment to subjects. Dismiss.

READERSHIP-MARKING INSTRUCTION SHEET

Using the marking pencil that has been provided for you, please indicate how much of each story and picture you have read by extending a line from the top of the headline through the last paragraph in the story you read or through the picture and its accompanying explanatory material. Please mark through the copy and not in the margins.

For instance, if you read only the headline, your vertical line would extend only through the headline. If you read the headline and the first 7 paragraphs of the story, your vertical line would extend through the headline and the first 7 paragraphs of the story, etc. If you only looked at a picture and did not read the accompanying explanatory material, your vertical line would extend only through the picture and would not reach into the accompanying explanatory material. If you looked at the picture and read the accompanying explanatory material, your vertical line would extend through both elements. Again, please mark through the copy and not in the margins.

If you did not read any part of a story or look at any part of a picture, you would make no mark on that story or picture. Please examine and consider each item on each of the four pages in your newspaper in this manner.

RATING SCALE INSTRUCTION SHEET

We would now like for you to consider the APPEARANCE and PATTERN of each page in your newspaper and NOT its content in providing the called-for evaluation. We are not interested at this point in the content of the stories, headlines or pictures, but only in the APPEARANCE and PATTERN of the pages. Here is how you use the scales:

If you feel the page is extremely closely related to one end of the scale, you should place your check mark as follows:

GOOD: X : : : ☐ : : : : BAD

or

GOOD: : : : ☐ : : : X : BAD

If you feel the page is very closely related to one or the other end of the scale (but not extremely), you should place your check mark as follows:

GOOD: : X : : ☐ : : : : BAD

or

GOOD: : : : ☐ : : X : : BAD

If the page seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

GOOD: : : X : ☐ : : : : BAD

or

GOOD: : : : ☐ : X : : : BAD

If you consider the page to be neutral on the scale (both sides of the scale equally associated with the page) or if the scale is completely irrelevant and unrelated to the page, then you should check the boxed middle space.

Be sure you check every scale--do not omit any. Never put more than one check mark on a scale. The information in the upper left of

your rating scale sheet indicates which page of your newspaper that rating scale goes with.

Go straight through the scales, checking each one as you go. Do not leave some to go back to later. It is your first impressions, the immediate "feelings" about the page that we want. On the other hand, please do not be careless, because we want your true impressions.

Group No. ____ Subject No. ____

1. The panel discussion on Women's Liberation was held at:
 - a. the University of South Carolina
 - b. Clemson University
 - c. Winthrop College
 - d. don't know
2. The defender of the Women's Liberation movement was:
 - a. Gloria Steinham
 - b. Ti-Grace Atkinson
 - c. Bella Abzug
 - d. don't know
3. According to the Los Angeles psychiatrist, the Women's Liberation movement is causing many of today's young men to suffer from:
 - a. a fear of confrontation
 - b. impotency
 - c. guilt feelings
 - d. don't know
4. A sociologist and former New York policeman said that frequently today's policemen are themselves lawbreakers, and that the fault lies partially with the police and partially with:
 - a. the public
 - b. penny-pinching governmental administrators
 - c. the schools for neglecting to teach proper respect for the law
 - d. don't know

5. The sociologist said the average policeman suffers from:
 - a. paranoia
 - b. anomie
 - c. lack of respect
 - d. don't know
6. He also said the problem of police who themselves break the law is:
 - a. a problem for which there is no solution
 - b. unique to New York City
 - c. national in scope
 - d. don't know
7. According to the USC vice-president for business affairs, the greatest inadequacy of the current University Health Service is:
 - a. lack of money
 - b. lack of space
 - c. a lack of student interest
 - d. don't know
8. University women can have birth control devices prescribed by the Health Center if:
 - a. they are 21 years of age or older
 - b. they have a note of permission from their parents
 - c. they will only ask for the devices
 - d. don't know
9. In comparison with other university health centers, according to the USC Health Center's acting director, the USC Center:
 - a. stacks up "very poorly"
 - b. is in "good shape"
 - c. is "about the same"
 - d. don't know

10. The official USC administration reaction to the Camp Gravatt Report has been to:
 - a. ignore it
 - b. give close attention to it
 - c. laugh at it
 - d. don't know
11. The report recommended that the National Merit Scholar Semi-Finalist Day be:
 - a. expanded
 - b. discontinued
 - c. kept the same
 - d. don't know
12. According to the University registrar, a revised plan for pre-registration will be ready by:
 - a. the 1972 fall semester
 - b. the 1973 summer session
 - c. the 1973 spring semester
 - d. don't know
13. SCPIRG's aims are to improve and maintain acceptable environmental standards and to:
 - a. elect environment-conscious persons to the state legislature
 - b. protect the state's consumers
 - c. raise money for the national Ralph Nader organization
 - d. don't know
14. SCPIRG seeks an annual budget of:
 - a. \$20,000
 - b. \$300,000

14. (Continued)

- c. \$100,000
- d. don't know

15. SCPIRG wants to fund itself through:

- a. student activity fees
- b. state legislature appropriation
- c. door-to-door solicitation
- d. don't know

16. The number of church spires shown in the spires picture is:

- a. three
- b. two
- c. four
- d. don't know

17. According to the accompanying explanatory material, the spires are:

- a. waiting to be torn down
- b. part of a disappearing skyline
- c. reaching out to heaven
- d. don't know

18. The spires shown represent:

- a. old architecture
- b. modern architecture
- c. a combination of old architecture and modern architecture
- d. don't know

Group No. ____ Subject No. ____

Please provide the information requested below. It will be of great help to us in the analysis of our data.

1. Your age _____
2. Your sex _____
3. Number of semesters of college-level education (count the current semester as a completed semester and each summer session attended as a half semester with two summer sessions equaling one semester)

4. Number and title of the course you are taking from which you were recruited for this study _____

APPENDIX B

PAGE DESIGNS USED IN THE EXPERIMENT

CONTROL PAGES

THE UNIVERSITY OF SOUTH AFRICA, COLUMBIA S.C.



few would deny that progress is important but many must be concerned about how much sacrifice is necessary for that progress. The score is more evidence of the steady march

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Manly - Eileen - getting a cause person

The former head shop had been transformed into a walk-in clinic information center to deal with drug abuse and other street situations.

Now known as The Brown Center, opened this fall as a project of the Columbia Urban Service Center.

The center has been a state leader in an effort to get more facts on different subgroups in the community. It has developed about 200 studies and other products to continue to use frequently as well as according to the local "highly coordinated" of the center.

