

## SUBJECT'S SELECTIVE LEARNING: AN INSIGHT INTO THE DEPTH-OF-PROCESSING FRAMEWORK<sup>1</sup>

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*Summary.*—Recently, debate has arisen over Craik and Lockhart's (1972) depth-of-processing framework. Attention has centered on the existence of a progressive linear hierarchy which is hypothesized to be the locus of the learning process. The term 'subject's selective learning' is used to bring a new perspective to this theory. This term asserts that what a subject is required to do in a particular learning situation will determine the durability of the memory trace as well as the type of trace. Changes in the situational requirements will bring changes in the trace 'depth.'

Recently, there has been much debate concerning the validity of the levels of processing framework established by Craik and Lockhart (1972). Major interest has concentrated on both the apparent inability of this framework to quantify an essentially qualitative system, as well as the existence of a progressive linear hierarchy, which is the locus of the learning process (Baddeley, 1978; Klieman, 1975).

Craik and Lockhart assume that the more deeply information is processed, the more semantic characteristics that memory trace will possess, i.e., abstract concepts and ideas. Conversely, the more semantically information is processed, the more deeply and durably will it be stored within memory. This hypothesis asserts an objective standard by which (a) the more semantically information is processed, the deeper it will be stored and (b) the information will be stored more durably and differently from other types of processing, i.e., nonsemantic, phonemic, or acoustic.

There is a growing pool of research which suggests that relatively superficial aspects of a stimulus may be deeply processed and therefore retained over substantially long periods of time. This applies to the visual characteristics of the stimuli (Kirsner, 1973) and the visual location of a stimulus on a page of text (Rothkopf, 1971). This empirical datum apparently puts a dent in the levels-of-processing framework, since obvious 'shallow' characteristics are being 'deeply' and durably stored in the memory system. Yet research by Morris, Bransford, and Franks (1977) has shown that semantic encoding, followed by a semantic test, yields higher retention levels than phonemic encoding followed by a phonemic test. Although it appears that semantic processing is inherently better than other encoding strategies, the fact remains that peripheral cues can attain a qualitative 'depth.'

This author believes that this discrepancy can be rectified within the levels of processing framework of Craik and Lockhart (1972). Baddeley (1978) asserts that the type of recognition task plays an integral function in the determination of the extent of processing (the durability of the memory trace) the information has received. It is here that the key to the problem may be found. What a subject is instructed to later do with the information is critical in determining the type of processing (either semantic or non-semantic) the information will receive.

In a study by Piedmont and Kayson (1979), the term 'subject's selective learning'

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was put forth to explain this point. This purports that, when subjects experience a series of events, they have the flexibility to employ any event or combination of events to help facilitate their deeper analysis of the material. Thus, processing will result in long lasting traces but the type of trace can vary. This approach to learning focuses attention on the conditions occurring during the encoding phase rather than concentrating on the natural, organizational processes incurred during the storage or retrieval phases.

This perspective asserts that it is not the storage of abstract concepts and ideas which promote 'deep' storage. Rather, it is the promotion of durability of the memory trace. Memory is a system which enables an individual to function properly in a situation. The more that is required of the individual or the greater the importance of the proper actions in the situation, the more durable or 'deeper' the necessary information will be stored. The type of memory trace which is employed (phonemic or semantic) will depend upon what would be the most beneficial in the particular learning situation. Thus, an individual will process information in a manner that will facilitate later performance. As a result, any vicissitudes in the learning situation will yield comparable fluctuations in the storage 'depth' of the information. In short, the more a subject is later required to do with information in a particular learning situation, the 'deeper' and more durable the resulting memory trace will be.

The depth of processing framework is a relatively sound theoretical perspective of the memory system. This author believes that emphasis should be shifted from studying the type of trace, which is believed indicative of 'deep' processing, to the study of the events which promote the development of durable memory traces. In this manner, it may be possible to quantify the processing and storage systems of memory.

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