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I am submitting herewith a thesis written by Gary P. Lankford entitled "Cognitive/Behavioral Predictors of Self-Management Effectiveness." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Educational Psychology.

Robert L. Williams
Robert L. Williams,
Major Professor

We have read this thesis
and recommend its acceptance:

Patricia M. Kindall
Markell Hector

Accepted for the Council:

C. W. Minkel
Vice Chancellor
Graduate Studies and Research

COGNITIVE/BEHAVIORAL PREDICTORS OF
SELF-MANAGEMENT EFFECTIVENESS

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Degree
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Gary P. Lankford
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ABSTRACT

Differences in self-management effectiveness may be due to both cognitive and behavioral factors. This study investigated the relationships among convergent and divergent thinking abilities, convergent and divergent behavior styles, left/right hemispheric dominance, and self-management effectiveness. It was hypothesized that effective self-managers are (1) more convergent in their thinking ability, (2) more convergent in their behavior style, and (3) more dominated by left hemisphere brain functions than less effective self-managers. Five paper and pencil inventories, including one developed by the author, were administered to graduate and undergraduate students to test these hypotheses.

The results indicated a positive relationship between several areas of self-management effectiveness and a convergent behavior style. A negative relationship was found between two areas of self-management and a divergent behavior style. Positive relationships were found also between a divergent style and right hemisphere dominance, and between a convergent behavior style and left hemisphere dominance. Expected negative relationships were found between convergent and divergent behavior styles, between left and right hemisphere dominance, between a divergent behavior style and left hemisphere dominance, and between a convergent behavior style and right hemisphere dominance. Surprisingly, a negative relationship was also found between left hemisphere dominance and convergent thinking ability.

It was concluded that effective self-managers tend to behave more convergently and less divergently than less effective self-managers. No direct relationships were found between self-management effectiveness and any of the cognitive factors.

TABLE OF CONTENTS

SECTION	PAGE
I. INTRODUCTION.	1
II. METHOD.	4
Subjects.	4
Materials	4
Procedure	7
III. RESULTS	8
Correlational Analysis.	9
Regression Analysis	9
IV. DISCUSSION.	10
LIST OF REFERENCES.	12
APPENDIX.	15
VITA.	38

I. INTRODUCTION

The concept of self-management is gaining popularity in educational and psychological literature. Much of the research focuses on ways to improve self-management effectiveness with little attention being given to why effectiveness differs across individuals. Differences may be due to both behavioral and cognitive styles.

Thomas, Olsen, and Williams (1982) define effective self-management in terms of healthy behavior habits in four broad areas: health, leisure, social, and work. The more healthy habits an individual engages in the more effective he or she is. To be an effective self-manager, an individual must also exhibit a balance of healthy habits across the four areas (Thomas et al., 1982; Williams & Long, 1983). While balance across these areas is central to this self-management approach, it is not characteristic of other approaches. Typical of this approach and others, however, are goal-setting, strategy-selection, self-monitoring, and self-reinforcement techniques aimed at developing effective behavior habits. The diversity, quantity, and quality of techniques an individual employs largely determine his or her effectiveness (MacMorran, Hector, & English, 1982; Perri & Richards, 1977; Williams & Long, 1983).

The habitual nature of behavior given in the aforementioned definition implies that individuals exhibit characteristic behavior patterns or behavior styles. It seems plausible, then, to describe these styles in terms of convergence or divergence. A convergent style of behavior may be defined as behavior focused on a specific goal or solution: It is solution-oriented behavior. A divergent behavior style, on the other hand, may be defined as diverse behavior, or solution-diffuse behavior. Since effective self-management involves goal-setting and employing specific

strategies to achieve these set goals, effective self-managers should be more convergent than divergent in their behavior style.

Convergent and divergent styles of behavior are based upon definitions of convergent and divergent thinking ability. Guilford (1959, 1967) describes convergent thinking ability as the ability to generate new information, from given or remembered information, with the objective of finding a correct or conventional solution to a problem. Divergent thinking also describes information production, but emphasizes quantity and variety, not the quality of new information (Guilford, 1959, 1967; Webster & Walker, 1981). It is logical that an effective self-manager who is behaviorally convergent would also have high convergent thinking ability.

