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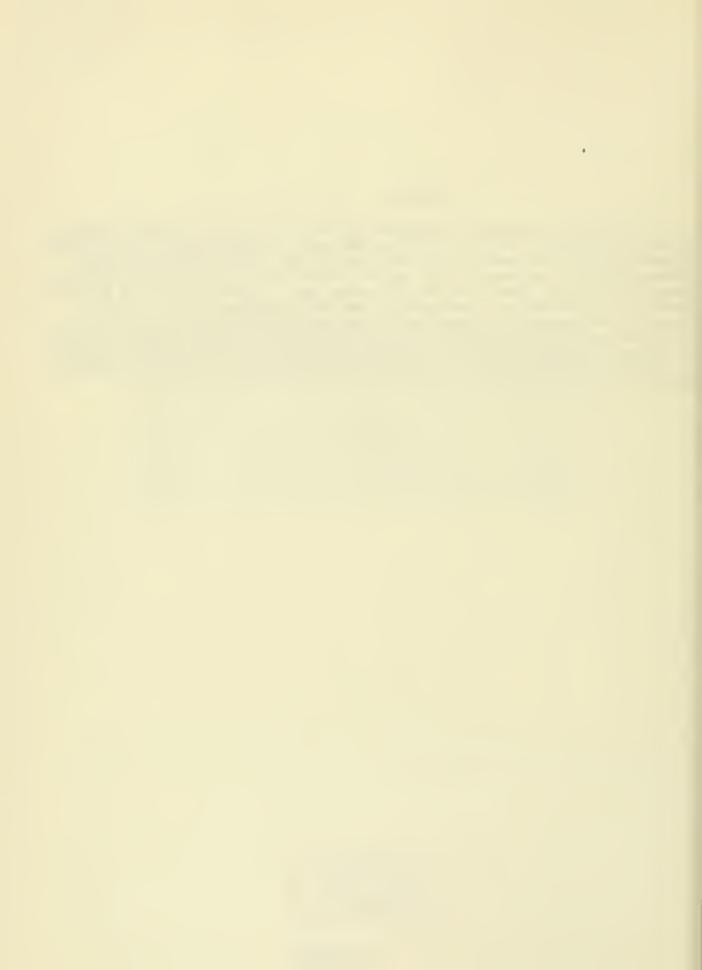
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#### **ABSTRACT**

This study investigated the hypothesis that the association between prospect status and exposure to print advertising decreases as advertisement size increases. Two definitions of prospect status were used. First, the distinction was made between users and non-users of the type of product which the advertised brand represents. Secondly, among users of the product type, recent users of the advertised brand were differentiated from those who had used some other brand. These two measures were separately related to advertisement noting and reading scores for 99 advertisements that appeared in a British magazine. Contrary to the hypothesis, non-linear relationships were found between advertisement size and the magnitude of usage-exposure associations. Selective processes appeared to affect advertisement reading more than noting.



Advertising researchers have frequently reported finding positive associations between measures of advertising exposure and various indicators of favorable disposition toward the product advertised such as interest [9], prospect status [23], and past usage or recent purchase [28]. Such correlations have generally been interpreted as a manifestation in advertising of the well-known mass communication phenomenon of "selective exposure" [20]. As Bogart observes, "In all media, audiences tend to expose themselves selectively to those messages which best fit their existing predispositions or inclinations" [6, p.54].

Recently, there has been considerable discussion of a hypothesis, credited to Bogart [6], which suggests that the association between prospect status and advertising exposure will diminish for advertisements of increasing size. The rationale given for expecting such a relationship is that large advertisements tend to stand out on the page and therefore, are difficult to miss. Thus, predispositions toward the product advertised will have little, if any, bearing on who notices and remembers large advertisements. However, smaller advertisements are likely to be screened out or overlooked by persons lacking interest in the products advertised therein but will tend to attract the attention of those who are or recently have been in the market for such products. In short, selective processes should operate for small but not large advertisements. Verification of such a relationship would be of practical significance since it implies that the advertiser who wishes to maximize the number of potential buyers reached for a fixed outlay will find it cost efficient to run a large number of small advertisements rather than a few large ones. <sup>2</sup>

