

CURRICULUM VITA

DOUGLAS G. BONETT

Education

1974	B.A.	<i>Psychology</i>	California State University, Fresno
1978	M.A.	<i>Applied Statistics</i>	California State University, Long Beach
1980	M.A.	<i>Psychology – Psychometrics</i>	University of California, Los Angeles
1983	Ph.D.	<i>Psychology – Psychometrics with Biostatistics minor</i>	University of California, Los Angeles (Co-advisors: PM Bentler and JA Woodward)

Professional Experience

6/81 – 9/82	<i>Statistician</i>	– Blue Cross of Southern California
9/81 – 9/84	<i>Senior Statistician</i>	– Blue Cross Plans of California
9/84 – 8/86	<i>Assistant Professor</i>	– Department of Psychology, University of Southern California
9/86 – 7/88	<i>Assistant Professor</i>	– Department of Statistics, University of Wyoming
7/88 – 7/93	<i>Associate Professor</i>	– Departments of Statistics and Management, University of Wyoming
6/91 – 9/92	<i>Interim Associate Dean</i>	– College of Business, University of Wyoming
7/93 – 8/98	<i>Professor</i>	– Departments of Statistics and Management, University of Wyoming
8/98 –	<i>Professor</i>	– Departments of Statistics and Psychology, Iowa State University
1/07 – 7/09	<i>Interim Director</i>	– Communication Studies Program, Iowa State University
8/05 – 6/09	<i>Chair</i>	– Department of Psychology, Iowa State University

Awards

Outstanding Dissertation Award in Psychology, UCLA, 1983
Outstanding Teacher Award, Department of Psychology, University of Southern California, 1986
Outstanding Junior Teacher Award, College of Business, University of Wyoming, 1988
Mortar Board Teaching Award, University of Wyoming, 1989
Outstanding Senior Teacher Award, College of Business, University of Wyoming, 1990
J.P. Ellbogen Meritorious Teacher Award, University of Wyoming, 1990
Outstanding Senior Researcher Award, College of Business, University of Wyoming, 1991
Outstanding Service Award, College of Business, University of Wyoming, 1991
Master Teacher, College of Liberal Arts and Sciences, Iowa State University, 2005
Research Excellence Award, College of Liberal Arts and Sciences, Iowa State University, 2007
Excellence in Leadership Award, Department of Psychology, Iowa State University, 2008
ISU Award for Departmental Leadership, Iowa State University, 2009

Professional Affiliations

American Statistical Association
Association for Psychological Science (Fellow)
American Psychological Association
Biometric Society

Publications

- Bentler, PM & Bonett, DG (1980) Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin* 88, 588-606.
- Bonett, DG (1982) On post-hoc blocking. *Educational and Psychological Measurement* 42, 35-39.
- Bonett, DG (1982) A weighted harmonic means analysis for the proportional unbalanced design. *Educational and Psychological Measurement* 42, 401-407.
- Bonett, DG & Bentler, PM (1983) Goodness-of-fit procedures for the evaluation and selection of log-linear models. *Psychological Bulletin* 93, 149-166.
- Bonett, DG, Woodward, JA & Bentler, PM (1985) Some extensions of a linear model for categorical variables. *Biometrics* 41, 745-750.
- Bonett, DG (1985) The negative multinomial logit model. *Communications in Statistics – Theory and Methods* 14, 1713-1717.
- Bonett, DG, Brecht, ML & Woodward, JA (1985) GENLOG II: A general log-linear model program for the personal computer. *Educational and Psychological Measurement* 45, 617-621.
- Bonett, DG (1985) A linear negative multinomial model. *Statistics and Probability Letters* 3, 27-29.
- Bonett, DG, Bentler, PM & Woodward, JA (1985) Minimum chi-square estimation of log-linear model parameters subject to exact and stochastic linear constraints. *Computational Statistics Quarterly* 3, 207-213.
- Bonett, DG, Woodward, JA & Bentler, PM (1986) Closed form estimators of latent cell frequencies. *Biometrical Journal* 28, 719-727.
- Bonett, DG (1986) Mixed estimation in covariance structure models. *Statistics and Probability Letters* 4, 157-159.
- Anglin, MD, Brecht, ML, Woodward, JA & Bonett, DG (1986) An empirical study of maturing out. *International Journal of the Addictions* 21, 233-246.
- Bonett, DG, Smalley, SI & Woodward, JA (1986) A general statistical model for multifactorial inheritance of discontinuous traits. *Biometrical Journal* 28, 985-992.
- Bonett, DG & Woodward, JA (1986) Minimum chi-square estimator and test for incomplete multidimensional contingency tables. *Communications in Statistics – Theory and Methods* 15, 1201-1207.
- Bonett, DG, Woodward, JA & Bentler, PM (1986) A linear model for estimating the size of a closed population. *British Journal of Mathematical and Statistical Psychology* 39, 28-40.
- Bonett, DG, Bentler, PM & Woodward, JA (1986) The asymptotic covariance matrix of the maximum likelihood estimator for conditional Poisson log-linear models. *Biometrical Journal* 28, 759-762.
- Bonett, DG, Woodward, JA & Bentler, PM (1987) Estimating the size of a closed population with inverse multiple recapture sampling. *Biometrics* 43, 985-991.
- Gustavson, AR, Dawson, ME & Bonett, DG (1987) Androstenal, a putative human pheromone, affects male choice behavior. *Journal of Comparative Psychology* 101, 210-212.