Whereas thinking ability, both convergent and divergent, refers to individual limitations, convergent and divergent thinking styles refers to habitual or typical modes of thinking across situations. An individual who exhibits a convergent style of thinking typically engages in convergent thinking; a person who exhibits a divergent thinking style, on the other hand, typically engages in divergent thinking across situations. However, just because an individual exhibits a particular style, say convergent, does not mean he or she cannot engage in divergent thinking. He or she may exhibit high convergent and divergent thinking ability, but typically thinks in a more convergent manner.

Several researchers have theorized a link between types of thinking and brain hemispheric specialization (Bakan, 1971; Butler & Glass, 1974; Kimura, 1967; White, 1972). More specifically, the left hemisphere is thought to specialize in convergent thinking while the right hemisphere specializes in divergent thinking, among other things (Kane & Kane, 1979; McCallum & Glynn, 1979; Torrance & Mourad, 1979). Someone who is dominated by left hemisphere processes presumably will exhibit a convergent thinking style. Similarly, a right hemisphere dominated individual will exhibit a more divergent

thinking style. Effective self-managers, then, should be dominated by their left hemisphere.

Whereas these relationships are conceptually logical, empirical evidence to support them is scarce. This study proposed to provide some needed evidence. Specifically, this investigation attempted to establish the relationship of convergent and divergent behavior styles, convergent and divergent thinking ability, convergent and divergent thinking style, and brain hemispheric dominance to self-management effectiveness. Three specific hypotheses were that effective self-managers are (1) more convergent in their thinking ability, (2) more convergent in their behavior style, and (3) more dominated by left hemisphere brain functions than less effective self-managers. The relationship between thinking style and self-management was not directly hypothesized, but is inferred through brain hemispheric dominance.

II. METHOD

Subjects

A total of 165 subjects were involved in this study either during the summer or fall of 1983. Undergraduate and graduate students enrolled in various educational psychology courses at The University of Tennessee at Knoxville ($n=155$) and students enrolled in an introductory psychology course at State Technical Institute at Knoxville ($n=10$) comprised the subject pool. All subjects were volunteers and in most cases were offered course credit for participating in research.

Materials

All subjects were administered five paper and pencil instruments. These instruments are discussed in the following paragraphs.

Tennessee Self-Description Form

Thomas, Olsen, and Williams' Tennessee Self-Description Form (TSDF) (1982) was administered to measure self-management effectiveness. Each respondent was asked to indicate how often on a zero to four point scale, from never to always, he or she engages in 47 different behaviors. One total score and five subscores are tabulated for each respondent. These subscores are: health, leisure, social, work, and social desirability. (See Appendix.) Scores may range from -20 to +20 for the health, social, and work subscales, from zero to +20 for the leisure subscale, and from -60 to +80 for the total score. Social desirability scores may range from zero to +24, with a score above 18 indicating possible falsification of self-report. Reported means are (a) 3.89 (SD=3.82) for work, (b) 6.52 (SD=3.19) for social, (c) 3.87 (SD=4.40) for health, (d) 8.22 (SD=2.56) for leisure, and (e) 22.51 (SD=8.95) for the total score (Williams, Joswiak, & Hector, 1984).

The TSDF has test-retest reliability coefficients (a) of .67 for the work subscale, (b) of .50 for the social subscale, (c) of .79 for the health subscale, (d) of .72 for the leisure subscale, and (e) of .64 for the total scale (Williams et al., 1984). The instrument's content validity was established through its method of construction. An initial pool of items was submitted to mental health professionals who categorized them as constituting healthy or unhealthy behavior habits. An interrater agreement of .89 was used as the criterion for item inclusion. Thus, the instrument has validity based on expert opinion (Thomas et al., 1982).

Style of Behavior

A new scale called Style of Behavior (SOB) inventory was developed for this investigation to measure convergent and divergent patterns of behavior. The 37-item SOB was developed from an initial pool of 47 items submitted to a panel of 20 graduate students enrolled in a behavior management course. Based upon the definitions supplied, the panel selected items they thought were descriptive of either convergent or divergent behavior, or neither. An interrater agreement of .70 was established as the criterion for item inclusion. Of the 37 items, 16 were convergent, 16 were divergent, and five were filler. Each respondent was asked to indicate on a zero to three scale (from never to always), how often he or she engages in each of the 37 behaviors. A convergent and divergent score were obtained for each respondent. See Appendix for a copy of the SOB inventory.

Remote Associates Test

Recent research has established Mednick and Mednick's Remote Associates Test (RAT) (1967) as an effective measure of convergent thinking ability (Belcher, Rubovits, & DiMio, 1981). Each of the RAT's 30 items is composed of a set of three words that have a conceptual link to a fourth word which respondents supply. A respondent's score is his or her total number of correct responses of a possible 30. (See Appendix.)