The Eucalyptus will deal with a wide range of soil situations as a tree or shrubby ground cover. It is a shallow feeder and common on sandy soils, but it also grows well on clay soils. It is a hardy tree, but it is not frost resistant.

— The college and Frisco need greater access to the Internet.

The center program will offer three credit-bearing and voluntary help 112 hours and that experience will be an important aspect of the instruction in

ment of billboards, telephone poles and other "progressive" elements into Columbus's present-day skyline.

om Becomes Crisis Center

Drug addicts desiring rehabilitation are urged by U.S. Justice Department officials to register and available for treatment through the Narcotics Addict Rehabilitation

of \$100,000 in the case of a conviction. The defendant was charged with possession of a controlled substance.

Continued on inside back cover

Zoo Dream Near Reality

Experimental findings do not show a significant

It is only through knowing better that we can help them. Frank Rich, assistant director of Education / Industry / Public, said:

The ecological path has not been only a dream for many Colombians. A decade ago a group of citizens formed the Citizens' Zoological Society, its ultimate goal: establish a zoo. With the aid of local zoo groups, the Society has raised approxi-

In 1969 the South Carolina General Assembly passed a bill creating the Riverbanks Park Commission. The commission was authorized to plan, establish, develop, construct, enlarge, improve, equip, maintain, staff, operate, regulate and protect the public recreation and raw facilities within their territory.

General obligation bonds amounting to \$2.2 million already have been approved by the legislature for the capital construction of the park. The remaining \$1.1 million needed for first-

Some of the \$1.1 million is for buying animals. Park rangers from Montana and Arizona are already seeking birds to put

The Columbus Ecological Park is located in Kew-Forest Park off St. at the intersection of Boulevard East. The park is located on both sides of the Naitheke River, on land leased from the North Carolina State.

There will be a considerable increase in the total number of atoms.

In this area the code has not separated the contents and the code will be one hundred percent correct due to the code being placed in the contents area will be correct due to the code being

The water caught in the soil will contain as little as 1% of the oxygen present in the atmosphere. It will also be a mixture of the total salt. The air and water will be dissolved. Water temperature will be maintained at 4 degrees, and the volume of the water will duplicate the volume of the atmosphere.

The upper deck of the tank will contain protection and ventilation areas. The tanks will be constructed to repurpose metals, but the ventilation will need to be removed.

There will also be a service building, containing administrative offices, a kitchen where the meals served will be prepared and veterinary stores.

The stress of the building can vary, animals will have a response of 10-15% from the culture stress to physical contamination of animals.

It will be submitted in a format appropriate to the species. For example, birds will be banded and measurements will be as given in the following:

Violence is undesirable, and people don't want it. It will be completely avoided and blocked. When animal life, the birds will be treated by defecation and death or, if possible, may also be "exterminated" by the mountain.

Convicts Seeking College Education

Following education, the majority of the inmates in the NMI by the end of the program were able to find employment. The majority of the inmates who had been in the program for less than one year had not yet found employment.

The college program comprised Project 1 from three units and gave each participant offered the opportunity to:

- 1. Attend 1st grade or its equivalent in the program. But have 10 "pullers" in addition, by having the Feedback table played once and Black Model played at least once each.

In addition to having high school diplomas, the majority have previous training completed on the 7600 in Aptitude 1 or 1734. 1 with no record of a distribution.

the risk of being a business owner and being able to

I have decided upon a new project and after looking through the files I have decided about my next book. It is called "The Book of the Dead".

[illegible][illegible]

Die oben beschriebene Konstruktion ist
nicht nur für die Konstruktion der
Kurve der ersten Art, sondern auch
für die Konstruktion der Kurve der
zweiten Art geeignet.

... and the ...

calculated. They consist of 17 per cent of the total but of 40 minutes. However, they are divided into 14 100 minutes, three 100 minutes, high school students. These mean consists of 42 100 minutes.



May I Ask Who's Calling?

A man's home—or a squirrel's home, for that matter—is his castle. Intuition, no different what the cause, is often appropriate, but even a squirrel can't resist just one quick peek to see what's causing all the racket.

'Maudy's Bosom' Changing Shape

(continued from page 1)

is determined to be an addict, the court orders the patient to be committed to the care and custody of the Surgeon General who places the patient in a rehabilitation center. Patients generally are sent to the Clinical Research Center in Lexington, Ky.

About 12,000 ninth and twelfth grade students in South Carolina schools are participating in a drug survey.

The survey, which began October 1 and continued through the month, was conducted by two U.S. professors through Gov. John L. West's Commission on Narcotics and Controlled Substances.

Twelve high schools are involved according to Dr. Murray Vincent, professor of health education with the U.S. Department of Physical Education.

Also helping to administer the survey is Dr. Larry Milroy of the USC College of Pharmacy.

Vincent said the survey will include a representative sample of urban and rural schools and will contain questions pertaining to extent of use, reasons for use and reasons for discontinuation.

The survey is similar to one Vincent conducted on the USC campus last spring.

It is designed as young people who have only tried marijuana once will not be placed in the

same category as the heroin addict.

Results of the survey, published in January, he said, "It would be pathetic if the results of these surveys are shelved and nothing is ever done."

The Museum currently is open-

The major problem of the Columbia Museum of Art now and in the immediate future is the lack of space and additional room for development, according to Donald Crawford, assistant museum director.

The Columbia Art Association, founded, funded and governing body of the museum, acquired a location for its downtown Columbia, when first establishing the museum in 1970 Crawford said. The lot is located on the corner of Senate and Bull streets.

The property acquisition was "inspired by citizen subscription" in 1968. It began a "future transformation of the museum into the components of a Center for the Arts and Sciences," according to Crawford. Plans for the center have to follow lines of gradual and development from the present small museum into a larger center providing areas, exhibition and lecture and study rooms for research.

New areas will be added as money for the building can be acquired, according to Dr. John R. Crafts, museum director.

A larger auditorium is needed at the museum, according to Mrs. Rose Ashby, museum receptionist. The small area the museum has is so much demand that many people requesting the auditorium, Mrs. Ashby said. If one does get a rooming room, the working area is so small that everyone gets in each other's way.

The Museum currently is open-

ing Workshop Theatre, "break off group" from the Town Theatre Crawford said. The group rehearse and perform in small science center auditorium in the museum. There is not enough room for even adequate dressing rooms and prop area, according to Mrs. Ashby.