The empirical evidence available in published sources concerning Bogart's hypothesis appears to be somewhat contradictory. In two separate studies involving a total of nearly 500 advertisements that appeared in the <a href="Philadelphia Inquirer">Philadelphia Inquirer</a>, no statistically significant relationship was found between advertisement size and the extent to which buying plans and exposure were associated [26, 27]. In the larger of



the two studies, Smith [27] found that the trend of the data for men was in the direction predicted by Bogart's hypothesis but this was not the case for women. 3 More recently, a member of the <u>Philadelphia Inquirer</u> organization has stated that "with a five year accumulation of test scores there appears to be no strong support for the contention that the reader groups of small ads are richer in prospects than those of larger ads" [18, p.77]. However, evidence consistent with Bogart's hypothesis were reported many years ago by Hadley [16, 17]. Readership studies covering 273 advertisements from a New York newspaper carried out by the Starch organization during World War II provided the basis for his investigation. A summary table he presented showed the proportion of readers who claimed to be regular users of the advertised products declining steadily as the size of the advertisements increased. Hadley indicated the correlation was statistically significant.

Among the differences discernable between the two major pieces of research cited above, two factors suggested themselves as possible explanations for the diverse results. First, an important conceptual distinction can be drawn between the two measures of prospect status employed. Smith and his associates [18, 26, 27] identified prospects in terms of responses to a 5-point buying intention scale. Hadley [16, 17] on the other hand, asked readers if they were "regular users" of the advertised product. It appears that the latter was a more brand-specific question than the former. While the two measures undoubtedly bear some relation to one another, the extent of their intercorrelation would probably vary across product categories as a result of differences in purchase frequency and other factors. In general however, it would seem reasonable to expect that the lack of correspondence between past usage and buying intention will be sufficiently marked to produce differences in the correlations between advertising exposure and each of these measures. 4 Selective tendencies of past users and those intending to buy may also have different motivational bases. Previous buyers or users may be seeking reinforcement for past decisions [13] while intended buyers will be searching for information relevant to future purchase choices. Such differences would appear to be important



but no unequivocal directional prediction can be made about the relative strength of selective exposure by past users as distinct from those expressing intent to buy.

A second distinction that can be drawn between the aforementioned studies by Hadley [16, 17], and Smith et al. [26] and Smith [27], pertains to the definition of advertising exposure. All employed recognition measures but operationalized them in somewhat different ways. Hadley used the Starch "seen-associated" score which represents the percentage of issue readers who report not only having seen an advertisement but also indicate they saw or read a part of it which clearly identified the name of the product [28, p.14]. Smith et al. [26] and Smith [27] utilized the "Exposure/Rating" method [11]. Respondents indicated on two scales how certain they were about having seen an advertisement and how much of it they read. Readers were defined by the consistency of responses given to both scales and included persons who claimed they had seen an advertisement but had not read any part of it. Conceptually at least, this corresponds to the Starch "noting" score. The Starch "seen associated" score Hadley utilized is determined by eliminating the "saw but did not read group from the total claiming "noting." This difference is of consequence because there are grounds for hypothesizing that selective processes affect reading scores more than noting scores. A certain amount of advertisement noting takes place incidentally as pages are scanned but reading an advertisement is a more deliberate act and therefore probably subject to greater conscious self-selection. 5 If such were the case, then the inverse selectivity-advertisement-size relationship Bogart proposed might be more likely to manifest itself in advertisement reading rather than noting data.