College and adult norm-group means range from 14.9 ($N=71$, $SD=4.23$) to 17.1 ($N=215$, $SD=5.28$) to 18.0 ($N=288$, $SD=4.90$) (Mednick & Mednick, 1967).

The RAT has a reported Spearman-Brown split-half reliability coefficient range of .82 to .92, and alternate-form reliability of .81. As a measure of creativity, the RAT has reported criterion validity (a) of .70 using ratings by others of creativity and (b) of .44 using ratings of creative products. The RAT has also been correlated with other associative tests ($r=.23$ to $.71$) (Mednick & Mednick, 1967).

Unusual Uses

E. P. Torrance's Unusual Uses (UU) (1966) test, one of Torrance's tests of creativity, was used to measure divergent thinking ability. The UU test requires each respondent to think of as many uses as he or she can for tin cans in 20 minutes. The total number of responses is the respondent's score. (See Appendix.) This method of scoring the UU test coincides with Guilford's (1959, 1967) definition of divergent thinking ability.

Your Style of Learning and Thinking

Torrance et al.'s Your Style of Learning and Thinking (YOSLAT) (1978) was used to measure hemispheric dominance. Each of the 40 items in this instrument describes three learning or thinking activities: Each activity presumably represents left, integrated, or right hemispheric functions. Respondents are to choose which of the three activities in each item they prefer. Each respondent receives three scores: left, integrated, and right. (See Appendix.) The college and adult norm-group ($N=639$) has means (a) for the right of 12.0 ($SD=4.90$), (b) for the left of 11.9 ($SD=4.80$), and (c) for the integrated of 16.1 ($SD=5.20$) (Torrance & Reynolds, 1980).

The YOSLAT has test-retest reliability coefficients (a) of .50 for the right, (b) of .70 for the left, and (c) of .60 for integrated. Alternate-form reliability for Form C of the

YOSLAT, used for this investigation, with forms A and B is summarized in Table 1, Appendix.

Torrance and Reynolds (1980) correlated subjects' (N=33) YOSLAT scores with a variety of creative thinking ability, personality, and motivation measures. The coefficients range (a) from .28 to .73 for the right, with most coefficients around .36, (b) from -.68 to .04 for the left, with most coefficients around -.36 and (c) from -.44 to .10 for the integrated, with most coefficients around -.25 (Torrance & Reynolds, 1980).

Procedure

All five instruments were administered according to their directions in a packet to the subjects by (a) the class instructor, (b) an associate of the investigator, or (c) the investigator in the classroom. The time limits for the two timed instruments were halved: The UU test was shortened from 20 to 10 minutes while the RAT was shortened from 40 to 20 minutes. Additionally, the number of items given in the Rat was reduced from 30 to 15 -- only the first half was administered. It is possible that these changes adversely affected the reliability and validity of the instruments. The remaining three instruments were completed outside the calssroom and all instruments were returned within a week to the investigator.

III. RESULTS

Three analyses were done on these data -- computations of descriptive statistics, correlation analysis, and regression analysis. Table 2, Appendix, summarizes the descriptive statistics.

The observed means and standard deviations for the TSDF and YOSLAT scales approximate norms reported by Williams et al. (1984) and Torrance and Reynolds (1980), respectively. The observed mean of the RAT approximates reported norms (Belcher et al., 1981) if the norms are halved. There are no available norms with which to compare observed values for the UU and the SOB.

Correlational Analysis

Pearson Product-Moment Correlations were calculated between all possible pairs of variables. Table 3, Appendix, presents these correlations. The following relationships were found using a set probability level for a Type I error at 5%.

Cognitive Variables

A significant negative relationship was found between convergent thinking ability and left hemispheric dominance ($r = -.22$). Significant negative correlations between integrated thinking/learning and right hemispheric dominance ($r = -.59$), between integrated thinking/learning and left hemispheric dominance ($r = -.63$), and between left and right hemispheric dominance ($r = -.17$) were also found.

Behavioral Variables

A significant negative correlation was found between convergent and divergent styles of behavior ($r = -.42$). Significant negative correlations were also found between total self-management and divergent behavior style ($r = -.25$) and between work self-management and diverent style of behavior ($r = -.43$).

