

本文章已註冊DOI數位物件識別碼

▶ Cluster Analysis of Svib Profile Patterns of Adult Women and College Men

SVIB職業興趣輪廓型性別異同的比較及集叢分析

doi:10.29811/PE.196912.0001

心理與教育, (3), 1969

Psychology and Education, (3), 1969

作者/Author：劉永和(Phyllis Yung-Hou Liu)

頁數/Page：1-10

出版日期/Publication Date：1969/12

引用本篇文獻時，請提供DOI資訊，並透過DOI永久網址取得最正確的書目資訊。

To cite this Article, please include the DOI name in your reference data.

請使用本篇文獻DOI永久網址進行連結:

To link to this Article:

<http://dx.doi.org/10.29811/PE.196912.0001>



DOI Enhanced

DOI是數位物件識別碼 (Digital Object Identifier, DOI) 的簡稱，是這篇文章在網路上的唯一識別碼，用於永久連結及引用該篇文章。

若想得知更多DOI使用資訊，

請參考 <http://doi.airiti.com>

For more information,

Please see: <http://doi.airiti.com>

請往下捲動至下一頁，開始閱讀本篇文獻

PLEASE SCROLL DOWN FOR ARTICLE



CLUSTER ANALYSIS* OF SVIB PROFILE PATTERNS OF ADULT WOMEN AND COLLEGE MEN

PHYLLIS YUNG-HOU LIU

University of California, Los Angeles

In 1943, Strong argued for separate blanks for men and women in that too many women enter an occupation as a stop-gap until marriage, would not be there if they had a choice, are rather a heterogeneous group and, thus, would not be an adequate criterion group used to develop differential occupational scales. (Strong, 1943) A quarter of a century has passed but similar position towards using separate blanks for men and women remains largely unchanged, though with some modification. (Strong, 1955; Laima, 63; Campbell, 1968).

However, in view of the increasingly merging and overlapping activities of men and women, in education, in vocation and in all walks of life, the continuing separate assessment of men's and women's success and satisfaction in a shared world is questionable. Furthermore, it has already been found that the interests of men and women are quite similar (correlating about .69); that authors, artists, and music teachers among men score the same on the MF scale as physicians and dentists among women; and that some men have the capacity to score almost as the most feminine of women. (Strong, 1955) Unfortunately, the SVIB Male form is widely used for women as well as for men. Counselors have also often used the SVIB Male form for women, because it contains more keys. The purpose of this study is to demonstrate that the application of SVIB-M to adult women does yield meaningful and comparable data, in the similarities and differences of the occupational scale scores, in the profile patterns, and in the occupational groupings obtained by cluster analysis.

METHOD

Subjects SVIB-M data on adult women were drawn from the women enrolled in a UCLA Daytime Extension course designed primarily to help adult women find a meaningful new direction after marriage and children. Their typical expressed concerns are: (1) To get some kind of gratifying, meaningful, and financially rewarding job; (2) To launch an interesting personal career which will allow for future growth and development; (3) To know what to do with increasing free time; (4) To be fulfilled in making a contribution to society, other than in the role of wife and mother; and (5) To grow in knowledge and ability, thereby enriching self and family.

* Computing assistance was obtained from the Health Science Computing Facility, UCLA, sponsored by NIH Grant, FR-3.

The SVIB-M data of college men were drawn from random samples supplied by counselors in the Student Counseling Center, UCLA. About 1/3 were graduate students and 2/3 undergraduates. Most of them were unhappy or unsuccessful with their chosen majors and were not sure what they could do with their majors and would like to transfer to a more promising field. By and large, the college men in this study constituted a rather selective group of college students who were aware of and willing to use the counseling service in their search for a career commitment.

Treatment of the data

1. Compare the means and standard deviations for all 54 occupational scales between two groups.
2. Compare the interest profile patterns of two groups.
3. Compare their occupational groupings obtained by the cluster analysis* method, and together, with the SVIB's given classification.

The cluster analysis method used here is a weighted variable group method (Sokol & Sneath, 1963) using Spearman's sum of variable method for recomputing the correlation of coefficient. In clustering, the first step is to find the mutually highest correlation as the central point of the cluster. Highest correlation means a correlation between any two scales which is higher than the correlation of these scales with any other scales.

After the first cluster is formed, one can proceed to determine whether an additional new scale could join this cluster by producing an average correlation between the newcomer and the established cluster by meeting a certain criterion not lower than the previous level of junction. If three members have formed a cluster, one will have to calculate the average correlation of the three cluster members with a fourth possible member in order to decide whether the cluster should cease or whether the fourth member should be admitted to the cluster. If the fourth member is not admitted, a new member with the highest correlation with the fourth member will be formed to establish a new cluster, and so on, until a certain number of clusterings are finally established to include all scales under consideration.