The museum is organizing plans for a new building to serve as a workshop theatre according to the museum director. The theatre will be sponsored by the Columbia Art Association and the museum director.

State's ACLU Faces Problem With Image

Better understanding by the general public is a major problem facing the American and Liberties Union (ACLU) South Carolina.

The ACLU, traditionally a defender of minorities, is seen by the typically conservative majority as a radical liberal organization.

Unknown to the casual observer, however, the ACLU has a history of defending civil liberties as well as liberals.

The common impression that the ACLU defends only revolutionaries causes doubt from the fact that people who go against the accepted procedures of society, whether they are an legal or not often meet harsh resistance and sometimes are sub-

Construction is scheduled to begin on the theatre early this year.

The museum plans to give the new building to the Workshop Theatre group according to Crawford.

The next decade should be filled with much growth for the Columbia Museum of Art according to Dr. Crafts. The experts say and state to become more conscious of the need to be educated and knowledgeable about art and sciences are concerned.

perpetrated to unlawful restraint and persecution.

The proportion of the U.S. anti-war collection, shared by academics, were defended by the ACLU because of the belief that free speech was denied. The type of action is considered typical to the majority of South Carolina citizens. But the ACLU also defends those whose political beliefs, owing to the other end of the spectrum.

Following an incident in Columbia, S.C., where citizens' groups opposed to school busing were turned a school bus and disrupted school operations. For several days, the ACLU offered to appear as a friend of the court in the appeal of Mrs. First Lady, wife of a leader of the protest, after her conviction of contempt.

Students charged with causing a disturbance on the University of South Carolina campus were denied legal counsel by the attorney because it was left in the U.S. Court that the rights of the University were also a bridge.

The basic premise of the ACLU is that if a right is guaranteed by the Constitution and the statutory structure of the United States, it exists for everyone and everyone should have the benefit of counsel if that right is denied them.

James Riddick, local executive ACLU director, is an example of the type of man who works within the organization. Upon graduation from Marquette University Law School, he had volunteered for the National Teacher Corps which brought him to South Carolina State College. From there he moved last August to his present position.

The ACLU tries to be a neutral and fair defender of the human rights in the tradition of John Locke, Thomas Paine and Thomas Jefferson, he says.

Junior College System Important Issue For State

Problems facing a proposed state system of junior colleges are perhaps the most vital issue facing the S.C. Commission on Higher Education in this decade.

Since 1961 the commission has tried to pass a bill in the South Carolina General Assembly to provide a state system of junior colleges.

South Carolina has the lowest percentage of high school graduates attending college in the nation, "About 33 per cent or one-third of the state's high school graduates enter college," James A. Morris, state commissioner of higher education, said.

Dr. Morris and commission members advocate lowering admission requirements for junior colleges entrance and reducing tuition and fees. Cost reduction will give students with financial difficulties a better opportunity to continue their edu-

cal education after high school graduation.

Noncredit remedial courses for students wanting to attend college, but lacking necessary reading and mathematics skills will be included in the junior college system, the commission said.

According to the commission's 1970 annual report, existing branches and centers of the state's two senior universities, Clemson University and the University of South Carolina, should be changed to state-supported junior colleges.

The commission sees as its goal for junior colleges cooperative relations between existing minority branches, which are to become state junior colleges, and technical education centers. It is coordination between the two systems and vice versa.

Many of Commissioner Morris' statements regarding opposition to a state system of junior colleges were contradicted by Dr.

Reginald Brinkley, who opposes the junior college system. A vocal proponent for regional campuses at U.S. Dr. Brinkley said a university's prestige and quality facilities.

Regional branches of the two universities should be retained, the idea of independent state-supported junior colleges "is not justified economically," he said. "The Southern Regional Educational Board (SREB) accredits colleges and universities in this section of the United States, does not recommend remedial courses for higher education." Blacks and others need these courses, despite present and usually withdrawn from the institution if they are placed in remedial courses.

But Commissioner Morris said the state junior college system is a vital factor in improving educational opportunities in S.C. for all high school graduates.

On Columbia Police Force Blacks' Status Changing

The status of the black policemen has changed since the first two blacks were added to the Los Angeles police force in 1970.

Police Chief William H. Ponder said that at first black policemen were not given the same treatment as whites. In the white patrolmen who worked regular eight-hour shifts, black men worked from 2 p.m. to 2 a.m. Ponder said these were the longest hours of the day and black patrolmen supplemented the work load.

Blacks were assigned to night beat, but white patrolmen were assigned to patrol areas with

in six months after joining the force they worked.

In 1966 the Columbia Police Department switched to a regular 10-hour work week. Most patrolmen say this was when blacks began to work the same hours, the same beats and ride in the same cars as white officers.

Black policemen make up 10 percent of the force, which has patrolmen cover a 27-square mile area with a 29 percent black population.

There is one policeman for every 531 persons in Columbia.

Chief A. A. Lawrence, a black policeman who has been with the department since 1957, said he was a lot of desks at the police station but not many black faces behind them.

The black policeman is used to in the community, he said. I think I know where the poor blacks are and I do not have to look for them. The use of black policemen will have no change and increase. The police will stand for nothing less.

Sergeant C. E. Chisold, who practices police apple status and

the difference has nothing to do with race relations in the department. The blacks are about the same as the whites, he said, because of the strong feeling against black policemen in the black community.

Detention. Monte Black, a black who has been with the department for 13 years, said he always has been treated better by the whites than the blacks. Blacks, he said, feel there are no differences in black policemen.

The key to working with blacks or whites, he said, is to know what to say when to say it and how to say it.

Projects Hit 'Roots Of Evil'

Continued efforts to better the conditions of the poor are planned for the South Carolina Council on Human Relations (SCHR), according to Executive Paul Mat

For the past 15 years, SCHR has devoted the creation of an environment in the state where the disadvantaged can be encouraged to overcome the barriers to success for all people. One of the first steps was to create a Council on Human Relations.

SCHR is conducting these major projects, which are planned to be completed by the end of 1975, Mat said.

The prime objective is to create a new environment in the state where the disadvantaged can be encouraged to overcome the barriers to success for all people.

The Council has been developing and implementing projects for the disadvantaged people and individuals for the past 15 years. The projects could not be completed. The plan will continue to be in progress. The plan will continue to be in progress.

The problem of the program is the creation of a stable environment. The plan will continue to be in progress. The plan will continue to be in progress.

Continued efforts to better the conditions of the poor are planned for the SCHR, according to Executive Paul Mat

In future years the plan is to create a new environment in the state where the disadvantaged can be encouraged to overcome the barriers to success for all people.