Several significant positive relationships were found. A convergent behavior style was significantly correlated with work ($r = .46$), social ($r = .25$), health ($r = .26$), and total ($r = .47$)

self management. Total self-management was significantly correlated with work ($r=.69$), social ($r=.66$), health ($r=.68$), and leisure ($r=.46$) self-management, approximating reported relationships (Thomas et al., 1982). Significant correlations were found between work and social ($r=.29$), work and health ($r=.20$), and health and leisure ($r=.25$) self-management.

Cognitive and Behavioral Variables

Several significant positive relationships were found between cognitive and behavioral variables. A significant correlation was found between a convergent behavior style and left hemispheric dominance ($r=.22$). A divergent style of behavior was significantly correlated with right hemispheric dominance ($r=.28$) and divergent thinking ability ($r=.17$). A significant negative correlation was found between a convergent behavior style and right hemispheric dominance ($r=-.18$), and between a divergent behavior style and left hemispheric dominance ($r=-.22$).

Regression Analysis

A stepwise regression analysis was run on the data using self-management effectiveness--TSDF total score--as the dependent variable. Both convergent and divergent behavior styles when used independently or in conjunction with other variables were found to be significant predictors of self-management effectiveness. A convergent behavior style was the more significant predictor of the two. Furthermore, any model including behavior style variables was a predictor. None of the cognitive variables, when included in the regression model, made a significant contribution to predicting self-management effectiveness: Style of behavior remained the best predictor. Table 4, Appendix, provides a synopsis of selected regression model results.

IV. DISCUSSION

Only one of the three hypotheses was confirmed in this investigation: Effective self-managers are more convergent in their behavior patterns than less effective self-managers. Related to this is the finding that effective self-managers are also less divergent in behavior. This finding lends credence to the notion that effective self-managers are goal-oriented people. These individuals emit behaviors directed at specific ends.

Suprisingly, convergent thinking ability was not found to be a predictor of self-management. Further, it was not found to be a predictor of convergent behavior. Neither was divergent ability found to be related to self-management. Divergent ability was found to be related to divergent behavior, however. There are several possible explanations for these relationships between convergent/divergent thinking ability, self-management effectiveness and behavior style. First, thinking alone does not account for a majority of behavior variations. The whole discipline of behavioral psychology with its deemphasis on cognitive processes is testimony to this. The external environment controls behavior as much as or more than cognitive factors. Second, the UU and the RAT were administered in an unconventional manner and may, therefore, have questionable validity and reliability. Likewise, the RAT may not be the best measure of convergent thinking ability. Any further research done in this area may want to utilize other instruments.

Typical styles of thinking related to convergent and divergent ability--hemispheric dominance--also were not found to be directly related to self-management. Relationships were found between hemispheric dominance and behavior style. Not surprisingly, divergent behavior was positively related to right hemispheric dominance. Since convergent thinking ability is assumed to be concentrated mainly in the left hemisphere, an indirect relationship may be inferred between convergent thinking style and convergent behavior style. A similar conclusion may be inferred concerning divergence and the right hemisphere.

Even though the YOSLAT is supposed to measure learning and thinking in terms of hemispheric dominance, many of the items describe behaviors related to the two hemispheres. This fact combined with the fact that the SOB deals with behaviors almost exclusively may account for the significant relationships between the scales of these two instruments.

Convergent thinking ability was found to be related to left hemispheric dominance, but negatively. This unexpected finding may be due to measurement error. It could reflect, however, lack of hemispheric specialization with respect to convergent and divergent thinking. In other words, convergent and divergent thinking may be shared functions of the hemispheres. There is some speculation in the literature to this effect (Meyers, 1982).

A final word needs to be said concerning the SOB inventory. This is a new instrument with no statistical validity and reliability data. Many of the reported findings may be due to this deficit. In fact, a perusal of the SOB inventory and the TSDF reveals some overlap in these two instruments. This overlap needs to be studied further before any definitive statements can be made regarding its utility. One approach to handling this overlap problem is to remove those items from the SOB inventory that are similar to items in the TSDF and reanalyze the data. If the relationships among the variables remain, there may be no problem with the present results. A factor analysis of both instruments also seems in order.

In summary, the only hypothesis that was confirmed was that effective self-managers are more convergent in behavior than less effective self-managers. No direct relationships were found between cognitive variables and self-management. Many other relationships among behavioral and cognitive variables were found. There may be problems with several instruments used in this investigation. These problems need to be studied and new instruments may need to be identified or developed as a next research step in this area.