Publications (*continued*)

- Bonett, DG & Woodward, JA (1987) Application of the Kronecker product and Wald test in log-linear models. *Computational Statistics Quarterly* 3, 235-243.
- Bonett, DG (1987) New product sales forecasts using a growth curve model. *Journal of Applied Business Research* 3, 119-123.
- Brecht, ML, Anglin, MD, Woodward, JA & Bonett, DG (1987) Conditional factors of maturing out: Personal resources and pre-addiction sociopathy. *International Journal of the Addictions* 22, 55-69.
- Bonett, DG & Woodward, JA (1988) Parameter estimation in the linear multinomial model. *Computational Statistics & Data Analysis* 17, 179-187.
- Bonett, DG (1988) Exact and stochastic nonlinear constrained estimation in the conditional Poisson log-linear model. *Communications in Statistics - Theory and Methods* 17, 3301-3311.
- Mednick, SA, Machone, RA, Huttunen, MO & Bonett, DG (1988) Adult schizophrenia following prenatal exposure to an influenza epidemic. *Archives of General Psychiatry* 45, 189-192.
- Bonett, DG (1988) Estimating the number of defects under imperfect inspection. *Journal of Applied Statistics* 15, 61-65.
- Bonett, DG (1988) Small sample bias and variance of the Lincoln-Petersen and Bailey estimators. *Biometrical Journal* 30, 723-727.
- Bonett, DG, Bentler, PM & Woodward, JA (1989) Asymptotic results for a conditional Poisson log-linear model. *Statistics and Probability Letters* 6, 267-270.
- Bonett, DG & Clute, RC (1989) Audit sampling with nonsampling errors of the first type. *Contemporary Accounting Research* 6, 432-445.
- Bonett, DG (1989) Applications of multiple recapture sampling in market research. *International Journal of Research in Marketing* 6, 259-266.
- Bonett, DG (1989) Pearson chi-square estimator and test for log-linear models with expected cell frequencies subject to linear constraints. *Probability and Statistics Letters* 8, 175-177.
- Evans, MA & Bonett, DG (1989) Maximum likelihood estimation in the negative multinomial log-linear model. *Communications in Statistics - Theory and Methods* 18, 4059-4065.
- Bonett, DG & Woodward, JA (1990) Testing residual normality in the ANOVA model. *Journal of Applied Statistics* 17, 383-387.
- Woodward, JA & Bonett, DG (1991) The analysis of simple effects in factorial designs. *Journal of Applied Statistics* 18, 255-264.
- Wright, TA & Bonett, DG (1991) Growth coping, work satisfaction, and turnover: A longitudinal study. *Journal of Business and Psychology* 6, 133-145.
- Evans, MA & Bonett, DG (1992) Multiple recapture sampling methods without replacement in the last occasion. *Communications in Statistics - Theory and Methods* 21, 2609-2624.

Publications (*continued*)

