

The *Sociological Methodologist*

Newsletter of the Methodology Section, American Sociological Association
Fall 2004

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Contents

Winter Conference Announcement	1
ASA Methodology Section 2005 Leo Goodman Award	2
Brian J. Grimm: Cul-de-sac Scales	2
Ken Bollen and Jane Zavisca: SAMSI Program on Latent Variable Models in the Social Sciences..	5
Call for Papers.....	6
Recent Publications.....	6
Notes from the Editor	7

Winter Conference Announcement

(November 30, 2004)

Conference: The 10th Winter Conference of the [American Sociological Association Methodology Section](#) will be held at the University of North Carolina, Chapel Hill on Friday and Saturday, April 22-23, 2005. As before, this year's meeting will run for a day and a half from Friday morning to Saturday noon, with papers given in a traditional presenter/discussant format. We will have a keynote speech on Friday afternoon followed by a dinner for participants.

Organizers: This year's conference is organized by Guang Guo of the University of North Carolina and Ken Land of Duke University. Three of our colleagues (David Weakliem of University of

Connecticut, Jim Moody of Ohio State University, and Hannah Brueckner of Yale University) have kindly agreed to consider the possibility of hosting the meeting in the spring of 2006. We will keep them informed of the preparation of this current meeting and they will make a final decision at the 2005 ASA annual meeting.

Keynote Speaker: Professor David Freedman will be the keynote speaker. Dr. Freedman received his B.Sc. degree from McGill and his Ph.D. from Princeton. He is professor of statistics at U.C. Berkeley, and a former chairman of the department. He has been Sloan Professor and Miller Professor, and is now a member of the American Academy of Arts and Sciences. He has written several books, including a widely used elementary text, as well as many papers in probability and statistics. He has worked on martingale inequalities, Markov processes, de Finetti's theorem, consistency of Bayes estimates, sampling, the bootstrap, procedures for testing and evaluating models, census adjustment, statistics and the law. In 2003, he received the John J. Carty Award for the Advancement of Science from the National Academy of Sciences. What is particularly interesting to us is that Dr. Freedman has written on and thought about many issues in empirical data analysis:

“On specifying graphical models for causation, and the identification problem.”

“Statistical assumptions as empirical commitments.”

“Salt, blood pressure, and public policy.”

“Census adjustment: Statistical promise or statistical illusion?”

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Registration Fees: None.

Hotel Information: Carolina Inn on UNC campus

Information on Airport and Local Transportation: You fly into the Raleigh-Durham International Airport and the UNC campus is about 20 miles away. The best way is take a taxi to the hotel or the meeting room on campus.

ASA Methodology Section 2005 Leo Goodman Award

The 2005 committee for the Leo Goodman Award is currently accepting nominations. The Leo Goodman Award recognizes contributions to sociological methodology or innovative uses of sociological methodology made by a scholar who is no more than 10 years past Ph.D. To nominate someone for this award, please send a letter or email explaining the significance of the nominee's contributions to the chair of the committee:

Professor Yu Xie; Department of Sociology; 1225 S. University; Ann Arbor, MI 48104-2590; email: yuxi@umich.edu. The deadline for nominations is February 15, 2005.

Cul-de-sac Scales

Brian J. Grim

Turning qualitative data into a meaningful numeric scale is the basic problem of coding. This short article proposes a conceptual scale for discussion and input.

While coding the U.S. State Department's 2003 International Religious Freedom Reports on 196 countries (Grim 2004), I found it useful to code the impetus for a government's regulation of religion along a two-dimensional 'scale', which I call a *cul-de-sac scale*. Specifically, a *cul-de-sac scale* shows the progression to a single outcome along two dimensions. I found cul-de-sac scales especially useful when coding qualitative data, which do not necessarily cover all aspects of a phenomenon equally. In such data there may be a hint of one aspect of a phenomenon while more information is available on the other aspect.¹ Though this may conflate separate phenomena, it does explain seemingly paradoxical routes to the same outcome. For example, a cul-de-sac scale of political conservatism might have the emphasis on 'divine providence' increasing in strength on the odd-numbered side of the street as 'individual responsibility' paradoxically increases on the even-numbered side of the street, with conservatism increasing no matter which side of the street one drives along.²

The socio-political example I would like to discuss in more depth is the *religious regulation paradox*, i.e., governments regulate religion by 'restricting' or 'favoring' religious brands in a country. At present, the U.S. can restrict threatening religious brands with Patriot Act powers. At the same time, other religious brands

¹ This draws on the mathematical concept of fractals and sociological zones of comparison (cf. Abbott 2000).