RESULTS

1. Comparison of the occupational scales is presented in Table 1. These groups of adult women and college men are significantly different at the .001 level on 24 occupational scales. As a group, the adult women scored higher on Psychiatrist, Psychologist, Personnel Director, Rehabilitation Counselor, Social Worker, Social Science Teacher, School Superintendent, Minister, Librarian, Music Teacher, Life Insurance Salesman, Advertising Man, Lawyer, Author-Journalist, Chamber of Commerce and Business Education Teacher scales. Unlike the college men, the women scored significantly lower on Chemist, Army Officer, Air Force Officer, Math-Science

* Computer program designed by J. A. Hartigar, Princeton University.

Table 1. Comparison of Means and S.D.'s of SVIB Occupational Scales between Adult Women and College Men

VARIABLE		ADULT WOMEN (N-230)		COLLEGE MEN (N-249)		
NAME	NO.	MEAN (1)	S.D. (1)	MEAN (2)	S.D. (2)	T
DENTIST	1	26.35	10.47	28.12	10.76	1.82
OSTEOPAT	2	24.89	10.93	27.14	9.59	2.37*
VETERINA	3	21.45	11.10	23.51	8.28	2.29
PHYSICIA	4	29.78	12.57	32.11	11.91	2.08
PSYCHIAT	5	36.13	12.28	28.86	11.98	6.55***
PSYCHOLO	6	36.70	10.71	32.67	11.17	4.07***
BIOLOGIS	7	30.24	13.75	28.91	12.35	1.11
ARCHITEC	8	29.97	10.60	28.76	11.01	1.22
MATHEMAT	9	26.62	11.54	24.07	11.28	2.49*
PHYSICIS	10	23.20	14.32	21.78	13.01	1.14
CHEMIST	11	20.69	12.46	28.62	14.17	6.55***
ENGINEER	12	21.31	12.63	23.62	12.77	1.99
PRODUCTI	13	22.90	11.98	26.09	9.53	3.23**
ARMY OFF	14	12.37	12.98	21.67	11.49	8.29***
AIR FORC	15	20.07	13.86	28.55	9.85	7.64***
CARPENTE	16	21.04	20.04	18.85	12.05	1.43
FOREST S	17	12.66	11.67	15.39	12.10	2.50*
FARMER	18	28.02	13.55	29.68	9.40	1.55
MATH SCI	19	19.02	9.44	27.82	10.29	9.78***
PRINTER	20	27.69	8.76	30.22	9.71	3.01**
POLICEMAN	21	15.57	11.88	16.64	9.57	1.08
PERSONNE	22	28.06	12.08	22.98	11.07	4.79***
PUBLIC A	23	30.19	12.52	30.78	10.81	.55
REHABILI	24	35.52	11.13	30.00	10.69	5.58***
YMCA SEC	25	29.58	12.56	29.13	13.44	.38
SOCIAL W	26	39.33	10.80	31.23	13.97	7.11***
SOCIAL S	27	36.69	10.93	29.99	12.05	6.38***
SCHOOL S	28	30.25	10.67	19.49	11.69	10.55***
MINISTER	29	32.22	12.87	19.52	14.27	10.24***
LIBRARIA	30	42.84	15.78	36.10	10.45	5.48***
ARTIST	31	31.92	11.43	32.00	9.68	.08
MUSICIAN	32	40.88	16.90	40.43	10.80	.34
MUSIC TE	33	37.61	13.27	31.40	12.13	5.31***
CPA OWNE	34	25.63	11.93	25.49	9.37	.23
SENIOR C	35	17.92	12.69	24.71	13.23	5.75***
ACCOUNTA	36	21.53	15.20	20.66	11.57	.79
OFFICE W	37	24.72	13.73	25.66	10.76	.83
PURCHASI	38	25.08	11.96	26.21	10.85	1.08
BANKER	39	24.02	10.12	22.71	9.58	1.46
PHARMACI	40	25.18	9.05	24.10	8.54	1.33
MORTICIA	41	29.26	12.11	27.01	8.48	2.34*
SALES MA	42	28.04	11.25	25.17	10.17	2.93**
REAL EST	43	35.95	11.00	33.81	8.37	2.38*
LIFE INS	44	35.38	11.16	28.67	9.98	6.99***
ADVERTIS	45	40.30	13.21	33.39	9.22	6.52***
LAWYER	46	38.07	9.72	33.95	8.64	4.90***
AUTHOR J	47	40.61	10.07	35.29	8.64	6.19***
PRESIDEN	48	25.99	10.76	19.54	8.98	7.09***
CREDIT M	49	28.27	12.79	26.79	11.77	1.31
CHAMBER	50	38.21	12.70	34.06	11.04	3.81***
PHYSICAL	51	25.27	13.21	32.23	11.10	6.21***
COMPUTER	52	25.64	16.83	35.35	12.44	7.14***
BUSINESS	53	32.72	11.62	27.95	11.21	4.50***
COMMUNIT	54	25.31	12.76	27.08	13.39	1.49
OPTOMETR	55	37.19	14.78	0.0		