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APPENDIX

Table 1

YOSLAT Alternate-Forms Reliability Coefficients

Forms	N	Right	Left	Integrated
A and C	39	.73	.66	.78
A and C	33	.77	.85	.84
A and C	24	.77	.55	.82
B and C	30	.63	.80	.65

Table 2

Observed Number, Means, and Standard Deviations

Scale	N	M	SD
TSDf			
Work	153	4.14	3.99
Social	153	6.50	3.46
Health	153	4.58	3.80
Leisure	153	7.97	2.14
Total	153	23.16	8.66
SOB			
Convergent	155	26.59	5.19
Divergent	155	19.46	4.20
YOSLAT			
Right	157	11.12	4.28
Integrated	157	16.67	5.66
Left	157	11.75	4.41
UU	164	20.09	8.81
RAT	164	8.68	3.28

Table 3

Correlations Among Variables

Scale	TSDF				SOB			
	Work	Social	Health	Leisure	Total	Soc. Des.	Converg.	Diverg.
Work	1.00							
Social	.30*	1.00						
Health	.20*	.22*	1.00					
Leisure	.11	.13	.25*	1.00				
Total	.69*	.66*	.68*	.46*	1.00			
Soc.Des.	.04	.07	.34*	.39*	.28*	1.00		
Converg.	.46*	.25*	.26*	.10	.47*	.15	1.00	
Diverg.	-.43*	-.09	-.10	.02	-.25*	.07	-.42*	1.00
Left	.02	.05	-.08	-.26*	-.06	-.17*	.22*	-.22*
Integr.	.02	.00	.04	.09	.01	.16	-.07	-.07
Right	-.11	-.11	.01	.14	-.06	-.07	-.18*	.28*
UU	.12	-.09	.05	.06	.06	.00	-.13	.17*
RAT	.15	.01	-.10	.14	.09	-.11	-.09	.08

Table 3 (Continued)

Scale	YOSOLAT			UUNIRAT	
	Left	Integr.	Right		
Left	1.00				
Integr.	.63*	1.00			
Right	-.17*	-.59*	1.00		
UU	-.15	.02	.12	1.00	
RAT	-.22*	.13	-.00	.13	1.00

* = Statistically significant beyond .05 level; most r's significant at .001 level.

Table 4

R^2 s, F Values, and Degrees of Freedom of
Selected Regression Models

Model	R^2	F*	df
TSDF Total = Convergent SOB	.2130	38.713	1/143
TSDF Total = Divergent SOB	.0794	12.326	1/143
TSDF Total = Convergent SOB & Divergent SOB	.2209	20.326	2/142
TSDF Total = Full Model (all variables)	.2789	7.568	7/137

* = Statistically significant beyond .05 level; most Fs
significant at .0001 level.

TENNESSEE SELF-DESCRIPTION FORM

This form lists many different personal and professional behaviors of adults. Using the following key, CIRCLE the ONE number that most closely describes how often you do each behavior. There are no right or wrong answers.

	Never	Few times a year	Few times a month	Several times a week	Several times a day
1. Drinking coffee	0	1	2	3	4
2. Putting away work materials	0	1	2	3	4
3. Rambling in conversation	0	1	2	3	4
4. Flossing my teeth	0	1	2	3	4
5. Creating art objects	0	1	2	3	4
6. Over-extending myself in work commitments	0	1	2	3	4
7. Keeping my word	0	1	2	3	4
8. Using hard drugs	0	1	2	3	4
9. Attending art and cultural exhibits	0	1	2	3	4
10. Donating to worthy causes	0	1	2	3	4
11. Reaching work goals	0	1	2	3	4

	Never	Few times a year	Few times a month	Several times a week	Several times a day
12. Criticizing others behind their back	0	1	2	3	4
13. Getting adequate rest at night	0	1	2	3	4
14. Playing a musical instrument	0	1	2	3	4
15. Aiding stranded motorists on the interstate	0	1	2	3	4
16. Jumping from one task to another	0	1	2	3	4
17. Starting a conversation	0	1	2	3	4
18. Eating excessively	0	1	2	3	4
19. Attending concerts	0	1	2	3	4
20. Completing work assignments on time	0	1	2	3	4
21. Interrupting others during conversation	0	1	2	3	4