² Though the numbers are odd and even, mathematically, both sides should probably be numbered equally, but the odd/even numbering may be theoretically useful, as discussed below.

lunch at the White House and may soon be favored through the Faith Initiatives program. Of course, threatening brands will be excluded from such subsidies. Faith Initiatives and Patriot Acts are two different actions, which contribute to a single outcome—religious regulation. Just as a parent saying ‘yes-yes’ (praise) or ‘no-no’ (punishment) regulates the behavior of a toddler, government restrictions and/or favors regulate the behaviors of religious brands.

The tandem powers of praise and punishment have long been recognized in many fields (e.g., Gallwey 1974). One of the few well-established principles of religious regulation is that countries can use the *carrot* of support or the *stick* of restriction to control religion (Bates 1945; Demerath 2001; Finke and Stark 1992). While ‘cul-de-sac scale’ is my term, W. Cole Durham, Jr. (1996) credits George R. Ryskamp (1980) with identifying the loop-like relationship of different religious freedom variables. Ryskamp noticed that religious freedom paradoxically decreased in Spain with either persecution (restriction) or support (subsidy/favoritism) of religion. I propose that cul-de-sac scales can help make sense of the paradox that such praise and punishment share a common aim.

The *Legal/Policy Impetus Cul-de-sac Scale* (Figure 1) captures this paradox. There is one numbering system on the scale (0-6) with odd/even indicating the side of the cul-de-sac the country tends toward. Larger numbers indicate how far into the cul-de-sac the country has traversed. The following examples are from my coding of the 2003 State Department Reports (see Figure 1).

According to the 2003 Reports, the impetus for the religious legal/policy framework in Taiwan and South Korea (both scoring 0) exemplifies the ideal that no religious brand is favored or singled out for regulation. On the favoritism side, Hong Kong (1) subsidizes schools run by various religious brands, but no strict regulations are reported. Belgium subsidizes salaries of various religious teachers from most recognized religions, which would put it at 1 on the favoritism scale, but it also restricts minority religions it considers dangerous sects, which thus puts Belgium at 2. By scoring Belgium at 2, I am suggesting that regulations to prevent a

religious brand from hurting the minds of citizens may be a more intense restriction on religious freedom than 1, where the regulations favor most religious brands. Chile’s subsidy (3) of religious education goes primarily to Catholic instruction. Singapore (4), being physically located at the tip of Malaysia, restricts all brands to assure order within the potentially volatile religious mix of their society. Malaysia (5), on the other hand, provides government funds to directly support the Islamic religious establishment and restricts brands that threaten society’s order. Of course, the situation in Iraq (6) is that religious brands threaten to lead the country into civil war, if they have not done so already. So while Islam is favored, it is also highly restricted.

Empirically, the measurements made with the cul-de-sac scale above are consistent with other measures in my data set, which measure each side of the cul-de-sac independently. The cul-de-sac score significantly and *positively* correlates both with a variable which measures whether the government subsidizes religion in the country (Pearson $r = .490$, $p < .001$, two-tailed) as well as with a variable which measures the number of laws mentioned in the Reports that restrict religious freedom (Pearson $r = .632$, $p < .001$, two-tailed). In addition, factor analysis indicates that a variable for “subsidies for religions” loads (albeit less strongly) upon a common factor with other variables specifically related to legal restrictions on religious freedom (chi-sq/df=1.042; TLI=.999; RMSEA=.015) (see Figure 2).

