

VITA

ALAN J. KLOCKARS

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Education:

- B.S. Oregon State University, 1962
Major: General Social Studies (Psychology)
Minor: Mathematics
- M.A. Oregon State University, 1963
Major: General studies (Education, Statistics,
Sociology, Psychology)
- Ph.D. University of Washington, 1967
Major: Psychology (Psychometrics)
Committee: Allen L. Edwards, Chair,
Paul Horst,
Ezra Stotland,
Cliff Lunneborg

Professional Employment

Visiting Instructor	1965-6	Psychology Department University of Montana
Assistant Professor	1967-71	Educational Psychology College of Education University of Washington
Associate Professor	1971-81	
Professor	1981-present	
Faculty Member	1983-85	Social Welfare Faculty University of Washington
Visiting Research Fellow	9-85	Centre of Behavioural Studies University of New England Armidale, NSW, Australia
Chair	1993-1996	Educational Psychology

Academic Responsibilities

Teaching: My typical teaching load for an academic year includes one section each quarter of EDPSY 490, a section of EDPSY 593 in the Winter Quarter, Survey Methods in the Autumn and a seminar in the Spring Quarter.

EDPSY 490 Basic Educational Statistics. 3 Credits
Course designed for first year master's students and advanced undergraduates. Covers bases of inferential statistics, confidence intervals and correlation.

EDPSY 593 Experimental Design. 5 credits
Primary experimental design course in the doctoral programs of Education and several other departments across the university. Emphasis on analysis of variance and covariance.

EDPSY 584 Seminar in Statistics, Research Design and Measurement. 3 Credits.
Seminar topics over the last five years: Issues in construct validity; Recent advances in multiple comparisons; Issues about rating scales; Options in experimental design; Non-parametric alternatives; Sampling .

EDPSY 588 Survey Methods 3 credits
The course is divided between issues related to questionnaire construction and sampling.

Research: I have three major lines of research:
Multiple comparisons within experimental design. Of particular interest are the analysis of orthogonal contrasts, the role of omnibus tests of significance in the decision structure and Finite Intersection Tests.

Comparative power of research designs and the conditions under which designs are most powerful. Of particular interest are the analysis of covariance and randomized block designs.

Rating scale format determinants of responses. In particular I am concerned with how characteristics such as the verbal label and physical position on a continuum affect responses on the scale.

Student Advising: I serve on a number of student doctoral committees, both within Education and in other departments (Psychology, Speech and Hearing Science, and Speech Communications, primarily). I have chaired the doctoral committee of 15 graduate students. These students are primarily in university settings, research institutes, and government service.

Consultations (Representative sampling of projects)

New Careers 1969-73, Ongoing measurement and statistical consultation for adult retraining project.

Interracial Awareness training, 1970, Seattle Public Schools. evaluator of an interracial program at Sealth High School.

Program evaluations, 1973-80 Highline and Bellevue Schools. Numerous evaluations of minor curriculum innovations.

Reading Program Evaluation, 1975 Seattle Public Schools. Statistical design for nationally validated program.

Project Learning Tree, 1976-77, Coevaluator of program for American Forest Institute.

Rainbow Project, 1977-78, Seattle Public Schools, Coevaluator of ethnic and cultural pluralism program.

Trade-Offs, 1978-80 Washington State Council of Economic Education. Test and evaluation design for economic education program.

Individual Progress Program, 1978-81, Seattle Public Schools. Evaluator of nationally validated gifted program.

Expert Witness, 1986-present, provided statistical analyses and testimony in several discrimination cases including major analyses for the Equal Employment Opportunities Commission.

Puget Sound Council of Governments, 1990, Analyze data on transportation survey of Puget Sound area.

Yellowstone Environmental Sciences, 1989-92. Constructed attitude scale and advised on research design for grant to develop and test new child resistant packaging.