	Never	Few times a year	Few times a month	Several times a week	Several times a day
22. Participating in vigorous physical activity	0	1	2	3	4
23. Writing creatively (e.g., poetry, short stories)	0	1	2	3	4
24. Eating only nutritious food	0	1	2	3	4
25. Putting off unpleasant, but necessary, tasks	0	1	2	3	4
26. Listening closely to others' comments	0	1	2	3	4
27. Smoking cigarettes	0	1	2	3	4
28. Reading leisurely (e.g., poems, fiction, magazines)	0	1	2	3	4
29. Helping anyone asking for help	0	1	2	3	4
30. Setting work goals	0	1	2	3	4
31. Dominating conversation	0	1	2	3	4
32. Drinking water	0	1	2	3	4

	Never	Few times a year	Few times a month	Several times a week	Several times a day
33. Gardening/ working in the yard	0	1	2	3	4
34. Losing work related materials	0	1	2	3	4
35. Encouraging others	0	1	2	3	4
36. Eating junk food	0	1	2	3	4
37. Engaging in outdoor nature activities	0	1	2	3	4
38. Doing more than two types of exercise	0	1	2	3	4
39. Reading course/ profession- ally related materials	0	1	2	3	4
40. Reprimanding/ scolding others	0	1	2	3	4
41. Doing stretching exercises	0	1	2	3	4
42. Engaging in a hobby not listed in this form	0	1	2	3	4
43. Stopping a mugging	0	1	2	3	4

	Never	Few times a year	Few times a month	Several times a week	Several times a day
44. Failing to meet deadlines	0	1	2	3	4
45. Showing affection toward others	0	1	2	3	4
46. Gulping meals	0	1	2	3	4
47. Dancing	0	1	2	3	4

STYLE OF BEHAVIOR

Each of the following items describes a behavior. For each item place a checkmark in the column that comes closest to describing your level of participation in the described behavior. Please place only one checkmark for each item. For example, if you eat breakfast every morning, your response to item 13 would look like this:

	Never	Occasionally	Frequently	Always
13. I eat breakfast.	—	—	—	—

However, if you hardly ever eat breakfast, your response to item 13 would look like this:

	Never	Occasionally	Frequently	Always
13. I eat breakfast.	—	—	—	—

	Never	Occasionally	Frequently	Always
1. I have a plan in mind as I go about the activities of the day.	—	—	—	—
2. I don't do anything else while I watch television.	—	—	—	—
3. I have a place for everything and keep everything in its place.	—	—	—	—
4. I don't complete projects I begin.	—	—	—	—
5. I shift things around at home.	—	—	—	—

	Never	Occasionally	Frequently	Always
6. I make an outline before writing a report.	—	—	—	—
7. When listening to someone speak, my thoughts turn to other things.	—	—	—	—
8. I participate in a few, specific leisure activities.	—	—	—	—
9. When I begin a project, I finish it.	—	—	—	—
10. I have difficulty concentrating on the task I am working on.	—	—	—	—
11. I vary my morning activities.	—	—	—	—
12. When I am at a social gathering, I stick with one or two conversations.	—	—	—	—
13. I eat breakfast.	—	—	—	—
14. I write reports without an overall plan.	—	—	—	—
15. I don't have any trouble concentrating on what I am doing.	—	—	—	—
16. I am not systematic when solving problems.	—	—	—	—
17. I pay close attention to what is being said when someone is speaking.	—	—	—	—
18. I do things as I think of them throughout the day.	—	—	—	—
19. In conversation, I jump from subject to subject.	—	—	—	—
20. My work or study area is neat and orderly.	—	—	—	—

	Never	Occasionally	Frequently	Always
21. I begin new projects regardless of the number of projects I currently have underway.	—	—	—	—
22. I listen in on or participate in many different conversations at social gatherings.	—	—	—	—
23. When working on job or school assignments, I finish one task before moving to another.	—	—	—	—
24. I take a nap in the afternoon.	—	—	—	—
25. When I have more than one problem to solve, I work on them all together.	—	—	—	—
26. My leisure activities are many and varied.	—	—	—	—
27. When I have more than one problem to solve, I solve them one at a time.	—	—	—	—
28. I combine watching television with other activities.	—	—	—	—
29. I have a morning routine.	—	—	—	—
30. I delay beginning new projects until I finish current projects.	—	—	—	—
31. I have coffee or tea with my meals.	—	—	—	—
32. My work or study area is cluttered.	—	—	—	—
33. When working on job or school assignments, I jump from task to task.	—	—	—	—
34. I drive to work.	—	—	—	—

	Never	Occasionally	Frequently	Always
35. In conversation, I say only what pertains directly to the topic being discussed.	—	—	—	—
36. I solve problems systematically.	—	—	—	—
37. I wash my car on weekends.	—	—	—	—

REMOTE ASSOCIATES TEST
College, Adult, Form 1

Sarnoff A. Mednick
University of Michigan

INSTRUCTIONS: In this test you are presented with three words and asked to find a fourth word which is related to all three. Write this word in the space to the right.