The preceding analysis suggested reasons for conjecturing that the relationship between advertisement size and selective exposure will be sensitive to differences in the manner in which readership and prospect status are conceptualized and measured. The purpose of the present study was to investigate this possibility. Two types of selective exposure which are of operational consequence to advertisers may be



identified. (1) To what extent are past users of the general <u>product</u> type more likely to pay attention to advertising for a specific brand in that product category than non-users? (2) Considering only past users of the product type, to what extent are past users of the advertised <u>brand</u> more likely to expose themselves to advertising for that brand than previous users of competing brands? The questions distinguish between what may be termed "product user" and "brand user" selective exposure, respectively. For purposes of setting advertising objectives, the difference between defining prospects as product users rather than as brand users is a meaningful one. In some situations, advertising on behalf of a particular brand may be aimed at product users generally without concern for past brand usage. However, the difference between undertaking advertising to reinforce or hold past customers (i.e., to stimulate repeat purchases) as opposed to attracting previous users of competing brands (i.e., to encourage brand switching) is also recognized to be important [22].

Here, both product and brand user selective exposure were examined for the same set of advertisements. Recognition measures of noting and reading the advertisements were available. Relating brand and product usage separately to both the noting and reading scores yielded four indices of selective exposure for each advertisement. These were then used to test Bogart's hypothesis that the association between prospect status and advertising exposure decreases as the size of the advertisement increases. A secondary hypothesis that prospect status is more strongly associated with advertisement reading than noting was also examined.

#### METHOD

The raw materials for this investigation were data derived from a study conducted by Social Surveys, Ltd. for the London Press Exchange Ltd. and reproduced by Copland in an appendix of his monograph [10, pp.150-156]. Measures of advertising exposure and product usage were obtained for a group of 99 advertisements that appeared in one of two consecutive issues of an English weekly magazine, Woman--47 of the advertisements were from the first (Issue I) and 52 from the



second (Issue II). The frequency distribution of the advertisements by size (fraction of the page) was as follows: one-sixteenth (8), one-eighth (15), one-quarter (36), three-eighths (9), one-half (17), and full page (14). Of the 99 advertisements, 85 were black and white. The advertisements represented five general product classes with the following frequencies: food products (26), household cleansers and soaps (20), proprietary medecines (20), shampoos and cosmetics (16), and miscellaneous shopping goods (17).

A sample of 100 female readers of the magazine were interviewed. "Noting" and "reading" scores for each advertisement were obtained by the recognition method. Respondents were questioned about their use of the advertised brands and their answers classified according to the following set of categories: (a) "Yes, last used," (b) "No, not last used," (c) "Never use this type of thing," and (d) "Don't know." Respondents in category (a) were users of the advertised brand while those in (b) were users of other competing brands. Combined, the two groups constitute users of the product type. In contrast, women in category (c) were non-users of the product type. 9 Copland presented tables showing the number of respondents per usage category who noted and read each advertisement. 10 This information was used to construct four different 2 x 2 contingency tables for each advertisement. Two tables were formed by cross-classifying brand users (category a) versus other brand users (b) with the dichotomous advertisement exposure measures--first, "noted" versus "not noted," and then "read" versus "did not read." A second pair of contingency tables was developed by relating product class users (a + b) versus nonusers (c) to noting and reading. The value of Yule's Q [30, p.30], was calculated for each table as a measure of the magnitude of usage-exposure association. Q is zero if two attributes are independent, +1 if they are completely associated, and -1 if they are completely disassociated. As used here, a positive Q indicated that users were more likely to be exposed than non-users while a negative Q indicated the reverse. The following notation was adopted to identify the Q's for the various



types of contingency tables:  $Q_B(N)$ ,  $Q_B(R)$ ,  $Q_p(N)$ , and  $Q_p(R)$  where B and P designate, respectively, the advertised brand user-other brand user and product user-non-user distinctions explained above and N and R refer to noting and reading, respectively.

#### **RESULTS**

### Noting vs. Reading Asociations

The Wilcoxon matched pairs signed-ranks test [25, pp.75-83] was used to evaluate the hypothesis that usage is more strongly associated with advertisement reading than with noting. The reading and noting Q's for both brand and product class usage were compared separately for each issue thereby making four tests of the hypothesis possible. A few of the advertisements contained no text material and hence there were no reading scores for them. As a result, the sample sizes upon which the test results shown in Table 1 are based were 42 and 47 for Issues I and II, respectively.