- Wright, TA & Bonett, DG (1992) The effect of turnover on work satisfaction and mental health: Support for a situational perspective. *Journal of Organizational Behavior* 13, 603-615.
- Bonett, DG & Deckro, RF (1993) A multinomial PERT for information systems analysis and design. *Management & Information* 25, 51-55.
- Wright, TA & Bonett, DG (1993) The role of employee coping and performance in voluntary employee withdrawal: A research refinement and elaboration. *Journal of Management* 19, 147-161.
- Bonett, DG (1993) Sample size determination for p -charts. *Journal of Applied Statistics* 20, 375-379.
- Evans, MA & Bonett, DG (1993) Constrained parameter estimation for the Cook-Jacobson model of visibility bias. *Biometrics* 49, 853-859.
- Bonett, DG & Woodward, JA (1993) Analysis of simple effects in fractional factorial experimental designs of resolution V. *Communications in Statistics - Theory and Methods* 22, 1585-1593.
- Wright, TA, Bonett, DG & Sweeney, DA (1993) Mental health and work performance: Results of a longitudinal field study. *Journal of Occupational and Organizational Psychology* 66, 277-284.
- Bonett, DG & Woolsey, RD (1993) Load distance analysis with variable loads. *Production and Inventory Control Journal* 34, 32-34.
- Evans, MA & Bonett, DG (1994) Bias reduction in multiple recapture estimators of closed population size. *Biometrics* 50, 388-395.
- Evans, MA, Bonett, DG & McDonald, L (1994) A general theory for analyzing capture-recapture data in a closed population. *Biometrics* 50, 396-405.
- Bonett, DG & Woodward, JA (1994) Sequential defect removal sampling. *Management Science* 40, 898-902.
- Bonett, DG & Al-Sundugchi, MS (1994) Approximating sample size requirements for s^2 charts. *Journal of Applied Statistics* 21, 433-437.
- Liu, W-C, Woodward, JA & Bonett, DG (1996) A generalized likelihood ratio test for the Pearson correlation. *Communications in Statistics - Simulation and Computation* 25, 507-520.
- Wright, TA & Bonett, DG (1997) The contribution of burnout to work performance. *Journal of Organizational Behavior* 18, 491-499.
- Wright, TA & Bonett, DG (1997) The role of pleasantness and activation-based well being in performance prediction. *Journal of Occupational Health Psychology* 2, 212-219.
- Woodward, JA, Liu, W-C & Bonett, DG (1997) Shortest two-tailed confidence intervals. *Applied Mathematics and Computation* 84, 65-77.
- Randall, R., Woodward, JA & Bonett, DG (1997) Critical values for the multivariate Wald test. *Communications in Statistics - Computation and Simulation* 26, 1275-1299.

Publications (*continued*)

- Cooper, MG, Bonett, DG & El-Saidi, MA (1998) A general log-linear model of band recovery sampling. *Environmetrics* 9, 377-391.
- Bonett, DG & Wright, TA (2000) Sample size requirements for estimating Pearson, Kendall, and Spearman correlations. *Psychometrika* 65, 23-28.
- Price, RM & Bonett, DG (2000) Estimating a ratio of two Poisson rates. *Computational Statistics & Data Analysis* 34, 345-356.
- Price, RM & Bonett, DG (2001) Estimating the variance of the sample median. *Journal of Statistical Computation and Simulation* 68, 295-305.
- Bonett, DG, Woodward, JA & Randall, R (2002) Estimating p -values for Mardia's measures of multivariate skewness and kurtosis. *Computational Statistics* 17, 117-122.
- Bonett, DG (2002) Sample size requirements for estimating intraclass correlations with desired precision. *Statistics in Medicine* 21, 1331-1335.
- Price, RM & Bonett, DG (2002) Distribution-free confidence intervals for difference and ratio of medians. *Journal of Statistical Computation and Simulation* 72, 119-124.
- Bonett, DG & Seier, E (2002) A test of normality with high uniform power. *Computational Statistics & Data Analysis* 40, 435-445.
- Bonett, DG (2002) A simple approximation to the percentiles of the t distribution. *Computational Statistics* 17, 265-268.
- Bonett, DG & Price, RM (2002) Statistical inference for linear functions of medians: Confidence intervals, hypothesis testing, and sample size requirements. *Psychological Methods* 7, 370-383.
- Bonett, DG (2002) Sample size requirements for testing and estimating coefficient alpha. *Journal of Educational and Behavioral Statistics* 27, 235-240.
- Wright, TA & Bonett, DG (2002) The moderating effect of tenure on the relation between job performance and commitment: A meta-analysis. *Journal of Applied Psychology* 87, 1183-1190.
- Bonett, DG (2003) Sample size requirements for comparing two alpha reliability coefficients. *Applied Psychological Measurement* 27, 72-74.
- Bonett, DG & Seier, E (2003) Statistical inference for a ratio of dispersions using paired-samples. *Journal of Educational and Behavioral Statistics* 28, 21-30.
- Seier, E & Bonett, DG (2003) Two families of kurtosis measures. *Metrika* 58, 59-70.
- Bonett, DG & Seier, E (2003) Confidence intervals for mean absolute deviations. *The American Statistician* 57, 233-236.
- Price, RM & Bonett, DG (2004) Improved confidence interval for a linear function of binomial proportions. *Computational Statistics & Data Analysis* 45, 449-456.