Community Transit, 1990-present. Develop sampling plan for federal reporting requirement. Write computer programs to randomly select sample

Yakima Valley Early Head Start evaluation. (1996-1999) Design and analysis specialist.

Sound Transit, 2000 Design sampling plan for Sounder Commuter Rail.

Professional Activities

Reviews of Statistical Texts for:

Holt, Rinehart, & Winston
William C. Brown, Co
Allyn and Bacon
Wadsworth Publishing Co.

Little, Brown, & Co.
Prentice Hall
John Wiley and Sons

Occasional Reviewer for:

Behavioral Assessment
Psychological Reports
Geochimica et Cosmochimica Acta
Journal of Educational Measurement
Journal of Personality and Social Psychology
Perceptual and Motor Skills
American Statistician
Psychological Bulletin
Psychological Methods
Psychometrika
Journal of Management
Sociological Methods and Research

External Examiner

Centre of Behavioural Studies
University of New England
Armidale, NSW, Australia

Ontario Institute for Studies in Education
University of Toronto

Memberships in:

American Educational Research Association
Sigma Xi
American Statistical Association

Editorships

Assistant Editor, Journal of Modern Applied Statistical Methods.

Grant:

Principal Investigator "Factors related to the curricular decision making process of High School seniors: Mathematics coursework." Virginia DeWolf, author. University of Washington Graduate School Research Fund.

Grant Reviewer:

University of Washington Graduate School Research Fund: Behavioral and social sciences. 1989-1994.

Symposium and Paper Presentations

"Personality variables related to selection in a peer rating model." Washington Educational Research Association, Second Annual Conference, 1974, Seattle, WA.

"The concept and measurement of Locus of Control" Washington Educational Research Association, Second Annual Conference, 1974, Seattle, WA.

"A look at the relationship between a variable's definition and the measurement model used to measure it." Washington Educational Research Association, Fourth Annual Conference, 1976, Yakima, WA.

"Cohort analysis as a general method of analyzing standardized test results in the public schools." Washington Educational Research Association, Fourth Annual Conference, May 27-28, 1976, Yakima, WA.

"The dimensions of Locus of Control." Washington Educational Research Association, Seventh Annual Conference, 1979, Seattle, WA.

"Interpretations of key concepts in measurement: Validity and fairness." Session chair. American Educational Research Association Annual Conference, 1980, Boston.

"Factors determining the favorability of responses on labeled rating scales." National Council of Measurement in Education Annual Conference, 1983, Montreal (with Midori Yamagishi)

"A factor-analytic investigation of dysphoria in high school cheerleaders." American Speech and Hearing Association Annual Meeting, 1985. (with S.L. Campbell, Reich, A.R., and McHenry, M.A.)

"Prediction of early school achievement from the Slingerland Screening Tests and cognitive ability." American Educational Research Association Annual Conference, 1986, San Francisco. (with E.D. Evans)

"Assessing the psychometric properties of the Parcel Meyer children's Health Locus of Control Scale." American Educational Research Association Annual Conference, 1986, San Francisco (with J. Hearne).

"Scales for rating a narrow bandwidth of behavioral performance: Impact of scale type and rating domain on validity." National Council on Measurement in Education Annual Conference, 1990, Boston (with G. Hancock)

"Competing strategies for conducting orthogonal comparisons." American Educational Research Association Annual Conference, 1990, Boston. (with G. Hancock)

"Power of recent multiple comparison procedures as applied to a complete set of planned orthogonal contrasts." American Educational Research Association Annual Conference, 1991, Chicago (with G. Hancock).

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"Flat versus weighted and simultaneous versus sequential multiple comparison procedures: A power analysis for the 2x2 factorial design." American Educational Research Association Annual Conference, 1991, Chicago (with G. Hancock and M.J. McAweeney).