Teacher, Senior CPA, Physical Therapist and Computer Programmer scales. At the .01 and .05 level of significance, although the women scored higher than the college men on Mortician and Real Estate Man scales, they scored lower on Printer, Sales Manager, Osteopath, Mathematician, Forest Service Man, Production Manager scales. Both adult women and college seem to reject the interests of Forest Service Man (scored 12.66 and 15.39) and Policeman (scored 40.88 and 40.43).

2. Comparison of the interest profile patterns of adult women and college men are quite similar—correlating .8046, significant at the .001 level. Collectively, the means of the scales for both groups seem to show Group VI, Creative-aesthetic, B+, B, and B-, to be their primary interest; Group V, Social Service; Group I, Psychiatrist and Psychologist and Group X, Linguistic, B and B-, to be their secondary interests. Both adult women and college men scored low in Group IV, Technical-trade and Group VIII, Business-Detail, indicating the areas of their rejection.

Chart 1. Comparison of SVIB Profile Patterns of Adult Women and College Men

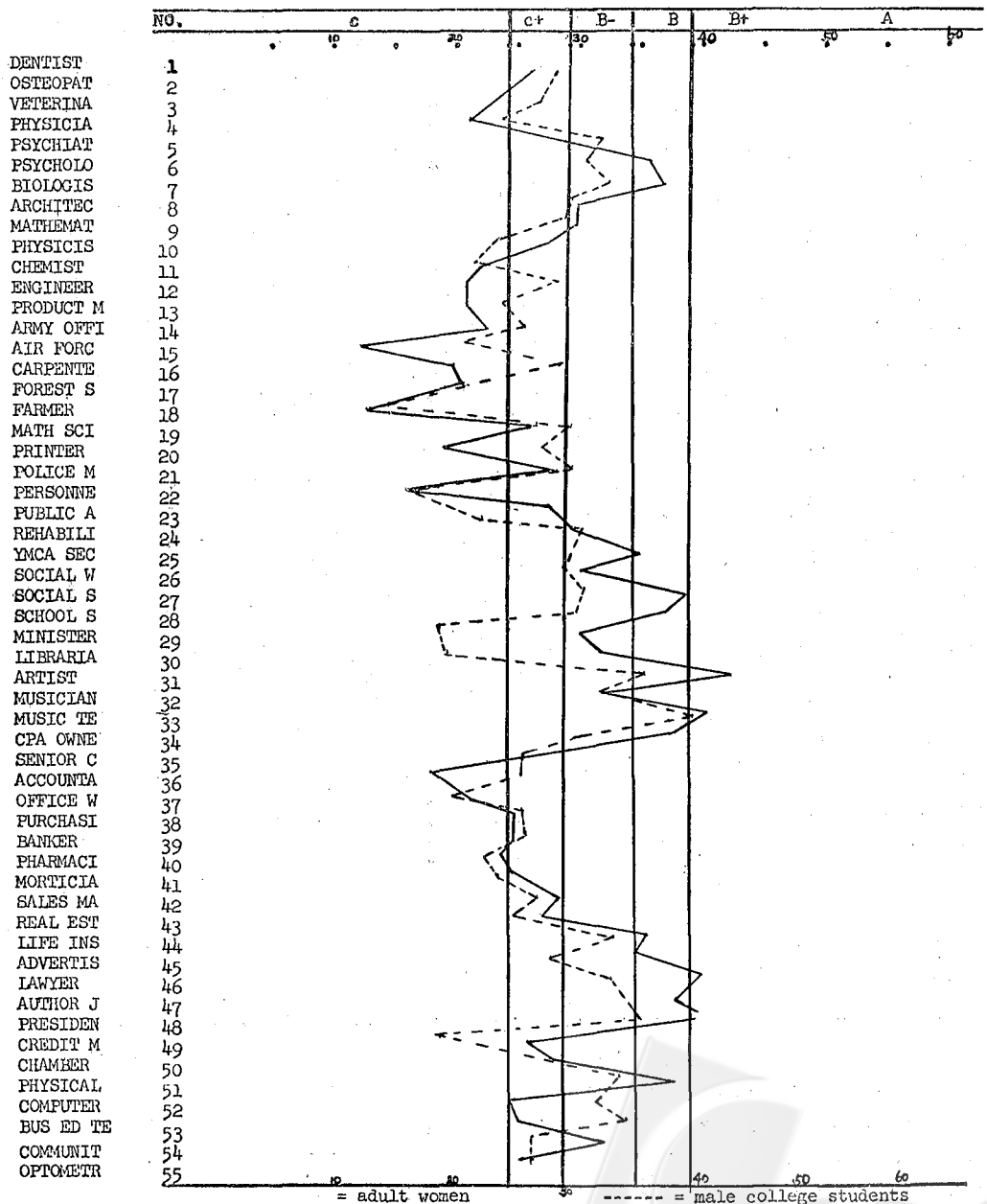


Chart 2. Tree Diagram of Cluster Based on Weighted Averages Algorithm—230 Adult Women

DENTIST 1	39	42	58	55	55	61	79	44	58	48	52	53	MORTICIA 41	47	37	42	65	82	55	98	**	**	**	65	88	
PHYSICIA 4	23	23	39	43	49	74	57	64	75	80	65	80	LIFE INS 44	14	29	58	65	32	40	**	**	**	83	**	93	
OSTEDPAT 2	49	59	59	76	83	78	90	72	79	53	70	**	REAL EST 43	28	51	64	33	55	**	**	**	84	**	84	**	
BIOLOGIS 7	26	34	41	58	68	82	66	71	76	70	**	**	SALES MA 42	30	80	50	68	**	**	**	**	98	**	**	**	
PHYSICIS 10	26	26	30	64	84	47	57	62	65	90	**	68	MFG PRES 48	81	71	77	**	**	**	**	**	**	**	**	97	
CHEMIST 11	41	30	57	73	72	71	92	77	86	**	81	89	AUTHOR J 47	37	37	87	**	93	67	65	50	83	82	62	**	
MATHEMAT 9	45	42	54	85	91	96	**	94	**	**	98	**	ADVERTIS 45	38	**	**	**	56	69	57	86	**	58	**	94	