Publications (*continued*)

- Bonett, DG & Price, RM (2005) Inferential methods for the tetrachoric correlation coefficient. *Journal of Educational and Behavioral Statistics* 30, 213-225.
- Bonett, DG (2005) Confidence interval for residual mean absolute deviations in regression models. *Journal of Computational Statistics and Simulation* 75, 673-678.
- Bonett, DG (2005) Robust confidence interval for a residual standard deviation. *Journal of Applied Statistics* 32, 95-100.
- Bonett, DG (2006) Approximate confidence interval for standard deviation of nonnormal distributions. *Computational Statistics & Data Analysis* 50, 775-782.
- Bonett, DG & Seier, E (2006) Confidence interval for a coefficient of dispersion in nonnormal distributions. *Biometrical Journal* 48, 144-148.
- Bonett, DG (2006) Confidence interval for a ratio of variances in bivariate nonnormal distributions. *Journal of Statistical Computation and Simulation* 76, 637-644.
- Bonett, DG (2006) Confidence interval for a coefficient of quartile variation. *Computational Statistics & Data Analysis* 50, 2953-2957.
- Bonett, DG (2006) Robust confidence interval for a ratio of standard deviations. *Applied Psychological Measurement* 30, 432-439.
- Bonett, DG & Price, RM (2006) Confidence intervals for a ratio of binomial proportions based on paired data. *Statistics in Medicine* 25, 3039-3047.
- Bonett, DG (2006) A new algorithm for the tetrachoric correlation. *Journal of Statistical Computation and Simulation* 76, 737-739.
- Bonett, DG & Price RM (2007) Statistical inference for generalized Yule coefficients in 2x2 contingency tables. *Sociological Methods and Research* 35, 429-446.
- Wright, TA & Bonett, DG (2007) Job satisfaction and psychological well-being as non-additive predictors of workplace turnover. *Journal of Management* 33, 141-160.
- Bonett, DG (2007) Transforming odds ratios into correlations for meta-analytic research. *American Psychologist* 62, 254-255.
- Wright, TA, Cropanzano, R & Bonett, DG (2007) The moderating role of employee positive well-being on the relation between job satisfaction and job performance. *Journal of Occupational Health Psychology* 12, 93-104.
- Bonett, DG & Wright, TA (2007) Comments and recommendations regarding the hypothesis testing controversy. *Journal of Organizational Behavior* 28, 647-659. [Invited article]
- Bonett, DG (2008) Confidence intervals for standardized linear contrasts of means. *Psychological Methods* 13, 99-109.
- Bonett, DG (2008) Meta-analytic interval estimation for bivariate correlations. *Psychological Methods* 13, 173-189.

Publications (*continued*)

- Price, RM & Bonett, DG (2008) Confidence intervals for a ratio of two binomial proportions. *Statistics in Medicine* 27, 5497-5508.
- Bonett, DG & Wright, TA (2009) Using confidence intervals in supply chain and operations research. *Journal of Supply Chain Management* 45, 26-33. [Invited article]
- Wright, TA, Cropanzano, R & Bonett, DG, Diamond, WJ (2009) The role of employee psychological well being on cardiovascular health. *Journal of Organizational Behavior* 30, 193-208.
- Bonett, DG (2009) Estimating standardized linear contrasts of means with desired precision. *Psychological Methods* 14, 1-5.
- Bonett, DG (2009) Meta-analytic interval estimation for standardized and unstandardized mean differences. *Psychological Methods* 14, 225-238.

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Work in Progress

- Bonett, DG Meta-analytic interval estimation for alpha reliability coefficients.
- Bonett, DG & Wright, TA Sample size planning for multiple regression analysis.
- Price, RM & Bonett, DG Diagnostic test performance: Confidence intervals for positive and negative predictive values.
- Bonett, DG Confidence interval for a ratio of independent coefficients of variation.
- Bonett, DG Statistical inference for a new measure of point-biserial correlation.
- Bonett, DG Combining multiple regression results from multiple studies.
- Bonett, DG Robust confidence interval for squared multiple correlations.
- Bonett, DG Meta-analytic interval estimation for risk ratio and risk difference. (proposed *NSF* research)
- Bonett, DG Meta-analytic interval estimation for measures of association in 2x2 contingency tables. (proposed *NSF* research)

Funded Research

- A multiple recapture analysis of Wyoming substance-abusers. *Wyoming Department of Health*, PI, 1996 – 2000.
- Using prior kurtosis information to improve confidence intervals for standard deviations. *National Science Foundation*, 2003 – 2004.
- Physiological effects of marital conflict. *National Institute of Health*, Co-PI, 2003 – 2005.
- Improving meta-analysis methods and practice. *National Science Foundation*, PI, 2010 – 2012, pending.