Insert Table 1 about here

For three of the four tests, the results were significant (p < .05, one tail test) thereby supporting the hypothesis. The disconfirming case occurred in Issue I where the advertised brand user-other brand user associations for reading were found to be no greater than those for noting.

## Effect of Advertisement Size

A graphical analysis of the data revealed an unexpected set of relationships between advertisement size and the various indices of selective exposure. Figure 1 shows the median values of the brand user coefficients for each advertisement size. The noting and reading coefficients were plotted separately. Figure 2 is a similar



graph for the product user associations. The medians shown in the figures are for the combined set of advertisements from both issues of the magazines.

Insert Figures 1 and 2 about here

In the case of the <u>brand user</u> associations, the median Q's were approximately zero for the smallest advertisements but rose in the medium size range and then tended to flatten out for the larger advertisements. Size and selective exposure for <u>product users</u> appeared to be related in an inverted U-shaped manner. For both the smallest and largest advertisements, usage and exposure were unrelated or somewhat negatively associated. However, within the small-to-medium-size region, the tendency for advertisements to be noted and read more by users than non-users increased and reached a peak beyond which such selectivity decreased as advertisement size increased further.

#### DISCUSSION

The apparent tendency for <u>brand user</u> selective exposure to increase monotonically as advertisement size increases is precisely the opposite of the predicted negative relationship between these two variables. On the other hand, the declining portions of the parabolic-like curves observed for the <u>product use</u> data are consistent with the hypothesized inverse selectivity-advertisement size relation but the increasing segments are not.

The question that immediately arises about this set of unanticipated relationships is whether they might merely represent sampling fluctuations. The application of significance tests here is problematical since the only data available to evaluate hypotheses about specific relationships are those which suggested the hypotheses in the first place. Nonetheless, because the samples for some of the size categories were rather small, it was desirable to obtain some indication of the



stability of the relationships indicated by Figures 1 and 2. A nonparametric test developed by Jonckheere [19] was used for this purpose. The procedure requires a prior specification of the rank order of magnitude of effects expected among the different samples or treatment groups. This enables a significance test to be performed which will lend support to a defined alternative to the null hypothesis when the latter can be rejected. The ordering of the size groups according to degree of selectivity assumed in carrying out the test for the brand user associations was that which implied by Figure 1, namely that selectivity increases monotonically with advertisement size. Pitted against such a predicted outcome, the null hypothesis that the different sized advertisements came from the same population could be rejected in the case of the brand user-noting associations (p < .05) but not for the brand user-reading associations. For the product user data, the hypothesized ranking of effects by advertisement size was exactly that indicated by the magnitude of the median Q coefficients plotted in Figure 2. Here, the test was significant (p < .01) for both the noting and the reading associations. While these results suggest that for three of the four sets of Q coefficients the relationships indicated in Figures 1 and 2 may not be illusory, such post hoc analysis is extremely suspect.

Little more than speculation can be offered to rationalize these non-linear relationships. As noted earlier, the essence of the reasoning underlying Bogart's prediction of an inverse advertisement size-selectivity relationship was that as advertisement size increases, the instance of unmotivated or incidental exposure rises thereby making predispositions less of a significant determinant of noting and reading. However, if a great deal of the attention paid to very large advertisements is unmotivated because such advertisements are difficult to overlook, then it might also be argued that the same holds for small ones which are easy to miss. Thus, it may be that predispositions exert their greatest influence on exposure to medium-sized advertisements which are sufficiently prominent to be easily



spotted by iterested consumers but not so obtrusive that they could not be readily passed over by indifferent readers. In other words, perhaps exposure is most discretionary over some region of intermediate-sized advertisements wherein increases in size enhance selective processes.