One advantage of using the cul-de-sac scale in Figure 1 is that it compensates for the fairly common situation in qualitative reports where the data may allude to one side of the cul-de-sac but have more to say about the other side. Other advantages include: *economy of measures*, i.e., coding is more efficient, and *theoretical parsimony*, i.e., religion is regulated by both praise and punishment. Even though it breaks the rule that a scale must only measure one dimension, it has the potential to make sense of seemingly paradoxical paths to the same outcome. The reliability and validity of cul-de-sac scales over time need further research as do the possibility of other measurement applications of this concept. Finally, the odd/even

number scheme versus a 0-1-2-3 scale on each side of the cul-de-sac also needs further investigation.

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http://gunston.doit.gmu.edu/liannacc/ERel/S5-ASREC/S51_REC2004.htm

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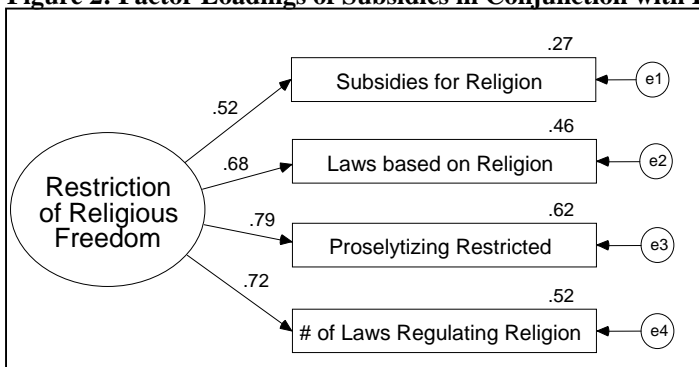
Figure 1: Religious Legal/Policy Impetus (Cul-de-sac Scale)

The religious legal/policy framework primarily responds to concerns _____.

Restriction / Punishment	Taiwan (0)	Low Regulation	S. Korea (0)	Favoritism / Praise
2 = that religious brands threaten the <i>minds</i> of some citizens	Belgium (2)		H.K. (1)	1 = for the needs and aims of <i>most</i> religious brands
4 = that religious brands threaten the <i>order</i> of society	Singapore (4)		Chile (3)	3 = for the needs and aims of the <i>historically established</i> religious brands
6 = that religious brands threaten the <i>legitimacy</i> of the Government	Iraq (6)		Malaysia (5)	5 = for the needs and aims of <i>one</i> religious brand above all others

High Regulation

Figure 2: Factor Loadings of Subsidies in Conjunction with Restriction Measures



SAMSI Program on Latent Variable Models in the Social Sciences

Ken Bollen and Jane Zavisca

The Statistical and Applied Mathematical Sciences Institute (SAMSI) has launched a one-year program on Latent Variable Modeling in the Social Sciences (LVSS) for the 2004-5 academic year.

The LVSS program is chaired by Kenneth Bollen, the H. R. Immerwahr Distinguished Professor of Sociology at the University of North Carolina at Chapel Hill. Other program leaders include James Heckman (University of Chicago), Alan Karr (NISS), and Susan Murphy (University of Michigan). Latent variables are widespread in the social sciences. Whether it is intelligence or socioeconomic status, many variables cannot be directly measured. The program takes a broad look at latent variables and measurement error issues to identify points of convergence and difference between approaches such as factor analysis, latent class analysis, structural equation models, error-in-variable models, and item response theory. The aim is to bridge related work that has developed in separate disciplines such as psychology, sociology, statistics, and biostatistics, and to advance new methods of use across these various disciplines.

A kick-off workshop held in September 2004 brought together a diverse group of scholars from a variety of disciplines and from around the nation and the world. Tutorials on structural equation models and multilevel models provided non-specialists with an introduction to approaches to latent variables common in the social sciences. At a series of panel presentations and plenary sessions, new and senior scholars presented ongoing work and raised questions and problems in latent variable models. A list of participants and copies of presented papers is available at <http://www.samsi.info/200405/socsci/socsci-home.html>. The workshop concluded through the formation of working groups, which will work on a series of problems throughout the year and present findings at a closing workshop in May 2005. Working groups meet regularly at the NISS building in Research Triangle Park, but teleconferencing facilities also enable long-distance

participation. Five working groups with their focuses and leaders are below:

Latent Variable Methods for Categorical Observed Variables: Many categorical variables can be conceived of as imperfect measures of underlying latent variables. The group is currently concentrating on integrating two classes of models useful for categorical variables: James Hardin et al's recent advances in models that correct for measurement error in nonlinear models within the GLM framework, and Ken Bollen's two-stage least squares approach to SEM that avoids the traditional assumption of multivariate normality. *Group Leader:* Ken Bollen, Department of Sociology, UNC Chapel Hill & Odum Institute for Research in Social Science (bollen@unc.edu)

Longitudinal Data Analysis: This group is designed as an introduction for non-specialists to longitudinal modeling approaches. The group began by reviewing linear mixed models, and will move quickly to considering other types of models that incorporate latent variables, such as models for categorical outcomes that change over time, or latent curve models in which time is conceived of as a latent variable. *Group leader:* Lloyd Edwards, Department of Biostatistics, UNC Chapel Hill (edwards@samsi.info)

Multilevel and Structural Equation Modeling: Methodologists working on multilevel models (MLM), used for hierarchical data with a nested structure, have recently begun incorporating latent variables into their models. Likewise, SEM researchers have begun incorporating hierarchical structure into their models. Finally, Bayesian statisticians have long been working on multilevel modeling, but generally without explicit reference to latent variables. This group is exploring the boundaries and convergences between the three approaches. *Group Leader:* Dan Bauer, Department of Psychology, UNC Chapel Hill (mbauer@samsi.info)

Model Uncertainty: Issues in model selection and assessment of model fit are being addressed by both Bayesian and frequentist perspectives. A primary

goal is to encourage social scientists to reconsider traditional model selection approaches, which generally seek out one “best” model, and instead to apply new methods that present both individual effects and entire models in a probabilistic framework that averages across models. This will require development of new techniques that make it easier to restrict the set of models to be averaged to those that are theoretically plausible in a given context. *Group Leader:* David Dunson, Institute of Statistics and Decision Sciences, Duke University (mdunson@stat.duke.edu)

Complex Survey Analysis: This group has divided into two subsections, with overlapping membership. The first section is concentrating on the challenges of complex sampling designs for weighting and estimation of latent variable models. Canadian scholars are particularly well represented in this group, and are putting together a proposal for a special workshop at the Centre de Recherches Mathematiques in Montreal in May 2005, under the auspices of the Canadian National Program on Complex Data Structures. The second section is focusing on use of latent class models for assessing measurement error in survey responses, with the goal of improving questionnaire design. This subgroup has attracted interest from the US Bureau of Labor Statistics and Census Bureau, as well as from disciplinary scholars. *Group leaders:* Chris Skinner (complex sampling), University of Southampton, UK (mcjs@socsci.soton.ac.uk) and Paul Biemer (latent class analysis), Odum Institute for Research in Social Science, UNC Chapel Hill & RTI International (mbiemer@samsi.info)

For more information on how to be a participant in a group, please contact the program leader, or Jane Zavisca, a postdoctoral scholar affiliated with the LVSS program (janez@samsi.info). Further information about the program, including links to conference presentations and working group websites, can be found at: <http://www.samsi.info/200405/socsci/socsci-home.html>.

ABOUT SAMSI: SAMSI is a partnership of Duke University, North Carolina State University, the

University of North Carolina at Chapel Hill, and the National Institute of Statistical Sciences (NISS), in cooperation with the Mathematical Sciences Research Institutes program of the Division of Mathematical Sciences at the National Science Foundation. Each year SAMSI sponsors several initiatives, usually for one year but resulting in longer-term collaborations, whose vision is to forge a new synthesis of the statistical sciences and the applied mathematical sciences with disciplinary science. SAMSI programs bring together faculty, postdoctoral scholars, and graduate students from a variety of disciplines to confront the very hardest and most important data- and model-driven scientific challenges.

Call for Papers

Ross M. Stolzenberg, editor of *Sociological Methodology*, welcomes submissions on all aspects of methodologies in the social sciences. Inquiries should be addressed to rstolzen@uchicago.edu.

