

the wrong responses (no's instead of yes's). Accuracy improved 10% for both levels of relevant fan with delay for those statements where both strategies could not work.

The accuracy pattern in the recognition task showed the opposite trend for the related statements for exactly the same reason. These were the only probes that would produce an error when the plausibility strategy was invoked. At the delayed test, there was a greater tendency to use the plausibility strategy and so more errors were made. Furthermore, these probes were 10% worse in accuracy for the high-fan condition, that is, when there was more information consistent with the theme of the not-studied probe.

THE MECHANISMS FOR STRATEGY-SELECTION

Several conclusions seem clear given the results just described. Questions are not always answered by using the same question-answering strategy or process. Which strategy is used to answer a given question varies. The available strategies do not compete for execution by racing against each other to see which one will complete first. A nonfixed order serial model can easily account for the data described. A parallel race model can also account for the data if we assume that the *allocation of processing resources* is unequally distributed for the two strategies. By assuming a shift in the allocation of resources from one strategy to another instead of a shift in which strategy is tried first, the same pattern of speedups, and so forth, can be explained.

Regardless of whether or not one assumes a variable, serial strategy-selection model or a differential allocation of resources in a parallel-race model, it still follows that there must be a preliminary process that determines strategy selection or allocation of resources among strategies. This preliminary process has two sub-components or stages: an initial evaluation of knowledge relevant to the question followed by a decision of which strategy to follow. I propose that the initial evaluation is an automated process while the decision is a conscious, controlled process (e.g., Neely, 1977; Posner & Synder, 1975; Shiffrin & Schneider, 1977).

Initial Evaluation

A number of factors are involved in the initial evaluation. One involves assessing the familiarity of the words in the question. The more familiar the words, the more a person is biased toward using direct retrieval. The initial evaluation also involves assessing how many intersections in memory there are among the words from the question. The more intersections, the more the person is biased toward plausibility.

The idea that we can automatically determine the familiarity of the concepts provided in the question has been proposed elsewhere (e.g., Hasher & Zacks, 1979; Jacoby & Dallas, 1981; Mandler, 1980). The activation level of the terms in memory that were referred to in the probe can be compared with their "resting" activation levels. If they seem higher than expected at the time of questioning, it is assumed that the words were encountered recently.

The proposal that relatedness affects decision times is also not new (e.g., Rips, Shoben & Smith 1973). In my view, the "relatedness" of the concepts in the question is monitored through the interconnections in memory. Relatedness is defined as the degree to which words in a question cause *activation* to intersect in memory. The more intersections that are detected in memory as a result of a query, the more potentially relevant information there is available for question answering.

Familiarity detection and intersection detection are processes that monitor the automatic spread of activation from the concepts in the question. This spread of activation is assumed to be automatic, as are processes that monitor the level of activation and the extent of intersections. The bias to use the direct retrieval strategy "trumps" the plausibility strategy since direct retrieval is a faster and easier strategy than judging plausibility when the queried fact is relatively accessible. This is because when memory search is relatively easy, the plausibility strategy does not have the search-time advantage to counteract its long plausibility computation time.

Strategy Selection

In deciding which strategy to apply, the subject integrates the biases from the initial evaluation along with considerations or factors that are *extrinsic* to the test question. These extrinsic factors include things such as task instructions and probability that a particular strategy will be successful. Some of these variables have already been shown to influence strategy selection, for example, form of the instructions (Gould & Stephenson, 1967; Reder, 1982), ease of discrimination among alternatives (Lorch, 1981; Reder & Ross, 1983; Reder & Wible, 1984), impressions of one's own expertise (Gentner & Collins, 1981), and form of the question (Rips, 1975).

In addition to these variables, it seems reasonable that strategy selection would be affected by recent prior history of success with a strategy, nominal constraints of the task, special knowledge that a strategy will or will not work, and motivation to perform well. The influence of extrinsic factors on strategy selection is partly a function of how strong the bias is from the automatic assessment of "feeling of knowing" from the first stage and how compelling the factors are from this stage. If there is overwhelming evidence that a strategy will not work, or if subjects are heavily penalized for making errors, they may ignore the biasing information from the automatic assessment.