Black economic development, second SCHR major project, is sponsored by Robert Wood Johnson Foundation. A subsidiary of the plan is the rural advancement program, sponsored by the National Urban League. The project serves low income groups in 15 counties. The project is to create a new environment in the state where the disadvantaged can be encouraged to overcome the barriers to success for all people.

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This is also a long term project which will continue to be in progress. The plan will continue to be in progress.

UWW Idea Draws Fire At University

University Without Walls (UWW), an educational experiment at the University of South Carolina, has become a "light" in the eyes of the state's educational establishment. The director of UWW at the university.

Dr. Robert G. Landon said that the debate is not unique to U.S., but is being experienced worldwide.

The central issue in the debate is "What is quality?" Dr. Landon said. He explained that there is a basic disagreement over whether a student receives qualitatively better education in the structured program or in an unstructured experimental program such as UWW.

Dr. Landon said that the major issue behind the UWW debate is philosophical. Not all of the members of the U.S. faculty accept the philosophy behind UWW. The students, teachers, and parents should be the prime determinant of the educational program.

Vice President John F. Studds said that there are some faculty members who do not apply of unstructured education, where others do. Our president is very much to experience it, he said. Dr. Thomas J. Jones was instrumental in bringing the UWW to the campus.

The two major questions concerning the program asked by faculty were to involve the administration and faculty and the quality of the experience. Dr. Landon said. He said these questions came as a result of the faculty's concern about the program and the fact that these people were aware that an ad hoc committee of faculty members had been created to study the experiment.

"What we are trying to do is find out what is good about the program," he said. This evaluation could also show if the program was working with the program. Dr. Landon said that from preliminary results, the majority of UWW has been in groups where the students are engaged in learning to learn motivation.



It Took Only A Few Seconds

The Columbia Hotel, long a landmark in the city, fell victim to progress last year. One can not feel the ground is actually

placed dynamic changes. The old structure is upon itself. What took more than a year to create was reduced to rubble in seconds.

OEO Predicts Reduction Of Hunger, Malnutrition

Hunger and malnutrition in South Carolina will be reduced substantially during the 1970s, representatives of the Office of Economic Opportunity (OEO) and the Department of Public Welfare said.

Goals of the Department of Public Welfare in the 1970s include teaching all eligible people with the Food Stamp Program about the food stamp program in buying foods necessary for a balanced diet and reducing the cost of food stamps.

Common sense with people eligible for food stamps is difficult because many live in isolated rural areas. Earl Clark, director of the food stamp program, said

Other poor people are aware of benefits such as the Food Stamp Program. But in another sense, more people are not taking advantage of the program, Clark said.

OEO acts as a referral agency in directing needy people to the Welfare Department to apply for food stamps.

Nicholas Jacobs, director of the Emergency Food and Medical Program for the Welfare Department, said he relies heavily on area residents to alert him to those needing emergency aid.

Jacobs said the emergency program is a department of food care, not just food welfare or

where welfare checks are made.

OEO has several programs to educate the poor in planning, economic and nutritional needs, according to Mrs. Helen R. White, coordinator OEO's National Nutrition Survey. Others are offering classes to the poor in planning and preparing meals.

The Emergency Food and Medical Program plans to reach 100,000 people in the next two years. Mrs. White said. Plans also include expanding the program to include Richmond and Lexington counties in the near future, she said.

EXPERIMENTAL PAGES

Gravatt Report Faces Problem—No Money

The University administration is giving close attention to the recently released Gravatt Report, according to a U.S. spokesman.

"We recognize the tremendous effort that went into the preparation of this report, and it has been received in the spirit in which it was offered—as a sincere effort to upgrade the academic atmosphere at the University," said Louis C. Goodley, U.S. vice president.

Goodley, said that University President Thomas E. Jones and the Board of Trustees have been aware for some time of the need for many of the proposals outlined in the report. "The primary stumbling block now is exactly the same one that we have had to contend with for a long time—a lack of necessary funds."

For instance, the moral climate and one of the recommendations of the Gravatt Report was that the National Merit Scholar "must study hard. It should be expanded to include degrees in the National Achievement Scholar-

ship program and provide a two-day seminar on the University. This year we set up a two-day program for the Merit Scholar, and the only way we could finance the effort was to ask various deans and departments to kick in a little here and a little there," he said.

Troubling on other proposals made in the report, Goodley said that the relative lack of outside the classroom contacts between faculty and students has always been a concern.

Goodley expressed special interest in the Gravatt Report recommendation that "less time be limited." "We have had smaller classes as a goal for a long time, but the report it will put on the real issue for us is to be prepared," he said. "When you limit class size, you have to create many more sections of each course. This in turn requires more instructors and more classroom space, a problem we have been wrestling with for quite some time," he said.

The University recently took a big step in the direc-

tion, according to the vice president, when it decided to limit the size of the incoming freshman class each year to about 2,500 students. "We have been forced to make a hard choice between quality and quantity, and we have opted for the former," he said.

William C. Goodley, University registrar said that the proposal for pre-registration is not a new one. "As a matter of fact, it was tried a few years ago, with almost disastrous results. We think, however, that it is something that simply has to be done, and we are working on a revised plan that might be ready for implementation in the summer of 1973," he said.

Goodley said that President Jones is greatly encouraged by the Gravatt Report as an incentive to provide some fresh thinking about the University's role and direction. "The next step, and the last, is that we have to have a plan, and we are going to have that plan," he said.

When Police Stumble, Public Often At Fault

The police seem to uphold the law, are themselves lawbreakers, and the fault lies as much with the public as with the police themselves, according to a former New York City policeman.

Arthur Niederhoffer, in a busy, between-flights interview at La Guardia Metropolitan Airport, said that paradoxically, society has granted the cop the license to violate the law in order to enforce it. "A cop may kill where necessary, and he may invade privacy and destroy property, all in the name of the law."

"This sense of power often corrupts him into a belief that he is superior to the law," he said.

The John Jay College of Criminal Justice teacher and holder of a doctorate in sociology, said the average policeman suffers from "anomie," which he defines as "a moral condition, characterized by the absence of moral values, by quality, confusion, frustration, alienation and despair."

To support his views, Niederhoffer cited the recent results of the Kopp Commission hearings in New York City. He said the commission had to determine that a single dollar enterprise—gambling—reportedly paid the police \$1 million a year.