Recent Publications

Glenn Firebaugh. 2003. *The New Geography of Global Income Inequality*. Cambridge and London: Harvard University Press. 257 pages.

Sociological Methodology, 2004. Ross M. Stolzenberg, Editor. Published by Basil Blackwell for the American Sociological Association.

Table of Contents

1. *Fundamental Methods for Historical Sociology*

1.1. Philip S. Gorski: The Poverty of Deductivism: A Constructive Realist Model of Sociological Explanation

1.2. Jack A. Goldstone: Discussion: Reasoning about History, Sociologically Jack A. Goldstone

1.3. William H. Sewell, Jr.: Discussion: Scientific Progress in a Non-Theoretical Discipline: History and Constructive Realism

1.4. Philip S. Gorski: Rejoinder: The Varieties of Deductivism: A Brief Rejoinder to Goldstone

2. *Advances in Time and Space Measurement and Analysis*

2.1. New Measures of Age, Period and Cohort Effects

2.1.1. Yang Yang, Wenjiang J. Fu, and Kenneth C. Land: A Methodological Comparison of Age-Period-Cohort Models: The Intrinsic Estimator and Conventional Generalized Linear Models

2.1.2. Herbert L. Smith: Discussion: Cohort Analysis Redux

2.2. Sean F. Reardon and David O'Sullivan: Measures of Spatial Segregation

2.3. Scott M. Lynch and J. Scott Brown: A New Approach to Estimating Life Tables with Covariates and Constructing Interval Estimates of Life Table Quantities

2.4. Jennifer S. Barber, Susan A. Murphy, and Natalya Verbitsky: Adjusting for Time-Varying Confounding in Survival Analysis

2.5. Avinash S. Bhati: Robust Spatial Analysis of Rare Crimes: An Information-Theoretic Approach

3. *New Applications and Methods for Network Analysis*

3.1. Matthew J. Salganik and Douglas D. Heckathorn: Sampling and Estimation in Hidden Populations Using Respondent-Driven Sampling

3.2. Laura M. Koehly, Steven M. Goodreau, and Martina Morris: Exponential Family Models for Sampled and Census Network Data

4. *New Measures of Measurement Quality*

4.1. Thomas A. DiPrete and Markus Gangl: Assessing Bias in the Estimation of Causal Effects: Rosenbaum Bounds on Matching Estimators and Instrumental Variables Estimation with Imperfect Instruments

4.2. Willem E. Saris, Albert Satorra, and Germa Coenders: A New Approach to Evaluating the Quality of Measurements: The Split-Ballot MTMM Design

5. *New Methods for Qualitative Data*

5.1. Kai R. Larsen and David E. Monarchi: A Mathematical Approach to Categorization and Labeling of Qualitative Data: The Latent Categorization Method

The next issue of *Qualitative Methods* (the newsletter of the American Political Science Association Section on Qualitative Methodology) will be devoted to Qualitative Comparative Analysis (QCA) with the lead article on QCA co-authored by Charles Ragin and Benoit Rihoux and comments by James Mahoney, Stanley Lieberson, and Jason Seawright.

Notes from the Editor

This is the first issue of our section newsletter in quite some time. I have copied format from earlier issues I've been able to find, but everything is open to change. I hope *The Sociological Methodologist* will be a forum for section members to let each other know what they're working on, share ideas, insights, tips, and accomplishments. I'm just the facilitator, however, so I welcome feedback and suggestions about format and content.

I anticipate two issues a year (Fall and Spring), but that depends on submissions. This will be an electronic newsletter, e-mailed to section members and (I hope) posted on the methodology section web page: <http://www.asanet.org/sections/method.html>. I thank contributors to this issue, especially Brian J. Grim for his article on "Cul-de-sac Scales" and Ken Bollen and Jane Zavisca for their report on SAMSI. Please note that Brian invites comment, which can be sent to him at Bjg213@psu.edu.

The section newsletter belongs to section members; we decide its fate. I hope you support its continued publication. Submissions to *The Sociological Methodologist* should be sent by mid-April for the spring issue, but are welcome at any time. Please send short articles, news, communications, comments, and suggestions to: L.raffalovich@albany.edu.