For example, what word do you think is related to these three?

cookies sixteen heart _____

The answer in this case is "sweet." Cookies are sweet; sweet is part of the phrase "sweet sixteen" and part of the word "sweetheart."

Here is another example:

poke go molasses _____

You should have written "slow" in the space provided. "Slow poke," "go slow," "slow as molasses." As you can see, the fourth word may be related to the other three for various reasons.

Try these next two:

A. surprise line birthday _____ A.

B. base snow dance _____ B.

The answers are at the bottom of the page.

Now open the booklet and try the groups of words on the inside pages. Many of these items are not easy and you will have to think about some for a while. If you have trouble with some groups of three go on to the next and come back to them later. Give only one answer to each question. You will have 20 minutes.

The answers are: A. party; B. ball.

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				31
1. stop	petty	sneak	_____	1.
2. elephant	lapse	vivid	_____	2.
3. lick	sprinkle	mines	_____	3.
4. shopping	washer	picture	_____	4.
5. stalk	trainer	king	_____	5.
6. sea	home	stomach	_____	6.
7. walker	main	sweeper	_____	7.
8. mouse	sharp	blue	_____	8.
9. envy	golf	beans	_____	9.
10. board	magic	death	_____	10.
11. athletes	web	rabbit	_____	11.
12. pot	butterflies	pump	_____	12.
13. bald	screech	emblem	_____	13.
14. note	dive	chair	_____	14.
15. cherry	time	smell	_____	15.

UNUSUAL USES

(Tin Cans)

Most people throw their tin cans away, but they have thousands of interesting and unusual uses. In the spaces below and on the next page, list as many of these interesting and usual uses as you can think of. Do not limit yourself to any one size of can. You may use as many cans as you like. Do not limit yourself to the uses you have seen or heard about; think about as many possible new uses as you can. You may have ten minutes for this activity.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____

20. _____
21. _____
22. _____
23. _____
24. _____
25. _____
26. _____
27. _____
28. _____
29. _____
30. _____
31. _____
32. _____
33. _____
34. _____
35. _____
36. _____
37. _____
38. _____
39. _____
40. _____
41. _____
42. _____
43. _____
44. _____
45. _____

YOUR STYLE OF LEARNING AND THINKING

INSTRUCTIONS: On the answer sheet provided, describe your style of learning and thinking by blackening the appropriate circles. Try to describe your strengths and preferences as accurately as possible.

1. (1) read for main ideas
(2) read for specific details and facts
(3) read for main ideas and for details and facts equally
2. (1) usually learn or remember only those things specifically studied
(2) good memory for details and facts in the environment not specifically studied
(3) have noticed no difference in my ability in these areas
3. (1) like to read fantasy stories
(2) like to read realistic stories
(3) no preference between fantasy and realistic stories
4. (1) equally as much fun to dream as to plan realistically
(2) more fun to dream
(3) more fun to plan realistically.
5. (1) solve problems logically, rationally
(2) solve problems intuitively
(3) equally skilled in solving problems intuitively and logically
6. (1) listen to music or radio while reading or studying
(2) must have total quiet in order to read or study
(3) listen to music or radio only if reading for enjoyment, not if studying
7. (1) would like to write fiction stories
(2) would like to write non-fiction books
(3) no preference between writing fiction and non-fiction
8. (1) if seeking mental health counseling, would prefer group counseling and sharing of feelings with others
(2) if seeking mental health counseling, would prefer the confidentiality of individual counseling
(3) have no preference for group over individual counseling
9. (1) enjoy drawing my own images and ideas
(2) enjoy copying and filling in details
(3) enjoy drawing my own images and copying and filling in equally