ENGINEER 12	66	81	74	70	78	64	81	86	62	57	58	59	LAWYER 46	89	96	96	88	92	91	**	99	84	76	79	**	
ARCHITEC 8	23	92	93	91	**	73	**	**	**	**	**	**	PSYCHOL 6	17	55	90	59	90	67	62	**	96	66	66	86	
ARTIST 31	**	**	**	**	79	**	**	**	**	**	**	**	PSYCHIAT 5	48	93	75	96	72	59	**	88	56	59	83	84	
CARPENTE 16	14	30	47	41	73	53	70	**	93	77	76	54	MINISTER 29	41	39	59	50	47	76	47	33	41	67	78	65	
FARMER 18	34	44	50	64	54	76	**	**	67	79	64	56	MUSIC TE 33	27	31	44	60	48	77	54	68	76	92	55	**	
VETERINA 3	47	74	52	55	58	99	89	77	94	82	73	70	LIBRARIA 30	27	35	35	46	85	64	65	78	96	73	**	**	
FOREST 17	89	80	42	58	84	79	82	63	73	64	61	72	MUSIC PE 32	44	50	39	**	83	**	**	**	87	**	**	**	
PRINTER 20	77	80	97	80	85	81	83	**	**	**	**	**	SCH SUPE 28	44	44	46	44	46	71	64	52	56	71	**	**	
PHARMACI 40	65	70	80	98	72	92	**	92	94	85	**	48	SOCIAL W 26	23	41	47	51	75	81	42	53	44	**	**	**	
POLICEMA 21	37	53	66	93	71	70	61	52	70	**	62	79	REHABIL 24	30	33	47	75	82	59	76	51	**	**	**	**	
PROD MAN 13	39	47	81	81	74	65	47	86	86	53	75	81	PUB ADMI 23	23	58	69	85	52	78	61	**	**	**	**	**	
ACCOUNTA 36	26	**	68	97	94	73	**	52	37	43	39	81	PERSONNE 22	62	54	70	51	57	54	**	**	**	**	**	**	
SENR CPA 35	87	65	78	74	60	**	55	55	63	55	**	**	SS TEACH 27	75	69	63	78	56	**	**	**	**	**	**	**	
MA-SC TE 19	59	58	70	64	99	**	**	91	**	**	**	**	CREDIT M 49	18	45	29	48	**	**	**	**	**	**	**	**	
COMPUTER 52	28	51	47	**	**	**	**	**	**	**	**	**	BUSED TE 53	49	35	56	**	**	**	**	**	**	**	**	**	
AIR FORC 15	27	49	**	**	**	**	**	**	**	**	**	**	COMMUNIT 54	31	32	**	**	**	**	**	**	**	**	**	**	
ARMY OFF 14	68	**	85	**	**	**	**	**	**	99	**	**	CHAM COM 50	45	**	**	**	**	**	**	**	**	**	**	**	
PHYS THE 51	**	**	**	**	**	**	**	**	**	**	**	**	YMCA SEC 25	**	**	**	**	**	**	**	**	**	**	**	**	
CPA OWNE 34	78	70	53	77	94	85	79	83	**	84	87	89														
PURCHASI 38	24	46	47	80	71	53	52	**	**	**	**	**														
BANKER 39	32	32	62	51	51	65	**	84	**	**	**	**														
OFF WORK 37	36	79	65	58	77	**	88	**	**	**	**	93														