"Recall and recognition test formats: A correlational analysis." National Council on Measurement in Education Annual Conference, 1991, Chicago. (with K. Thiede and G. Hancock)

"An F-enhanced stagewise protected procedure for testing a complete set of planned orthogonal contrasts." American Educational Research Association Annual Conference, 1993, Atlanta (with G. Hancock).

"Using finite intersection test methodology to create an improved Scheffe's procedure." American Educational Research Association Annual Conference, 1996, New York (with G. Hancock)

"Using finite intersection tests to improve Shaffer's modified sequentially rejective Bonferroni for all possible pairwise comparisons." American Educational Research Association Annual Conference, 1996, New York (with G. Hancock).

"Relative power of ANCOVA and randomized block designs". American Educational Research Association Annual Conference, 1997, Chicago (with N. Potter).

"Method of block assignment and power." American Educational Research Association Annual Conference, 1997, Chicago (with S. Beretvas)

"Covariance and randomized block: Detecting trait-treatment interactions." American Educational Research Association Annual Conference, 1998, San Diego (with S. Beretvas)

"Effects of mild curvature of ANCOVA and randomized blocks." American Educational Research Association Annual Conference, 1999, Montreal (with N. Potter)

"Dealing with violations of the assumptions for aptitude x treatment interactions in analysis of covariance." American Educational Research Association Annual Conference, 2001, Seattle (with T. Moses)

"Testing for aptitude-treatment interactions in analysis of covariance and randomized block designs under assumption violations" American Educational Research Association Annual Conference, 2005, Montreal (with Tim Moses)

"The effects of sample size, test length, and inclusion criteria on the use of SIBTEST." American Educational Research Association, 2005, Montreal (with Yoonsun Lee).

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"An evaluation of standard, alternative and robust analysis strategies for Aptitude-Treatment Interactions" American Educational Research Association, 2007 Chicago (with Tim Moses).

"Varying the Regression Correction in SIBTEST to Better Remove Impact and Bias" American Educational Research Association, 2007 Chicago (with Shin-Ping Tsai).

Publications:

Edwards, A.L. & Klockars, A.J. (1965) "*Social desirability and the probability of endorsement of items in the Yatabe-Guilford Personality Inventory.*" Psychological Reports, 17, 166.

Moran, G. & Klockars, A.J. (1967) "*Dissonance and performance alteration: Critique and empirical reexamination.*" Journal of Social Psychology, 72, 249-255.

Moran, G. & Klockars, A.J. (1968) "*Favorability of group atmosphere and group dimensionality.*" Psychological Reports, 22, 3-6.

Edwards, A.L. & Klockars, A.J. (1970) *Factor analysis of full scale and balanced scales on the MMPI.* Reported in A.L. Edwards, The Measurement of Personality Traits by Scales and Inventories. New York:

Edwards, A.L., Klockars, A.J., & Abbott, R.D. (1970) *Social desirability and the TSC MMPI scales.* Multivariate Behavioral Research, 5, 153-156.

Edwards, A.L., Abbott, R.D., & Klockars, A.J. (1970) *Social desirability and the TSC MMPI scales: A replication and reply to Stein.* Multivariate Behavioral Research, 5, 325-328.

Edwards, A.L., Abbott, R.D. & Klockars, A.J. (1972) "*A factor analysis of the EPPS and PRF personality inventories.*" Educational and Psychological Measurement, 32, 23-29.

Sax, G., Eilenberg, E., & Klockars, A.J. (1972) "*Achievement as a function of test item complexity and difficulty.*" Journal of Experimental Education, 40, 90-93.

Klockars, A.J. (1972) *Psychometric properties of the I and He formats in personality measurement.* Educational and Psychological Measurement, 32, 997-1001.

Klockars, A.J. & Varnum, S. (1975) "*A test of the dimensionality assumptions of Rotter's Internal-External Scale.*" Journal of Personality Assessment, 39, 397-404.

Klockars, A.J. (1978) "*Personality variables related to peer selection.*" Educational and Psychological Measurement, 38, 513-517.