Niederhoffer pointed out that the problem is not unique to New York, but is an American scourge. He said, "We ought to be more shocked than we are. The moral failings of the police are a reflection of our values as well as theirs."

State Consumer Group

SCPIRG Forming

The formation of the state's first consumer and environmental protection agency is only months away, according to Michael H. McGraw, of the committee to establish the North Carolina Public Interest Research Group (PIRG).

The aims of the group, composed of students and professionals, are to improve and maintain a viable economic and standard of life, to protect the state's economy, along the lines of the national Ralph Nader consumer research group. McGraw said. The group's purpose is virtually the same as Nader's. He said.

He added that SCPIRG is not associated directly with the Nader organization. "We are asking for a budget of around \$100,000 a year, and we want to fund it through student fees," McGraw said. Any time a student checks his fee is increased, he can get a refund, he said. But for the most part, campaigns are being conducted at Fourness, C. Benson, Westport, Wofford and the University, McGraw said.

Praise, Blame Tossed At 'Lib'

Women's Lib was defended on the one hand and called a movement of "controlling liberation" on the other at a recent panel discussion at Washington College.

Liberate University called by some the philosophers of the Women's Liberation Movement for a time during the 1960s and 1970s, her favorite topic, by saying, "Men are not the enemy, they only act like it." She pointed out that the movement had inspired rapidly after women gained the right to vote early in the century.

However, after the fall of 1966, the movement divided on an issue—abortion or divorce. The question was whether we were going to get on the hangover first or last. "Liberate feels the change is being forced on us," she said. "Liberate feels the change is being forced on us."

How many women do Lib think are in trouble? They're the ugly, poor, often black. What about charging the church with murder? That's ridiculous. But organized religion is based on the lack of

thought, and on many Christian churches the cure has been a symbol of man's reaching to the heavens.

Old Spires Reach Out To Heaven

These examples represent a few of the old buildings in Columbia.

Infirmary Expansion Scheduled

The Student Health Center planned for completion in August, 1972, may help solve many of the health problems on the University of South Carolina's campus.

Harold Brinson, University vice president for human affairs, said the present infirmary is due for a major renovation. The plans call for a new building, which will be a major step in the expansion of the University Health Service. The present infirmary is "an outdated room that we are uncomfortable treating the students. If we had the time to go to students, we could be saving more of them instead of processing them like cattle," he said. "We were here for 100 years and we were not here for 100 years."

Dr. McLean said U.S.C.'s health service is a step

in the right direction. "We are going to have a new building, which will be a major step in the expansion of the University Health Service. The present infirmary is "an outdated room that we are uncomfortable treating the students. If we had the time to go to students, we could be saving more of them instead of processing them like cattle," he said. "We were here for 100 years and we were not here for 100 years."

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When Police Stumble, Public Often At Fault

The police seem to uphold the law as often as lawbreakers and the fault lies as much with the public as with the police when, according to a former New York City policeman.

Arthur Neufeldt, who has been a two-month intern at Columbia Metropolitan Airport and that paradoxically, shortly has granted the city the license to build the law in order to reduce it. A cop may tell where necessary, and he may make prices and decisions, except all in the name of the law.

"The sense of power often corrupts him into a belief that he is superior to the law," he said. "The police are often the cause of the law." The John Jay College of Criminal Justice, teacher and holder of a doctorate in sociology, said the average policeman suffers from "anomie," which is defined as a moral condition that is expressed by the absence of standards by which confusion, frustration, alienation and despair.

To support his views, Neufeldt cited the recent results of the Knapp Commission hearings in New York City. He and the commission heard testimony that a single illegal enterprise, gambling, reportedly pays the police \$1 million a year.

Neufeldt pointed out that the problem is not unique to New York, but is national in scope. He said, "We ought to be more shocked than we are. The moral failure of the police is a reflection of our values as well as theirs."

Infirmary Expansion Scheduled

The Student Health Center, planned for completion in August, 1972, may help solve many of the health problems on the University of South Carolina's campus.

Harold Davidson, University vice president for business affairs, and the present infirmary facilities were insufficient 10 years ago. The greatest medical need is lack of space, he said, adding, "there isn't enough space to get in more doctors."

According to Dr. Sally McAnte, acting director of the University Health Center, the present infirmary is "an understaffed mess that we are under-treating the students. If we had the time to give to students, we could be seeing more of them instead of processing them like cattle," as we have before we get appointments.

State Consumer Group

SCPIRG Forming

The formation of the state's newest consumer and environmental protection agency is only months away, according to Michael H. McGraw, of the Committee to Establish the South Carolina Public Interest Research Group (SCPIRG).

The same of the group composed of students and professionals, are to improve and maintain a credible, non-partisan, and to protect the state's consumers, along the lines of the national Ralph Nader consumer research group. McGraw said. The group's purpose is virtually the same as Nader's. However,

he added that SCPIRG is not concerned directly with the Nader organization.

They are asking for a budget of around \$100,000 a year, and want to fund it through student activity fees. McGraw said. Any time a student decides he has no money, he can get a refund he added. Thus far, the most active campaigner, being conducted at Furman University, is the University of South Carolina.

Praise, Blame

Tossed At 'Lib'

Women's Lib was defended on the one hand and called a movement of "radicalizing females" on the other at a recent panel discussion at Washington College.

Esther Atkinson called it by some of the phrases of the Women's Liberation Movement and the time for a radicalizing females on her favorite topic by saying, "At the end of the women they only ask it. 'We are not the same that the movement had inspired equally after women gained the right to vote early in the century.'"

However, after the fall of 1966, the movement decided on a new direction on demand. The question was whether we were going to go to the Washington for or for. Atkinson told the church is behind government's role to take to take their own.

How many women do I ask them? I ask them. They do the right, people who are black, but not changing the church's role in making it, but not change. But organize it when it is based on the backs of women. Therefore is breaking the church.

Gravatt Report Faces Problem—No Money

page 1

The University administration is going to have to live with the results of the Gravatt Report as early as the end of 1971.

We recognize the tremendous effort that went into the preparation of the report and it has been received in the spirit in which it was offered. It is a sincere effort to upgrade the academic atmosphere at the University, and John F. Gravatt, 197, can't.

Gravatt said that University President Thomas B. Jones and the Board of Trustees have been aware for some time of the need for many of the proposals outlined in the report. The primary thing, Gravatt said, is exactly the same one that we have had to contend with for a long time—a lack of necessary funds.

For instance, the vice president said one of the recommendations of the Gravatt Report was that the National Merit Scholar-Scholarship Fund be established to expand to include students in the National Achievement Scholarship program and provide a two-year program for the Merit.