Chart 3. Tree Diagram of Cluster Based on Weighted Averages Algorithm 249 Male College Students, UCLA

DENTIST	1	30	34	26	28	34	44	36	30	36	82	xx	xx	COMPUTER	52	48	32	52	68	xx	xx	xx	xx	xx	58	82	xx
ARCHITEC	8	12	18	30	28	34	48	76	90	56	76	xx	xx	MATH ACI	19	56	72	80	xx	xx	xx	xx	xx	62	78	84	96
ARTIST	31	44	28	54	28	32	36	68	74	46	58	92	92	AIR FORC	15	14	40	94	xx	xx	98	xx	56	64	74	72	xx
CHEMIST	11	8	16	24	24	44	62	78	58	98	xx	xx	84	ARMY OFF	14	36	94	96	xx	86	xx	52	58	68	64	84	64
PHYSICIST	10	14	10	18	40	66	74	46	84	xx	xx	74	62	PRODUCTI	13	60	70	86	68	xx	48	38	50	28	50	88	xx
ENGINEER	12	32	48	66	76	xx	80	xx	xx	xx	xx	94	xx	PRESIDEN	48	58	48	36	66	78	56	68	44	54	xx	xx	xx
MATHEMAT	9	22	48	84	68	36	60	96	xx	68	44	96	72	MORTICIA	41	26	28	30	90	64	42	36	30	92	98	90	82
BIOLOGIS	7	20	48	40	28	62	84	xx	56	58	xx	88	xx	REAL EST	43	14	16	90	70	54	46	40	xx	94	90	82	84
PHYSICIA	4	24	44	50	78	84	xx	58	60	xx	76	xx	xx	SALES MA	42	22	78	52	42	38	40	xx	90	82	74	66	48
OSTEOPAT	2	58	80	xx	94	xx	78	xx	xx	xx	xx	xx	82	LIFE INS	44	xx	90	70	76	60	xx	66	64	56	74	58	54
PSYCHIAT	5	22	48	42	66	60	74	xx	70	90	xx	xx	xx	SENIOR C	35	18	36	42	46	xx	xx	xx	xx	xx	92	60	72
PSYCHOLO	6	34	58	80	56	46	82	60	60	xx	xx	xx	xx	ACCOUNTA	36	16	24	28	xx	xx	xx	xx	88	74	44	54	86
LIBRARIA	30	28	34	32	44	62	64	92	xx	xx	xx	xx	xx	OFFICE W	37	24	22	96	xx	96	96	84	70	30	34	58	70
MINISTER	29	18	44	74	80	72	xx	xx	xx	xx	xx	xx	xx	PURCHASI	38	18	xx	xx	xx	xx	94	82	56	64	90	88	xx
MUSIC TE	33	38	72	64	80	xx	xx	xx	xx	xx	xx	xx	xx	BANKER	39	xx	xx	xx	xx	96	84	54	54	66	86	96	96
MUSICIAN	32	50	76	92	xx	xx	xx	xx	98	xx	xx	xx	xx	PHYSICAL	51	36	66	92	74	92	68	70	80	82	46	46	xx
AUTHOR	47	24	24	78	xx	xx	xx	xx	xx	xx	xx	xx	xx	SOCIAL W	26	10	26	34	40	62	58	38	30	32	32	xx	xx
ADVERTIS	45	28	68	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	REHABILI	24	24	30	32	46	40	36	28	30	30	xx	xx	xx
LAWYER	46	48	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	SCHOOL S	28	30	32	56	54	42	36	42	48	xx	xx	xx	xx
CPA OWNE	34	xx	xx	xx	xx	xx	xx	xx	94	86	xx	xx	xx	PUBLIC A	23	18	38	46	58	26	30	40	xx	xx	xx	xx	xx
OPTOMETR	55	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	PERSONNE	22	30	40	52	22	36	44	xx	xx	xx	xx	xx	xx
CARPENTE	16	18	8	42	60	54	80	76	58	80	82	52	96	CREDIT M	49	12	36	22	30	34	xx	xx	xx	xx	xx	xx	xx
FARMER	18	34	38	66	34	70	90	76	96	90	58	82	92	BUSINESS	53	26	34	34	36	xx	xx	xx	xx	xx	xx	xx	xx
PRINTER	20	68	68	72	80	96	70	xx	xx	76	92	86	96	SOCIAL S	27	36	32	30	xx	xx	xx	xx	xx	xx	xx	xx	xx
FOREST S	17	44	46	80	98	76	74	60	62	xx	98	xx	xx	CHAMBER	50	16	18	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
POLICEMA	21	50	52	xx	74	58	50	46	xx	62	84	82	98	COMMUNIT	54	6	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
VETERINA	3	36	xx	94	96	92	66	86	56	70	84	88	94	YMCA SEC	25	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
PHARMACI	40	xx	80	82	88	58	66	36	62	56	74	72	58														