- Klockars, A.J. (1979) "*Evaluative confounding in the choice of bipolar scales.*" Psychological Reports, 45, 771-775.
- Johnson, H., Klockars, A.J., & Shepard, G. (1980) "*What can be learned from statewide test data?*" Context and Conflict, 8, 10-11.
- Klockars, A.J. & Walkup, H.R. (1980) "*The PRF and peer ratings.*" Educational and Psychological Measurement, 40, 1099-1103.
- Edwards, A.L. & Klockars, A.J. (1981) "*Relationship between perceived evaluations by significant others, actual evaluations by one significant other, and self-evaluations for 53 personality traits.*" Personality and Social Psychology Bulletin, 7, 244-251.
- Klockars, A.J., King, D., & King, L.A. (1981) "*The dimensionality of bipolar rating scales in self-description.*" Applied Psychological Measurement, 5, 219-227.
- King, L.A. & Klockars, A.J. (1982) "*Imposed differences in comparative ratings.*" Journal of Personality and Social Psychology, 42, 631-636.
- Lam, T. & Klockars, A.J. (1982) "*Anchor points effects on the equivalence of questionnaire items.*" Journal of Educational Measurement, 19, 317-322.
- King, L.A., King, D., & Klockars, A.J. (1983) "*Forced choice and multipoint scales using bipolar adjectives.*" Applied Psychological Measurement, 7, 173-180.
- King, D., King, L.A., & Klockars, A.J. (1983) "*Bipolar adjective rating scales for self-description: Reliability and validity data.*" Educational and Psychological Measurement, 43, 879-886.
- Riley, K. & Klockars, A.J. (1984) "*A critical reexamination of the Adolescent Alcohol Involvement Scale.*" Journal of Studies on Alcohol, 45, 184,187.
- Klockars, A.J. & Sax, G. (1986) "*Multiple Comparisons.*" Sage University series on Quantitative Applications in the Social Sciences, 07-061. Beverly Hills: Sage Pubns. 86pp.
- Evans, E.D. & Klockars, A.J. (1987) "*Prediction of early school achievement from the Slingerland Screening Tests and cognitive ability.*" Resources in Education, ED274 686, 25pp.
- Campbell, S.L., Reich, A.R., Klockars, A.J., & McHenry, M.A. (1988) "*Factors associated with dysphonia in high school cheerleaders.*" Journal of Speech and Hearing Disorders, 53, 175-185.
- Hearne, J. & Klockars, A.J. (1988) "*Applicability of the Parcel-Meyer Children's Health Locus of Control Scale.*" Journal of School Health, 58, 16-19.
- Klockars, A. J. & Yamagishi, M. (1988) "*The influence of labels and position on rating scales.*" Journal of Educational Measurement, 25, 85-96.

