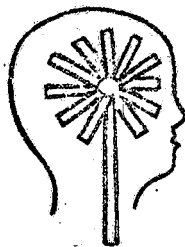


**THE EFFECTS OF THE UNATTENDED MATERIAL ON THE READERS'
WORD-PROCESSING CAPABILITIES IN SELECTIVE READING**

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ABSTRACT

The effect of the unattended material on the readers' comprehension was investigated in this study in terms of the number of intrusion errors committed in answering a multiple-choice questionnaire after reading the passage aloud. Forty general psychology students were used as subjects, of which 20 were assigned to the selective reading condition and the other half to the control condition. The stimulus materials were brief passages which were similarly used in both conditions, except that in the selective reading condition, a string of random words were printed between the lines of the passage. These string of words served as intrusions as well as distractions while the subject reads the attended material. This study examined the hypothesis that the content of the "unattended" material printed between the lines of the attended passage, may influence subjects' understanding eventhough they may not be able to recall the unattended material. Using the t-test for independent groups, the results indicated that at $p < .01$ it proved to be highly significant. The scores of the control group were higher than those of the selective group. In addition, the failure to find a single intrusion error in the control group indicates that the intrusion words affected the selective readers' understanding and comprehension of attended material. Thus, it can be concluded that the control readers' test scores were improved by the absence of the unattended material.

While it is clear that the complex task of reading may require many processes in addition to the initial extraction of visual information, the ability to pick up several words in one fixation would not only speed reading but would increase comprehension of the material (Patberg, 1978). Comprehension encompasses more than understanding words or phrases or decoding prepositions. These elements of understanding must also be arranged in a coherent pattern.

While we read, we make several visual fixations in each line of print and at each fixation we take in one or more words. According to Cattell (1885) adult readers have a perceptual span the size of a short sentence. But still, as we process the words in our visual periphery, there is the possibility that we unconsciously pick up the words which are not actually fixated. Such as words on adjacent lines or those above and below the fixated line. Perhaps we unconsciously process these lines and may somehow influence our memory of the fixated words or line. Since human beings possess a cognitive processing system of limited capacity, perceiving words which are not related to the current contents of the working memory will overload the cognitive processing system, impairing comprehension (Miller, 1980).

In the present study, this possibility has been explored using a technique called "selective reading". Subjects are asked to read a passage aloud. Between the lines of the passage is a string of words. Subjects commonly recall little of this unattended line

or material except that most notice their own name if it occurs there.

This finding is analogous to that for the selective listening technique in which subjects can selectively attend to one of two spoken messages presented simultaneously but on ~~some~~ occasions words from the unattended passage, e.g. their own name are noticed. It has also been claimed in selective listening experiments that though subjects cannot recall the unattended material, it nevertheless influences their comprehension of the attended material.

Willows and MacKinnon (1973) suggested that the same effect may be shown in selective reading. Their experiment, on which this study is based, examined the hypothesis that the content of the "unattended" material printed between the lines of the relevant passage, may influence subjects' understanding even though they may not be able to recall the irrelevant material.

This experiment tested subjects' comprehension of the attended material by asking them to answer multiple-choice questions after reading each passage aloud. The choices for each question included a correct answer based on the material in the attended lines and an incorrect answer based on the information in the irrelevant lines. Choosing the latter would indicate an influence of the unattended on the attended material.