

EFFECT OF CONSTRUCT TYPE ON RECALL¹

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Kelly (4) proposed that a person uses a finite system of dichotomous dimensions, i.e., constructs, to subsume the events around him. The following propositions derived from Kelly's construct theory were submitted to experimental test: (a) The larger the number of constructs that a *S* has available, i.e., perceptual categories, the more accurately he should be able to recall material. (b) Material which is similar to a *S*'s construct dimensions should be more accurately recalled than material which is dissimilar.

METHOD

One hundred undergraduate students were given Kelly's (4) Role Construct test. The test requires the *S* to consider, separately, 22 different groups of three persons; to describe in what way two are similar to each other (the construct) but different from the third (the contrast); and to indicate to whom among the remaining persons on the list of 22 persons from which the groups of three were drawn, the construct applies.

Two sets of two experimental groups each were selected from the initial 100 *S*s as follows: (a) The *S*s were predominantly cognitively complex (many different constructs, upper 25%, $N = 24$), or cognitively simple (few constructs, lower 25%, $N = 24$). Complexity was scored according to Bieri (2). (b) The *S*s used predominantly dynamic constructs, referring to personality attributes, e.g., happy-sad ($N = 24$); or nondynamic constructs, referring to physical attributes, e.g., tall-short ($N = 24$). Here the scoring technique of Maher (5) was used.

Test-retest reliability was .51 for complexity, and .61 for dynamic-nondynamic constructs ($N = 33$, 6-week interval).

The *S*s individually listened to a tape recording of a person talking about himself. This material consisted of dynamic and nondynamic material in equal proportions and equated for difficulty by Flesch's formula as presented in Daniel and Louttit (3). A sample of the material would be: "I come from a family of seven boys" (nondynamic). "I guess that is why I like competitive things" (dynamic). "I have been offered an engineering job when I graduate" (nondynamic). "At school I like to socialize and be with a group" (dynamic). Three independent judgments on the dynamic-nondynamic nature of the statements resulted in 94% agreement. The *S*s were tested individually for recall 24 hours later, the interval having been determined in a pilot study as one which avoided

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rote recall, but provided enough material to be scored reliably. The response measures consisted of the number of dynamic and nondynamic statements that were: correctly recalled, omitted, or added. All recall material was scored independently by two judges, with interscorer reliabilities of .93, .91, and .96 respectively. The split-half reliability of the recall task, Spearman-Brown corrected, was .59.

RESULTS

(a) There was no significant relationship between the number of constructs and amount of material recalled ($p < .20$), or accuracy of recall as reflected in accuracy and omission scores ($p < .20$).

(b) An analysis of variance for the dynamic and nondynamic construct types showed no greater accuracy for material that was similar to the construct type ($.75 > p > .50$).

Although the reading difficulty of the stimulus material was equated, at the time of recall t -tests, corrected for the .55 correlation between dynamic and nondynamic recall (this r was nearly as high as the reliability of task), indicated that the nondynamic material was easier than the dynamic material for all four subject types ($p < .01$).

Additions to the material were considered as a second and independent response measure. The expectation was that S s who fabricated material would add material consistent with their construct scores. But the analysis of variance for additions yielded no significant interaction between type of additions and type of construct system ($p > .50$). However, a main effect was observed for additions: both types of S s added more dynamic than nondynamic material, although t -tests, corrected for correlated measures, indicated that this difference was significant only for nondynamic S s ($p < .05$), a finding contrary to expectations.

DISCUSSION

While no support was obtained for the experimental hypotheses, the data are best considered inconclusive rather than negative because of low reliability in the assessment of constructs ($r = .51$ and $= .61$) and in the criterion recall task ($r = .59$).

The lack of positive results occurred with a method that, in the past, has yielded positive results in demonstrating various effects of cognitive structure on memory. Bartlett (1) concluded that people perceive the world in terms of a pre-existent perceptual "schema" in such a manner that events which fit the schema are the ones which are remembered. He showed a relationship between a person's pre-existing

schema which reflected the influence of his society, and selective memory. The similarity between Bartlett's schema and Kelly's "construct" is striking, the difference seeming to lie in Kelly's extension of schema to the realm of *personal* constructs as dimensions used by an individual in the perception of his world. If such an extension is useful, it should also be possible to demonstrate the operation of personal constructs through selective memory.

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