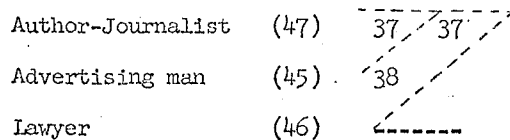


Adult women and college men are not only much alike in the variability between different occupational groups; their pattern of fluctuation between different scales within the same occupational groups is also similar. In Group I, both scored high on Psychiatrist and Psychologist, and low on Veteraniarian scales; in Group II, high on Architect and low on Physicist and Engineer scales; in Group IV, higher on Printer and Farmer and lower on Forest Service Man; and Group VIII, higher on Mortician and lower on Accountant.

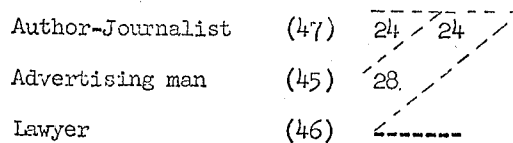
3. Cluster analysis of adult women's and college men's data are shown on Chart 2 and Chart 3. The average of all correlations between members of each and all of the occupational clusters are listed in Table 2. A comparison of adult women's and college men's occupational clusters with that of the SVIB's classification is presented in Table 3.

Explanation of the clusters on Chart 2 and Chart 3

The cluster consists of a distance matrix intersected by lines representing a tree. (Hartigan, 1967) A sample tree found in adult women is:



The number 37 means that the distance between Author-Journalist and Advertising man and Lawyer is 37, corresponding to a correlation $1 - .37 = .63$. The number 38 means that the distance between Advertising man and Lawyer is 38, corresponding to a correlation $1 - .38 = .62$. A similar tree is found in college men's data:



Accordingly, the distance between Author-Journalist and Advertising man and Lawyer is .24, corresponding to a correlation of .76; and the distance between Advertising man and the Lawyer is .28, corresponding to a correlation of .72.

The cluster consists of a set of scales which may be reached by moving left on dashed lines from nodes (intersections of dashed lines). The cluster here contains three variables (occupational scales) 47, 45, and 46, and it may be defined by the boundaries once the order of variables in specified.

Order of Variables	Other Boundary	Cluster
47	49	47, 45, 46
45	46	45, 46
46	47	46, 45, 47