It would seem likely that the tendency for prospects or users to pay more attention to advertising than others is affected by interactions between size and other variables such as product type and page format. Recently, Bogart [7, p.41] has suggested that such factors as product salience, advertisement shape, and the presence of adjacent editorial material and advertising for related products may be important in this regard. Unfortunately, the sample of advertisements available here was too small to investigate such effects systematically. However, it may be mentioned that in the magazine studied here, the smallest advertisements tended to appear in groups of 2-4, often next to other larger advertisements. As a result, the smaller advertisements were part of a rather cluttered-looking block of advertising material, the individual elements of which would probably not be very distinguishable to the glancing reader. On the other hand, most of the medium-sized advertisements appeared in pairs with the remainder of the page filled with editorial material. Because of these format differences, prominence would not seem to be related to size in any simple fashion.

The above conjecture about how the likelihood of unmotivated exposure might vary according to advertisement size and context could account for the parabólic relationship observed for product usage selectivity (Figure 1) and the monotonically increasing portion of the brand user selectivity curve (Figure 2). However, the indication that brand user selectivity increased slightly rather than decreased in the medium to large advertisement size range remains to be explained. Recall that the Q coefficients represented in Figure 1 measure the association between noting (or reading) and having last used the advertised brand as opposed to some other competing brand. Non-users of the product type were excluded from



the calculations. Seemingly, beyond a certain point, this type of selectivity is not affected by advertisement size.

There are a number of limitations to this study which bear noting. The data pertained to a single, dated English magazine and the sample sizes for advertisements and respondents were small. It is also known that the type of recognition measure used here overstates advertising exposure and is affected by problems of response set [2, 21]. Recall scores or the method of measuring recognition developed by Davenport et al. [11] used in the Philadelphia Inquirer studies which attempts to identify and eliminate erroneous claims of noting would be preferable. Finally, the data analyzed here as well as those employed in the other studies of selective exposure cited were obtained in a single interview. The question may therefore be raised whether the correlations observed between usage or prospect status and recognition of advertisements are indicators of selective exposure or the effects of advertising. Starch has based his "NETAPPS" approach to estimating the immediate sale effects of print advertisements on the latter assumption [28, Chapts. 17 and 18]. In mass communications research, it is more common to regard correlations between audience characteristics and communications behavior as reflections of selective exposure tendencies rather than as evidence of communication effects [5, p.29]. The question of what motivational factors underly selective exposure has recently become the subject of a great deal of controversy among social psychologists [1, pp.769-800; 3, 15, 24]. A number of the issues raised in this latter work deserve consideration in designing future studies of selective exposure in advertising. Despite these qualifications, the results of this study are sufficiently intriguing to suggest that further investigation of the selectivity-advertisement size relationship is warranted with an improved and larger data base.



TABLE 1

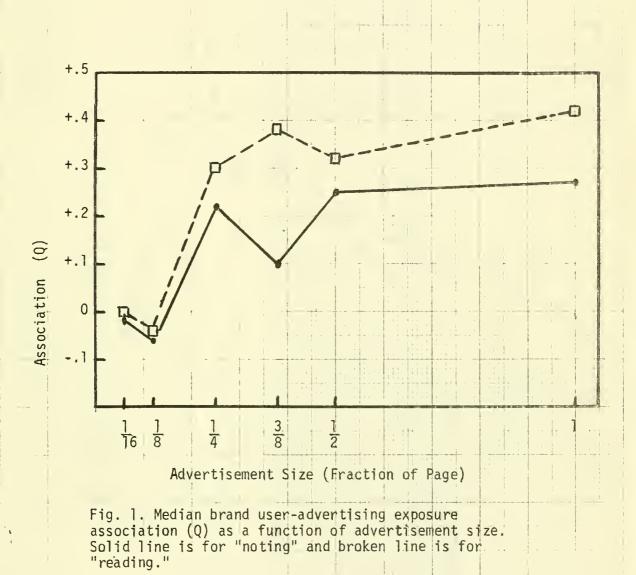
Z Values for Wilcoxon Test of Differences Between Noting and Reading Associations

Issue	Usage Association		
	Brand	Product Class	
	(Q <sub>B</sub> )	(Q <sub>P</sub> )	
I	0.09	2.62**	
II	2.84**	1.66*	