Gravatt said the only way we could finance the report was to ask various deans and departments to look at their budgets and make cuts.

Even though on other proposals made in the report, Gravatt said, and that the relative lack of outside the University's financial resources and students has always been a concern.

Gravatt expressed great interest in the Gravatt Report recommendations that they can be funded. We have had similar changes in a good long time, but the report is still not in the end of the day, but as such a proposal. The cost. When you find that you can have to create many more sections of each course. This means more money, more students, and more—therefore, a problem we have been dealing with for quite some time, he said.

The University's financial health is a long step in the direction, according to the vice president, that is devoted to limit the use of the increasing financial resources to about 2,500 students. We have been forced to make a choice between quality and quantity, and we have hoped for the best.

Gravatt said that University's financial health and that the proposal for per capita is not a new one. "It is a matter of fact it was tried a few years ago with almost disastrous results. We thought that it was something that ought to be done, but we are working on a revised plan that might be ready for implementation in the summer of 1973," he said.

Gravatt, however, said that President Jones is greatly concerned by the Gravatt Report as an instrument to provide some fresh thinking about the University's role and direction. The next step, he said, is to make a decision about the report. He is going to work hard at it.



Old Spires Reach Out To Heaven

Through the ages man has tried to reach for the gods, and in many religions there is the spirit of man reaching out to the heavens. This is a symbol of a man's desire to reach the heights of the spiritual experience of the soul, to reach for the divine, to reach for the eternal.

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He added that SCPIRG is not associated directly with the Nader organization.

"We're asking for a budget of around \$100,000 a year, and we want to fund it through student activity fees," McGraw said. Anytime a student decides his fee is misused, he can get a refund, he added. This far, the most active campaigns are being conducted at Furman, Clemson, Wakeforest, Wakefield and the University of North Carolina.

Praise, Blame Tossed At 'Lib'

Women's Lib was defended on the one hand and called a movement of "contrasting ideas" on the other at a recent panel discussion at Wakeforest College.

Teddy Atkinson, called by some the philosopher of the Women's Liberation Movement, set the tone for a rambling discussion on the favorite topic by saying, "Men are not the enemy, they only act like it." He pointed out that the movement lost impetus rapidly after women gained the right to vote early in the century.

However, after the fall of 1966, the movement decided on an issue—abortion on demand. "The question was whether we were going to get on the landscape first or last," Atkinson felt the church is behind government efforts later in female liberation.

"How many women die, I ask them. I'm crude. They die regularly, often black. What about charging the church with murder? That's ridiculous. But yes," said Atkinson, is based on the backs of women. Abortion is legal, the law, but the law is criminal. But of course women die just like that."

On the other side of the issue, Dr. E. L. Yarnall Stewart, a Los Angeles psychiatrist, pointed out that many doctors are repeating a significant rise in impotency among young men, and that the battle and less support of Women's Lib are being held responsible.

"Paul member Helene Rader, author of 'I Am A Machine: My Story' and other topical books, supported Dr. Stewart's views. He said authoritarian women are raising men to become passive and hostile."

"The hostility," he noted, "prevents a man from learning whole and results in self-destructive behavior."

In short, Rader said, women's Lib are "blamed men by demanding too much of them. It is too much," Atkinson added, "The young men were in control in the 1950s. It was a 'me' life. No rebellion, crime, family abandonment, and a lot of pleasure."

In Rader's view, the fault of contrasting feminisms.

Gravatt Report Faces Problem—No Money

The University administration is giving close attention to the recently released Gravatt Report, according to C. C. Gravatt.

"We recognize the tremendous effort that went into the preparation of this report, and it has been received in the spirit in which it was offered—as a sincere effort to improve the academic atmosphere at the University," said John C. Grubb, USC vice president.

Grubb said that University President Thomas F. Jones and the Board of Trustees have been aware for some time of the need for many of the proposals outlined in the report. "The primary standing block now is exactly the same one that we have had to contend with for a long time—a lack of necessary funds."

For instance, the vice president said, one of the recommendations of the Gravatt Report was that the National Merit Scholar "Senior-Fellow" Plan should be expanded to include designers in the National Achievement Scholarship program and provide a two-day seminar on the University. "This year we set up a temporary program for the Merit Scholars, and the only way we could finance the affair was to ask various deans and departments to kick in a little here and a little there," he said.

Touching on other proposals made in the report, Grubb said that the relative lack of outside-the-classroom contacts between faculty and students has always been a concern.

Grubb expressed special interest in the Gravatt Report recommendation that class size be limited.

"We have had smaller classes as a goal for a long time, but the report should be on the end of the road as a proposal—the end. When you limit class size, you have to create many more sections of each course. This in turn requires more instructors and more classrooms space, a problem we have been wrestling with for quite some time," he said.

The University recently took a big step in this direction, according to the vice president, when it decided to limit the size of the incoming freshman class each year to about 2,500 students. "We have been forced to make a basic choice between quality and quantity, and we have opted for the former."

Rollin E. Gaultney, University registrar, said that the proposal for pre-organization is not a new one. "As a matter of fact, it was tried a few years ago with almost disastrous results. We think, however, that it is something that simply has to be done, and we are working on a revised plan that might be ready for implementation in the summer of 1973," he said.

Basically, however, Grubb said that President Jones is greatly concerned by the Gravatt Report as an instrument to provide some fresh thinking about the University's role and direction. "The next step, and the really thorny one, is implementation. We're going to need a good deal of it," he said.



Old Spire Reach Out To Heaven

Through the ages man has erected temples to his gods, and on many Christian churches the spire has been a symbol of man's reaching to the heavens.

Infirmary Expansion Scheduled

The Student Health Union, planned for completion in August, 1972, will help solve many student health problems on the University of South Carolina's campus.

Harold Brimston, University vice president for business affairs, said the present infirmary facilities were insufficient 10 years ago. "The greatest inadequacy is lack of space," he said, adding "there's not enough space to put in more doctors."

According to Dr. Sally V. Calkins, acting director of the University Health Union, the present infirmary is "an understated new that we are under treating the students. If we had the time to give to students, we could be serving more of them instead of processing them like cattle—as we were before we got appointments."

Dr. McCants said USC's health service stacks up "very poorly" with other universities. "She added that several times plans have been made to improve the health services, but each time the plans were dashed under the rug."

She explained that students have the feeling the infirmary does not know what it's doing, and they do not come in unless they are dying.