10. (1) believe I would be easily hypnotized
(2) could probably be hypnotized but it would be difficult
(3) do not believe I could be hypnotized
11. (1) just as exciting to me to improve something as to invent something new
(2) more exciting to improve something
(3) more exciting to invent something new
12. (1) prefer to learn through free exploration
(2) prefer to learn systematically through ordering and planning
(3) no preference between learning through free exploration and learning through more systematic ways
13. (1) no preference between mystery stories and action stories
(2) prefer action stories
(3) prefer mystery stories
14. (1) no preference between algebra and geometry
(2) prefer algebra
(3) prefer geometry
15. (1) like to organize things sequentially
(2) like to organize things to show relationships
(3) no preference for sequential over relational organization
16. (1) skilled in sequencing ideas
(2) skilled in showing relationships among ideas
(3) equally skilled in sequencing and showing relationships
17. (1) good at remembering verbal materials
(2) good at tonal memory
(3) equally good at verbal and tonal memory
18. (1) paces personal activity to time limits with ease
(2) uses time to organize self and personal activities
(3) has difficulty in pacing personal activities to time limits
19. (1) have frequent mood changes
(2) have few mood changes
(3) stable; almost no mood changes
20. (1) skilled in communicating with animals
(2) moderately good in communicating with animals
(3) cannot communicate very well with animals

21. (1) no preference for cats over dogs or vice versa
(2) preference for cats
(3) preference for dogs
22. (1) enjoy clowning around
(2) can clown or be serious depending upon the occasion
(3) do not enjoy clowning around
23. (1) conforming or nonconforming depending upon the situation
(2) generally conforming
(3) generally nonconforming
24. (1) frequently somewhat absentminded
(2) occasionally absentminded
(3) almost never absentminded
25. (1) no preference for well structured over openended assignments
(2) preference for openended assignments
(3) preference for well structured assignments
26. (1) when viewing advertisements, am most often influenced by attractive signs, pleasant scenes, and sensual overtones
(2) when viewing advertisements, am most often influenced by the information comparing several products and demonstrating which works the best
(3) primarily influenced by the advertising medium only when accompanied by information on the quality of the product
27. (1) enjoy analyzing stories
(2) enjoy creative storytelling
(3) enjoy equally analyzing stories and creative storytelling
28. (1) equally valuable to discuss stories and illustrate them
(2) more valuable discuss stories read
(3) more valuable to illustrate stories read
29. (1) equally valuable to tell stories and to act out stories
(2) more valuable to tell stories
(3) more valuable to act out stories
30. (1) moving rhythmically and rhyming are equally enjoyable
(2) moving rhythmically is more fun
(3) rhyming is more fun

- 31. (1) producing ideas and drawing conclusions are equally enjoyable
(2) drawing conclusions is more fun
(3) producing ideas is more fun
- 32. (1) could like to do impromptu interpretative dancing
(2) would like to do ballet dancing
(3) no preference for ballet over impromptu interpretative dancing
- 33. (1) enjoy interacting at an emotional level with others
(2) enjoy interpreting the emotional interaction of others
(3) equal preference for emotional interactions and interpretation of the emotional interaction of others
- 34. (1) strong in recalling verbal materials (names, dates, etc.)
(2) strong in recalling spatial imagery
(3) equally strong in recalling verbal and spatial imagery
- 35. (1) can think better while lying down
(2) can think better while sitting up straight
(3) equal preference for thinking while lying down or sitting up straight
- 36. (1) would like to be a music critic
(2) would like to be a music composer
(3) would enjoy equally music criticism and composition
- 37. (1) skilled in the intuitive prediction of outcomes
(2) skilled in the statistical, scientific prediction of outcomes
(3) equally skilled in intuitive and statistical-scientific prediction
- 38. (1) generally attentive to verbal explanations
(2) generally restless during verbal explanations
(3) can control attention during verbal explanations
- 39. (1) no preference between outlining and summarizing readings
(2) preference for outlining over summarizing
(3) preference for summarizing over outlining
- 40. (1) no preference for demonstration over verbal instructions
(2) prefer demonstration
(3) prefer verbal instructions

VITA

Gary Paul Lankford was born in Cape Cod, Massachusetts on July 31, 1959. He moved to California with his family in early 1960. He attended elementary school there and moved with his family to Maryville, Tennessee in November, 1968. He graduated from Alcoa High School in May, 1977. The following September he entered Maryville College, and graduated in June, 1981. He received the Master of Science degree with a major in Educational Psychology in March, 1985.

After graduation, the author will continue to work on the Doctor of Philosophy degree with a major in Education while continuing to teach in his position as a graduate teaching assistant. He is a member of the American Education Research Association and the American Psychological Association.

He is married to Susan Williams Lankford of Maryville, Tennessee and has no children.