Other Publications

- Smalley, SL, Williams, BJ, Woodward, JA, Bonett, DG, & Ritenbaugh, C (1985) A covariance structure model for quantitative genetic research. In R Chakraborty, & EJE Szathmary (Eds.), *Diseases of Complex Etiology in Small Populations* (pp. 67-96). Liss: New York.
- Woodward, JA, Bonett, DG, & Brecht, ML (1985) Estimating the size of a heroine-abusing population using a multiple recapture census. In *Self Report Methods of Estimating Drug Use: Meeting Current Challenges to Validity*. Ruse, Kozel, and Richards (Eds.) 158-171, National Institute of Drug Abuse Research Monograph 57. US Government Printing Office: Washington, DC.
- Woodward, JA, Bonett, DG & Brecht, ML (1990) *Introduction to Linear Models and Experimental Design*. Harcourt-Brace-Jovanovich: New York.

Teaching Experience

Undergraduate

Research Design and Methodology (ISU)
Introductory Statistics (USC/UW)
Introduction to Statistical Theory (UW)
Computational Statistics (USC/UW)
Experimental Design (USC/UW/ISU)
Regression Analysis (USC/UW)
Psychological Measurement (ISU)
Business Statistics I & II (UW)
Statistical Quality Control (UW)

Graduate

Applied Categorical Data Analysis (USC/UW/ISU)
Statistical Methods (UW/ISU*)
Multivariate Analysis (UW)
Advanced Categorical Data Analysis (UW)
Psychometric Theory (ISU)
Survey Research Methods (ISU)
Advanced Business Research Methods (UW)
Advanced Experimental Design (UW)
* with distance education section

Ph.D. Students

- Evans, MA (1989) *Professor* – Department of Statistics, Washington State University. *Estimation of population size from capture-recapture data using log-linear models.*
- Fox, DR (1989) *Professor* – Department of Civil and Environmental Engineering, Melbourne University. *Statistical calibration: Theory and applications.*
- Morsy, MAF (1990) *Statistician* – Cairo, Egypt. *Multivariate sampling models.*
- Cooper, MG (1992) *Professor* – Department of Management Science, Ferris State University. *A log-linear model for the analysis of band-recovery data.*
- Petrakos, G (1993) *Statistician* – Athens, Greece. *Combining information: Statistical theory and applications.*
- Price, RM (1996) *Associate Professor* – Department of Mathematics, East Tennessee State University. *Estimating a ratio of medians.*
- Seier, E (1998) *Associate Professor* – Department of Mathematics, East Tennessee State University. *A family of skewness and kurtosis measures.*

Student Advising

Directed 7 dissertations (see above) with one in progress, 25 master's theses, and served as statistical advisor on more than 175 thesis and dissertation committees.

University Service (partial list)

University Tenure and Promotion Committee (UW, 1989 – 1991)
University Faculty Development Committee (UW, 1988 – 1991)
University Computer Advisory Committee (UW, 1989 – 1992)
University Teaching Effectiveness Committee (UW, 1990 – 1991)
University Enrollment Planning Committee (UW, 1991 – 1992)
President's Budget and Planning Advisory Committee (ISU, 2006 – 2007)
Provost Review Committee (UW, 1993)
College of Business Course and Curriculum Committee, (UW, 1986 – 1990)
College of Business Reorganization Task Force (UW, 1990 – 1991)
College of Business Tenure and Promotion Committee (UW, 1991 – 1993)
College of Business Student Appeals Committee (UW, 1991 – 1993)
College of Arts and Sciences Tenure and Promotion Committee (UW, 1994 – 1996)
College of Liberal Arts and Sciences Faculty Development Committee (ISU, 2001 – 2003)
College of Liberal Arts and Sciences Learning Outcomes Assessment Committee (ISU, 2003 – 2005)
College of Liberal Arts and Sciences Budget Advisory Group (ISU, 2006 – 2007)
College of Liberal Arts and Sciences Dean Review Committee (ISU, 2008)
Department of Statistics Curriculum Committee (ISU, 2003 –)
Department of Statistics Tenure and Promotion Advisory Committee (ISU, 1999 – 2003)
Department of Psychology Executive Committee (ISU, 2005 – 2009)
Department of Psychology Tenure and Promotion Committee (ISU, 1998 – 2002)
Department of Psychology Committee on Evaluation of Research, Teaching and Service (ISU, 2002 – 2004)

Editorial Responsibilities

Editorial board member for *Psychological Methods* and ad hoc reviewer for numerous statistics, management, and psychology journals

Contact Information

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