- Roush, S. & Klockars, A.J. (1988) "*Construct validation of two scales measuring attitudes toward persons with disabilities.*" Journal of Rehabilitation, 54, 25-30.
- Klockars, A. J. & Hancock, G. R. (1990). *Competing strategies for planned orthogonal contrasts*. Seattle, WA: University of Washington, Department of Educational Psychology. (ERIC Document Reproduction Service No. TM 015 101)
- Hancock, G. R. & Klockars, A. J. (1991). "*The effect of scale manipulations on validity: targetting frequency rating scales for anticipated performance levels.*" Applied Ergonomics, 22, 147-154.
- Kortering, L., Haring, N., & Klockars, A.J. (1992) "*The identification of learning disabled high school dropouts: Evaluating the utility of a discriminant function analysis.*" Exceptional Children, 58, 422-435
- Klockars, A. J. & Hancock, G. R. (1992) "*Power of recent sequential Bonferroni procedures as applied to a complete set of planned orthogonal contrasts.*" Psychological Bulletin, 111, 505-510.
- Bragg, R.M., Klockars, A.J., & Berninger, V.W. (1992) "*Comparison of families with and without adolescents with traumatic brain injury.*" Journal of Head Trauma Rehabilitation, 7, 94-108.
- Klockars, A.J. (1992) "*Evaluating pretest-posttest control group experiments.*" Perceptual and Motor Skills, 75, 96-98.
- Klockars, A.J. & Hancock, G.R. (1993) "*Manipulation of evaluative ratings scales to increase validity.*" Psychological Reports, 73, 1059-1066.
- Klockars, A.J., & Hancock, G.R. (1993) *An F-enhanced stagewise protected procedure for testing a complete set of planned orthogonal contrasts*. Seattle, WA: University of Washington, Department of Educational Psychology. (ERIC Document Reproduction Service No. TM019847)
- Klockars, A.J. & Hancock, G.R. (1994) "*Per experiment error rates: The hidden costs of several multiple comparison procedures.*" Educational and Psychological Measurement, 54, 292-298.
- Klockars, A.J., Hancock, G.R. & McAweeney, M.J. (1995) "*Power of unweighted and weighted versions of simultaneous and sequential multiple comparison procedures.*" Psychological Bulletin, 118, 300-307.
- Klockars, A.J. & Hancock, G.R. (1996) "*Power of a statewise intersection protected multiple comparison procedure.*" Communications in Statistics: Simulation and Computation, 25, 953-960.
- Hancock, G.R. & Klockars, A.J. (1996) "*The quest for α : Developments in multiple comparisons procedures in the quarter century since Games (1971).*" Review of Educational Research, 66, 269-306.

- Hancock, G.R. & Klockars, A.J. (1997) "*Finite intersection tests: A paradigm for optimizing simultaneous and sequential inference.*" Journal of Educational and Behavioral Statistics, 22, 291-307.
- McAweeney, M.J. & Klockars, A.J. (1998) "*Maximizing power in skewed distributions: Analysis and assignment*" Psychological Methods, 3(1), 117-122.
- Klockars, A.J. & Hancock, G.R. (1998) "*A more powerful post-hoc multiple comparison procedure in analysis of variance.*" Journal of Educational and Behavioral Statistics, 23(3), 279-289.
- Hearne, J. & Klockars, A.J. (1999) *Fairness issues in Student Exit Performance Assessment*. WA: University of Washington, Department of Educational Psychology. (ERIC Document Reproduction Service No. TM029718)
- Klockars, A.J., Potter, N.S., & Beretvas, S.N. (1999) *Power to detect additive treatment effects with randomized block and analysis of covariance designs.* The Journal of Experimental Education, 67(2), 180-191.
- Klockars, A.J. & Hancock, G.R. (2000) "*Scheffe's more powerful F-protected post-hoc procedure.*" Journal of Educational and Behavioral Statistics, 25(1), 13-19.
- Klockars, A.J. & Beretvas, S.N. (2001) "*Analysis of covariance and randomized block designs with heterogeneous slopes.*" The Journal of Experimental Education, 69, 393-410.
- Klockars, A.J. & Moses, T.P. (2002) "*Type I error rates for rank-based tests of homogeneity of slopes.*" Journal of Modern Applied Statistical Methods, 1(2), 452-460.
- Klockars, A.J. (2003). "*Multiple comparison tests: Their utility in guiding research practice*". Journal of Clinical Child and Adolescent Psychology, 32(4) 613-621.
- Moses, T.P., & Klockars, A.J. (2005) "*Testing for aptitude-treatment interactions in analysis of covariance and randomized block designs under assumption violations*" Journal of Modern Applied Statistical Methods, 4(2), 460-472.
- Moses, T.P., & Klockars, A.J. (in press) "*An evaluation of standard, alternate and robust slope test strategies*" Journal of Modern Applied Statistical Methods.
- Klockars, A.J. & Lee, Y. (in press). "Simulated Type I error rates and power for SIBTEST with and without impact". Journal of Educational Measurement.