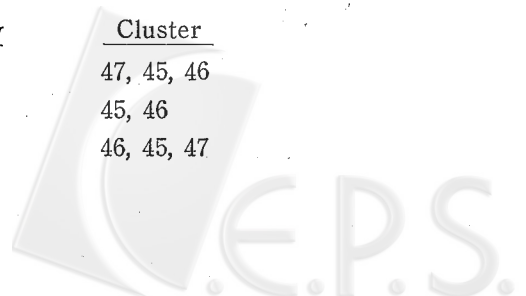


Table 2. Comparison of SVIB Occupational Scale-Grouping

Group Occupational Scales		230 Clusters (Adult Wome)		249 Clusters (Male College Students)	
I	1. Dentist	I	...	I	...
	2. Osteopath		...		...
	3. Veterinarian		?		?
	4. Physician		...		...
	5. Psychiatrist		?		?
	6. Psychologist		?		?
	7. Biologist		...		...
II	8. Architect	...	Artist	...	Artist
	9. Mathematician		...		...
	10. Physicist		...		...
	11. Chemist		...		...
	12. Engineer		...		...
III	13. Production manager	?	Math.Sci. Te.	II	...
	14. Army Officer		...		Computer
	15. Air force officer		...		Math.Sci. Te.
IV	16. Carpenter	III	...	III	...
	17. Forest service man		...		Veterinarian
	18. Farmer		...		Pharmacist
	19. Math-Science teacher		?		...
	20. Printer		...		...
21. Policeman	?	...			
V	22. Personnel director	IV	...	IV	...
	23. Public administrater		...		...
	24. Rehabilitation counselor		...		...
	25. YMCA secretary		?		?
	26. Social worker		...		...
	27. Social Sci. teacher	...	?		
	28. School superintendent	...	...
	29. Minister	V	...		?
	...	Psychiatrist	...		...
...	Psychologist	...	...
VI	30. Librarian	VI	...	VI	...
	31. Artist		?		Minister
	32. Music performer		...		?
	33. Music teacher		...		...
VII	34. CPA owner		?		?
VIII	35. Senior CPA	VII	...	VII	...
	36. Accountant		...		President MFG
	37. Officer worker	VIII	...		...
	38. Purchasing agent		...		CPA owner
	39. Banker		...		President M.
	40. Pharmacist		?		...
	41. Mortician		...		?
IX	42. Sales manager		...		...
	43. Real estate salesman		...		...
	44. Life ins. salesman		...		...
X	45. Advertising man	IX	...	VIII	...
	46. Lawyer		...		CPA owner
	47. Author-journalist		...		...
XI	48. President MFG		?		?
XII	49. Credit manager	X	...	IX	...
	50. Chamber of Com. exec.		...		YMCA secretary
	51. Physical therapist		?		...
	52. Computer programmer		?		...
	53. Business Ed. Te.		...		...
54. Community Rec. admin.	...	...	

* ...=same as



The construction algorithm is such that the first variable always appears first in the tree. The distance in the matrix should increase from left to right, and should be approximately equal in the parallelepipeds bounded by the dashed lines.

By visual inspection, the size of intra-cluster correlation ranges from .45 to .88, with most correlations scattering around .50. For adult women, the highest correlation is .88, in a single small cluster formed by Psychiatrist, Psychologist and Minister. For college men, the highest correlation is found in the cluster tentatively labeled Community Action, consisting of Business Education Teacher, Social Science Teacher, Chamber of Commerce, Community Recreation and YMCA secretary.

The cluster groupings obtained by the cluster analysis method seem to demonstrate that adult women and college men do have a common framework of reference in responding to differential interests of men of various occupations. Artists' interests are seen to be similar to those of the Architect's, changed from Group V to Group I. Neither adult women or college men clearly differentiate between life science and physical science, though together the sciences might be subdivided into several small clusters. The Computer programmer and Physical Therapist join in with SVIB Group III, probably having in common regimentation, precision and control. The Veteranarian's interests are not associated with those who are involved with life science, Group I; nor with the Pharmacist, the Business-detail, Group VIII. Instead, they are in closer association with the interests of Carpenter, Farmer, or Printer, Group IV. SVIB's Group V remains almost the same, except that YMCA secretary was clustered, instead, with Credit Manager, Chamber of Commerce, Community Recreation Director—a group of community action men. Psychiatrist and Psychologist, unfortunately, are not clustered in life science. For women, they are definitely associated with the Ministers; and for men somewhat closer to the interests of the Minister and Librarians. Both women and men do not clearly differentiate between Business Contact and Business Detail as SVIB has suggested, though women perceived Senior CPA, Accountant, Policeman, and Production manager as having something in common, forming a separate cluster. SVIB's Group X, Linguistic remains a cohesive cluster, joined by CPA owner, however, according to the men's data. All in all, the cluster analysis of women's and men's data are highly comparable, having shared similarities and differences in comparison with SVIB's given classification.

DISCUSSION

The above findings suggest some possibilities and also raise some questions regarding the application of SVIB-M to women.

First, the differences of the scale scores between adult women and college men remind the users of SVIB to explore more fully the variables that might influence the scores of the occupational scales. In his 1966 revision of SVIB, Campbell (1966) has noticed that his recently tested samples score higher on recently developed

scales, no matter what the occupation is. William, Kirk, and Frank (1968), on the other hand, found discrepancies between scores obtained on the new form as compared with the old form and the tendency for the scores obtained on the new form to be lower than the old form, in magnitude and location. No adequate explanation has been given for those differences, although it appears that variables such as form (old or new), sex, or sampling population could all operate to produce significant differences between scale scores under different circumstances.

Second, the similarities and differences of the interest profiles between the two groups in this study pose an interesting question. In general, the adult women indicated that they are interested in helping people (Group V, Uplift) through verbal and persuasive communication (Group V, Linguistic), and in a professional (group I, Professional Scientists) and cultural setting (Group VI, Musician) to function more effectively in the world of personal service (Group IX, Business Contact) and interpersonal relations (Group XI). With a .80 correlation of coefficient, the interest profile of the college men looks rather similar to that of the adult women. Could we infer the career direction of those college men seeking career counseling to be similar to that of the adult women?