\* p < .05

\*\* p < .005







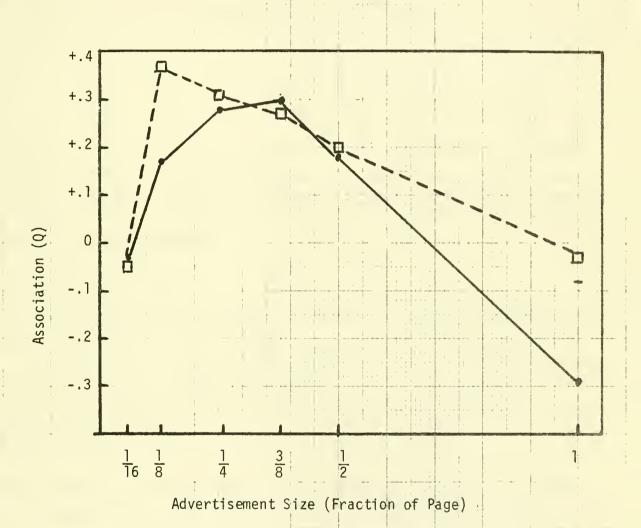


Fig. 2. Median product user-advertising exposure association (Q) as a function of advertisement size. Solid line is for "noting" and broken line is for "reading."



## **FOOTNOTES**

- See Bogart [7, pp.146-147] for a further discussion.
- <sup>2</sup>Of course, in order to establish such an advantage account would have to be taken of the total audience size and cost associated with each advertisement size. The type of approach followed by Diamond [12] in developing his model for advertisement format decisions could be employed for such purposes.
- <sup>3</sup>It would appear that Smith [27] only tested the null hypothesis that the samples of different sized advertisements all came from the same population. The Wilson nonparametric analysis of variance [29] he employed may not have been sensitive to the particular pattern of differences among the samples implied by the inverse size-selectivity relationship predicted by Bogart. Procedures are available for testing the null hypothesis against a specific alternative hypothesis of a definite ordering of effects [8, pp.134-138].
- <sup>4</sup>See [4] for a similar argument.
- <sup>5</sup>The distinction between noting and reading advertisements has been made in studies of advertising readership of new car buyers undertaken to test dissonance theory hypotheses about post-decision information seeking [13, 14]. The data reported in those studies provides some weak support for the notion that reading scores are more sensitive to selective processes than noting measures.
- <sup>6</sup>Copland [10, pp.102-105] performed only a limited informal analysis of these data to demonstrate that noting scores were higher for users than non-users. He constructed a graph showing the average noting scores of brand users and non-users for advertisements in each size category. In passing, he mentioned that advertisement size did not appear to affect noting by users and non-users differentially.
- <sup>7</sup>The size of the magazine pages was 10  $\times$  13 1/4 inches. The magazine was approximately 50 pages long.