Three, these examples represent a few of the other experiments of the continuing life to be found in a Christian.

"They feel like we're an arm of the administration and won't come to us with their problems," she added. "Students will not come to us with such things as STD because they are afraid we will go to the administration, but this is just not so."

If a student were to come to the infirmary with an overdose of drugs, he first would be checked medically. Later he would be advised to consult with a counselor and if necessary a psychiatrist.

Pregnancy tests are held in confidence between the doctor and patient. If the answers look somewhat positive, the test is asked, but not required, to come back in and talk with one of the doctors. Dr. McCants said.

Women 21 years of age and older can be examined by a university doctor and have provided for her birth control devices, although they are not dispensed by the infirmary pharmacy.

Dr. McCants said they hope to be able to staff the new building with two or three physical therapists, seven full-time doctors, 13 nurses, eight social nurses and two pharmacists besides the chief pharmacist.

Gravatt Report Faces Problem—No Money

The University administration is giving low attention to the recently released Gravatt report, according to a USC spokesman.

"We recognize the tremendous effort that went into the preparation of the report, but it has been received in the spirit in which it was offered—as a sincere effort to upgrade the academic atmosphere at the University," said John C. Gault, USC vice president.

Gault said that University President Thomas F. Jones and the Board of Trustees have been aware for some time of the need for many of the proposals in the report.

One of the primary stumbling blocks now is exactly the same one that we have had to contend with for a long time—a lack of necessary funds.

For instance, the vice president and one of the recommendations of the Gravatt Report was that the National Merit Scholarship Fund Day should be expanded to include designers in the National Achievement Scholarship program and provide a two-day seminar on the University. This year we set up a seminar for the Merit scholars and the only way we could finance the effort was to ask out-

side donors and departments to kick in a little here and a little there," he said.

Touching on other proposals made in the report, Gault said that the relative lack of outside-the-faculty contacts between faculty and students has always been a concern.

Gault expressed special interest in the Gravatt Report recommendation that there be no limited "We have had smaller classes as a goal for a long time, but the report said that we should have more classes in such a program."

When you limit class size you have to create more money

for each course. This in turn requires more instruction and more classroom space, a problem we have been wrestling with for quite some time."

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Rufus F. Coffey, University registrar, said that the proposal for pre-registration is not a new

one. "As a matter of fact it was tried a few years ago with almost disastrous results. We think here now that it is something that simply has to be done—and we are working on a second plan that might be ready for pre-implementation in the summer of 1977."

Basically, however, Gault said that President Jones and the Board of Trustees have been aware for some time of the need for many of the proposals in the report. "We have been aware for some time of the need for many of the proposals in the report," Gault said.

When Police Stumble, Public Often At Fault

The police, sworn to uphold the law, are themselves lawbreakers, and the fault lies as much with the public as with the police themselves, according to a former New York City policeman.

Arthur Niederhoffer, a historian, wrote in his book, "The American Metaphysical Society," that paradoxically, "every law granted the cop the right to violate the law in order to enforce it. A cop may kill when necessary, and he may smash property and destroy property all in the name of the law."

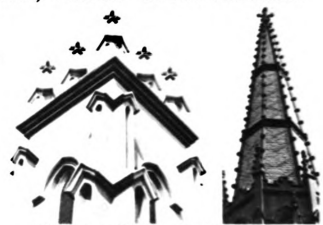
"The arrest of private citizens has become a habit that is superior to the law," he said.

The John Jay College of Criminal Justice teacher and historian

of a delicate in sociology and the average policeman suffers from "anemia" which he defines as "a mental condition characterized by the absence of standards in specific conclusion from rational deduction and logic."

To support his views, Niederhoffer cited the recent results of the Knapp Commission hearing in New York City. He said the commission heard testimony that "certainly the majority of the police are honest, but the police are not honest."

Niederhoffer pointed out that the problem is not unique to New York but is national in scope. He said "the thought to be most shocked that we are the moral failure of the police are a reflection of our values as well as their."



Old Spires Reach Out To Heaven

Through the ages man has erected temples to his gods, and on many a frontier has been the spire has been a symbol of man's reaching to the heavens.

These examples represent a new kind of expression of the individual's desire to reach out to the heavens.

State Consumer Group

SCPIRG Forming

The formation of the state's newest consumer and environmental protection agency is only months away, according to Michael H. McFarlane, executive director of the South Carolina Public Interest Research Group (SCPIRG).

The aims of the group, composed of students and professionals, are to improve and maintain acceptable environmental standards and to protect the state's consumers, along with the national Ralph Nader consumer research group, McFarlane said.

The group's purpose is virtually the same as Nader's Raiders.

He added that SCPIRG is not associated directly with the Nader organization.

"We're asking for a budget of around \$100,000 a year and we want to fund it through student activity fees," McFarlane said. Any time a student decides he is in need of a car, he can find a car. He added: "For the most active campaigns are being conducted at Clemson University, North Carolina State University, and the University of Maryland."

Infirmary Expansion Scheduled

The Student Health Center planned for completion in August 1972 may help solve many student health problems at the University of South Carolina, campus.

Harold Branson, University vice president for human affairs, and the present infirmary facilities were insufficient 10 years ago. The present infirmary is a lack of space, he said, adding there isn't enough space to get in more doctors.

According to Dr. Sally McAndrew, acting director of the University Health Service, the present infirmary "is inadequate."

He said that an understaffed infirmary, he said, we had the time to go to students, we could be using more of their medical processing time, with a little more we were before we got appointment.

Dr. McAndrew and US health service doctors are very busy with other commitments. He said that several times plans had been made to improve US health service, but each time the plans were "shelved under the rug."

He explained that students have the feeling the infirmary does not know what it's doing.

and they should not come in unless they are dying. They feel like we're an arm of the administration and we're coming in to see with their problems, he added. "Students will not come to us as with such things as AIDS because they are afraid we will go to the administration, but this is not so."

If a student were to come to the infirmary with an overdose of drugs, he said, he would be checked out quickly. "I don't believe we'd be asked to consult with a coroner and if necessary a physician."

Pregnancy tests are held in confidence between the doctor and patient. The women, he said, but not required to come back in and talk with one of the doctors, Dr. McAndrew said.

Women 21 years of age and older can be examined by a gynecologist doctor and have provided for her birth control devices, although they are not dependent by the infirmary physicians.

Dr. McAndrew said they hope to add staff in the scheduled year, with two or three physicians, 11 nurses, and a few other staff, he said. "I don't know if we can do it, but we're going to try."