However, the women's profile is sharper. According to Strong, a sharper profile was interpreted as having clearer direction. For instance, the engineer or other professional school students in his sample had sharper profiles than did the business majors, because the former supposedly had little misgivings about their choice of a field and less difficulty in finding themselves. A recent study by Herkenhogg, who compared older and younger women, also revealed that women thirty years or older have more clearly defined interests in SVIB. Should we then, imply that the adult women have stronger preferences regarding what they will and will not enjoy doing? Or, though inexperienced in career and employment have the adult women developed more definite interest patterns? Or, as a group, the adult women are more homogeneous, than the younger females and college men?

Third, the meaning of the occupational groupings needs to be further examined. Thurstone, Guilford and others have shown that four or five factors (or groups) are sufficient to account mathematically for all or nearly the variation in interests among the occupational groups thus far studied. Strong, however, was skeptical about the possibility of finding a few interest factors which would explain all interests and determined, through intercorrelation, to get a dozen sets of coordinates in terms of the relationships between every occupation with every other occupations. Thus, it is largely a matter of convenience whether we have a few groups with many members in each or many groups which contain only a few members. An examination of the clusters established by adult men and college women through the use of the cluster analysis method present basically the same problem.

But the similarity of the two groups in their scale groupings based on cluster analysis is striking. Such resemblance suggests a common framework of reference

in responding to differential interests of men in various occupations. All in all, the comparison of interest scales, interest profiles, and interest clusters points to the possibility and feasibility of *integrating* two separate SVIB blanks into one, in the near future.

REFERENCES

- (1) CAMPBELL, D. P.: "The 1966 Revision of the Strong Vocational Interest Blank." *Personnel & Guidance Journal*, 1966, 44, 744-747.
- (2) CAMPBELL, D. P.: *Manual for SVIB for Men & Women*, 1968.
- (3) HERKENHOFF, L. A.: "A Comparison of Older & Younger Women Students at San Jose City College with Implication for Curriculum & Student Personnel Service."
- (4) HARTIGAN, J. A.: "Presentation of Similarity Metrics by Tree." *Journal of American Statistical Association*, 1967.
- (5) LAIMA, B.: "Women's Score on the M & F Forms of the SVIB". *Vocational Guidance* 12: 116-8, Winter 63-64.
- (6) SOKOL, R. R. & SNEATH, P. A.: *Principles of Numerical Taxinomy*. San Francisco: W. H. Freedman & Co. 1963.
- (7) STRONG, E. K.: *Vocational Interests of Men & Women*, Stanford, California: Stanford University Press. 1943.
- (8) STRONG, E. K.: *Vocational Interests 18 Years After College*. Minneapolis: University of Minnesota Press, 1955.
- (9) WILLIAM, P. A., KIRK, B. A. FRANK, A. C.: "New Men's SVIB: A Comparison with the Old." *Journal of Counseling Psychology*, 1968, Vol. 15, No. 3, 287-294.



SVIB 職業興趣輪廓型性別異同的 比較及集叢分析

劉 永 和

摘 要

近數十年來美國各學校機關心理學家、教育家及各專業輔導工作人員從事升學就業輔導所最通用的測驗工具莫過 SVIB(Strong Vocational Interest Blank)，SVIB 的編製人史氏(Edward Strong)分別製訂男女職業興趣測驗及其常模，並申言男女兩性由於生活經驗及社會期望的不同，升學就業的志向和可能性亦殊異，必須分別測量診斷，結果才能正確可靠。

然而近年來心理學各方面研究似已證明兩性間的差異，遠不如個別差異大，而許多所謂「男性的」或「女性的」的職業興趣也因為社會的制度，生活的方式、工作的性質與種類的改變而更趨近似。

本研究的對象係 230 名參加洛杉磯加州大學升學就業輔導班的成年男女，平均年齡四十歲，平均教育程度大專二年級和 249 名大學本部及研究院的男學生，平均年齡 26 歲。男女都填答為男性所編訂的 SVIB—M 測驗卷。

統計分析結果，發現中年女人和青年男學生在某些職業興趣上雖有強弱大小的差異，但是他們却不因性別、年齡、及生活經驗的不同和距離而有顯然不同的職業興趣輪廓型。測驗資料經過集叢分析後，所得結果兩組又極相似。由此可見，受過中等以上教育者職業興趣的性別差異似不足道。SVIB—M 職業興趣測驗可以男女共用，而從事升學就業輔導者，更應着重個人的志趣，不必過份拘泥、保守，對男女學生的事業輔導採取不同的原則與標準。