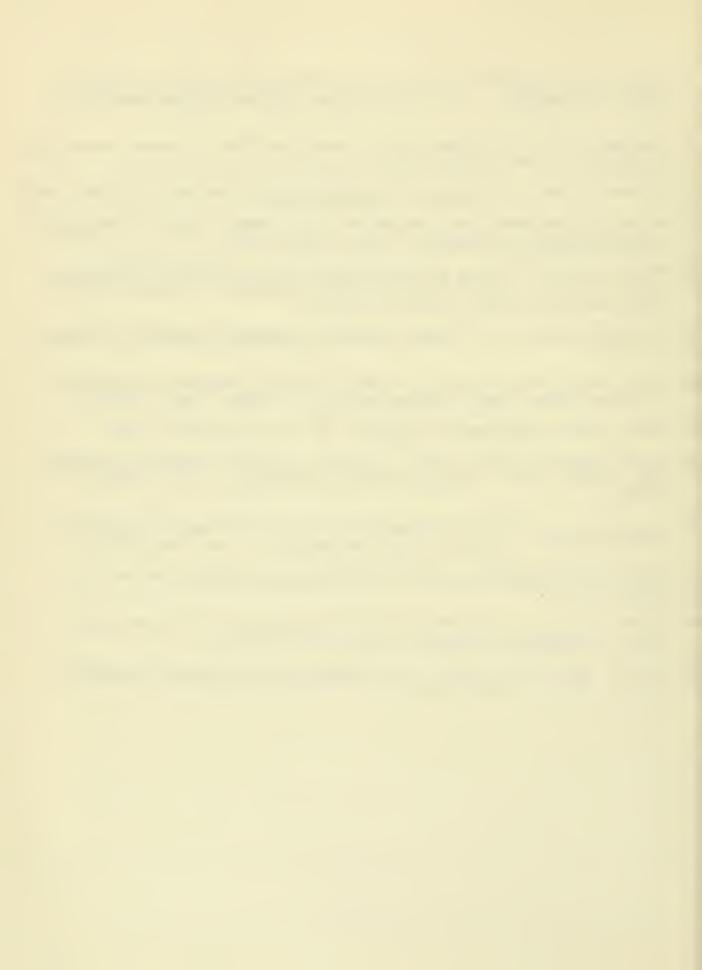
- <sup>8</sup>An inspection was made of the advertisements to supplement the information about them found in Copland [10]. The authors are indebted to the staff of the British Museum Newspaper Library, London for their assistance in locating copies of the magazine.
- <sup>9</sup>The frequency of "don't know" responses was very small and they were ignored in tabulating the contingency tables.
- 10 "Noting name" scores were also available. Analysis of that data produced results very similar to those obtained for the "noting" measure and hence are not shown here.



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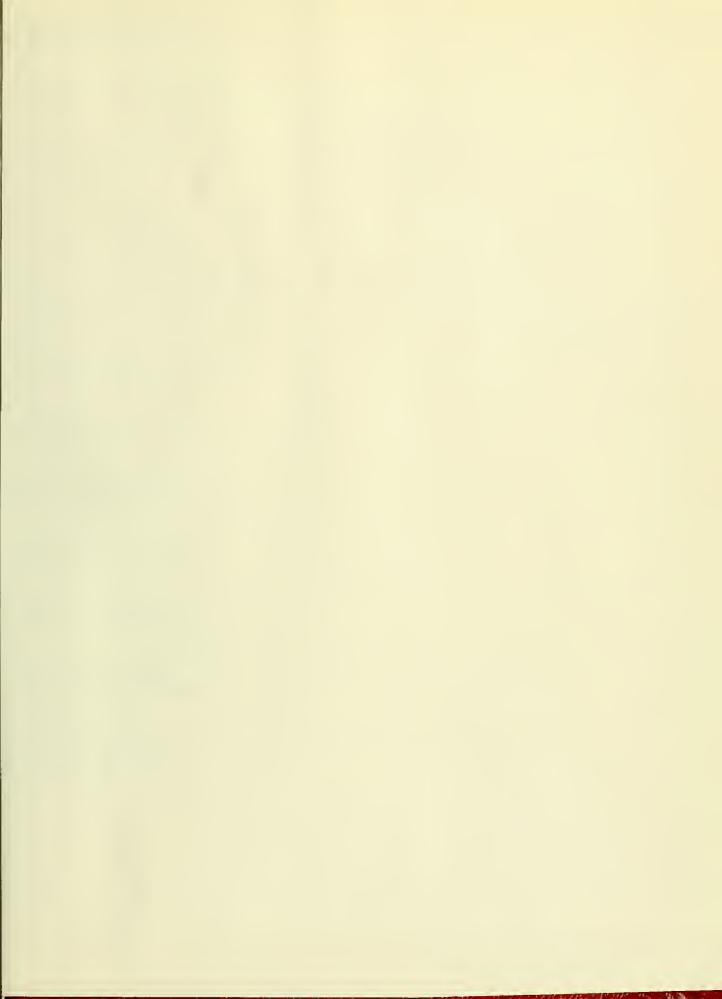


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