Praise, Blame Tossed At 'Lib'

Women's Lib was defined on the one hand and called a movement of "contrasting females" on the other at a recent panel discussion at Whitman College.

Esther Atkinson, called by some the philosopher of the Women's Liberation Movement, set the tone for a scathing discourse on her favorite topic: "Men are not the enemy, they're just as fat as I am," she pointed out that the movement lost sight of the right to vote early in the century. However, after the fall of

1964, the movement devolved on an issue abortion on demand. The question was whether we were going to let the hand wagon find or last? Esther felt the church is behind gender's reluctance to higher abortion.

How many women do I look these I'm crude. They do ugly poor old lady look. What about chasing the church with money? That's ridiculous. But again it's a trap set in the hands of women. Abortion is killing the girl, but the law is

criminal. But of course women don't like that. The sister one of the name, Dr. Libby, was a very nice, very polite, pointed out that many doctors are reporting a significant rise in impotence among young men, and that the health and life has supporters of Women's Lib are being held responsible.

In an interlude Esther Baker, author of "A New Woman," said many other types of books, supported by the "New" news, the and authoritarian women are

enough men to become passive and hostile. "The hostility, he noted, prevents a man from becoming healthy and results in antisocial and self-destructive behavior."

In short, Baker said, women have emasculated men by demanding too much of them. Baker said that the movement, although he added for young men even to search for a woman, he said. "I don't know if we can do it, but we're going to try."

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The police, sworn to uphold the law, are themselves lawbreakers, and the fault lies as much with the police as with the police themselves, according to a former New York City police man.

Arthur Naderhoffer, in a haste, between flights, interview at Columbia Metropolitan Airport, said that paradoxically, "society has granted the cop the license to violate the law in order to enforce it." A cop may kill where necessary, and he may invade privacy, and destroy property, all in the name of the law.

The John Jay College of Criminal Justice teacher and holder of a doctorate in sociology said,

State Consumer
SCPIRG

the average policeman suffers from "anomie," which he defines as "a morbid condition...characterized by the absence of standards, by apathy, confusion, frustration, alienation and despair."

To support his views, Niederhoffer cited the recent results of the Knapp Commission hearings in New York City. He said the commission heard testimony that a single illegal enterprise - gambling - reportedly pays the police \$1 million a year.

Niederhoffer pointed out that the problem is not unique to New York, but is national in scope. He said, "We ought to be more shocked than we are. The moral failings of the police are a reflection of our values as well as theirs."

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The University administration is giving close attention to the recently released Grawatt Report, according to a USU spokesman.

"We recognize the tremendous effort that went into the preparation of this report, and it has been received in the spirit in which it was offered - as a sincere effort to upgrade the academic atmosphere at the University," said John C. Givels, U.S. vice president.

Guido said that University President Thomas F. Jones and the Board of Trustees have been aware for some time of the need for many of the proposals outlined in the report. "The primary stumbling block now is exactly the same one that we have had to contend with for a long time - a lack of necessary funds."

For instance, the vice provost said, one of the recommendations of the Ginzatt Report was that the National Merit Scholar Semi-Finalist Day should be expanded to include designers in the National Achievement Schol-

scholarship program and provide a two-day seminar on the Internet. This year we set up a two-day program for the Merit Scholars and the only way we could finance the affair was to ask various deans and departments to pitch in a little here and a little there," he said.

Teaching on other proposals made in the report, Gombi said that the relative lack of outside-the-classroom contacts between faculty and students has always been a concern.

Guides expressed special interest in the Grant Report recommendation that class size be limited. "We have had smaller classes as a goal for a long time, but the report itself hit on the real cruxer in such a proposal—the cost. When you limit class size, you have to create many more sections of each course. This in turn requires more instructors and more classroom space, a problem we have been wrestling with for quite some time," he said.

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We have been forced to make a
choice between quality and
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Killian J. Fournier, University of Toronto, noted that the proposed reorganization would be a new one. As a matter of fact it was not a new one, as it had already been discussed in the past.

...that it is something that people have to be done, and we are working on a revised plan that might be ready for presentation at the summer of 1971, he said.

Eventually, however, Gaudin said that President Jones is greatly encouraged by the General Report as an instrument to provide some fresh thinking about the University's role and direction. "The next step, and the really crucial one, is implementation. We're going to work hard at it," he

**State Consumer Group
SCPIRG Forming**

The formation of the state's newest consumer and environmental protection agency is only months away, according to Michael H. McGraw, of the Committee to Establish the South Carolina Public Interest Research Group (SCPIRG).

The aims of the group, composed of students and professionals, are to improve and maintain acceptable environmental standards and to protect the state's consumers, along the lines of the national Ralph Nader consumer research group. Mohan and

The group's purpose is virtually the same as Nader's Raiders. He added that SCPIRG is not associated directly with the Nader organization.

"We're asking for a budget of around \$100,000 a year, and we want to fund it through student activity fees," McGraw said. "Anytime a student decides his fee is misused, he can get a refund," he added. Thus far, the most active campaigns are being conducted at Furman, Clemson, Winthrop, Woodford and the University of Maryland, said McGraw.



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Women's Ethics was defended on the one hand and called a movement of "castrating females" on the other at a recent panel discussion at Wintthrop College.

Professor Atkinson, called by some the philosopher of the Women's Education Movement, set the tone for a rambling discourse on her favorite topic by saying, "Men are not the enemy, they

However, after the fall of 1966, the movement decided on an issue — abortion on demand. "The question was whether we were going to get on the band wagon first or last," Tigrice feels the church is behind government's reluctance to legalize abortion.

On the other side of the issue, Dr. H. Lyman Stewart, a Los Angeles gynecologist, pointed out that many doctors "are reporting a significant rise in impotency among young men, and that the heated and hot less supporters of Women's Lib are being held re-

Panel member Hutson Rader, author of "I Am a Machine: Any more?" and other topical books, supported Dr. Stewart's views. He said authoritarian women are causing men to become passive and hostile. "This hostility," he noted, "prevents a man from becoming whole and results in anti social and self-destructive behavior."

manding too much of them. It is enormously difficult, he added, for young men even to survive Marjoe in the United States. "Student rebellion, crime, family abandonment: school and job failures are *not* for us," he says, the fault of *not* being *from*.

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The doctors said they hope to be able to staff the new building with two or three physiotherapists, seven full-time doctors, 11 nurses, eight student nurses and two pharmacists besides the chief pharmacist.

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