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# Mathematical Sociologist

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## Greeting from the Chair!

### By: Jane Sell

Greetings to the section, We have an exciting and vibrant ASA planned. The preliminary program is listed on the website at:

<http://convention2.allacademic.com/one/asa/asa14/index.php?click key=1&obf var=3186731&PHPSESSID=b7b22k60rnkrpabj3l6313ajn5>

We have a great array of section events. While our section day is Tuesday the 19<sup>th</sup>, our reception is early in the ASA meetings: In fact on Saturday (and yes, we did request a different day!) The reception is held in partnership with the sections Rationality and Society and Evolution, Biology & Society. Please plan on attending!

We have two Section sessions: Brent Simpson has organized a section on *Advancements in Mathematical Theory: Group Processes and In-*

*teraction* and Mark Fossett has organized a section on *Advancements in Mathematical Theory: Population Structures and Dynamics*. In what I hope becomes a section tradition, the 2012 Coleman Award Winner, John Skvoretz, will deliver the Coleman Address, and introduce the 2014 Coleman Award Winner, Phil Bonacich in a special session. Immediately after the Coleman Address, we will have our business meeting and the presentation of our other awards (the Graduate Student Paper Award, the Dissertation Award, and the Outstanding Article Award).

I want to thank the council members for their help and advice this year, as well as all the others who agreed to serve on our committees. And I am especially grateful to Matt Brashears for his work on our website and Donna Lancianese and Pam-



### INSIDE THIS ISSUE:

<b>From the Chair</b>	1-2
<b>Freeman Award Announcement</b>	3
<b>Publication Announcement—Michael Evans</b>	3
<b>Mathematical Sociology Sessions at ASA</b>	4-5
<b>Feature Book: <i>Analytic Sociology</i></b>	6
<b>25th Annual Groups Conference</b>	7
<b>Call for Papers and Manuscripts</b>	8-9
<b>Recent Articles in <i>Mathematical Sociology</i></b>	10
<b>Call for Submissions</b>	10
<b>Back Matter</b>	11

Continued on page 2...

## Greetings from the Chair

ela Emanuelson for their editorship for our newsletter. And a really special shout out to Donna who just graduated with her PhD and will be a visiting scholar at the University of Iowa during the next year!

In a recent article to come out in Review of Behavioral Economics, Herbert Gintis and Dirk Helbing present their vision for sociology. The title of the article is "*Homo Socialis: An Analytical Core for Sociological Theory*," and they offer a critique of sociology and suggestions for developing sociology. The critique is that sociology lacks an analytical (and mathematical) core. Gintis and Helbing's suggestions are inter-

esting, creative and somewhat disconcerting. Interesting and creative because they offer some insightful comments, especially related to the functioning of norms (through correlated equilibria concepts). Disconcerting because none of the analytical suggestions originate from sociology. They arise from economics and evolutionary game theory. Granted, the analytical models are ones in which sociologists, many in this section, have used and are using. But, do we, as sociologists, lack a unique analytical core? I would like to see some discussion of this at ASA and then in the next newsletter.

*Continued from page 1*

Please send your thoughts.

**ASA Annual Meeting**  
**Pre-registration deadline is**  
**July 9, 2014**



# Freeman Award Winner

## Congratulations Delia Baldassarri!



One of our members, Delia Baldassarri, was selected as the Freeman award recipient by the International Network for Social Network Analysis. This was announced at INSNA annual conference Sunbelt XXXIV. Here is the link to the award: <http://www.insna.org/freeman.html>

*Submitted by: John Skvoretz*

## [“A Computational Approach to Qualitative Analysis in Large Textual Datasets”](#)

by Michael S. Evans

In this paper I introduce computational techniques to extend qualitative analysis into the study of large textual datasets. I demonstrate these techniques by using probabilistic topic modeling to analyze a broad sample of 14,952 documents published in major American newspapers from 1980 through 2012. I show how computational data mining techniques can identify and evaluate the significance of qualitatively distinct subjects of discussion across a wide range of public discourse. I also show how examining large textual datasets with computational methods can overcome methodological limitations of conventional qualitative methods, such as how to measure the impact of particular cases on broader discourse, how to validate substantive inferences from small samples of textual data, and how to determine if identified cases are part of a consistent temporal pattern.



Evans, Michael S. 2014. “A Computational Approach to Qualitative Analysis in Large Textual Datasets.” PLoS ONE 9(2): e87908.

# Mathematical Sociology Sections at ASA

## Session 1 ~ Mon, August 18, 2:30 to 4:10pm, TBA

### Presentations:

“A Novel Simulation Method for Binary Discrete Exponential Families with Application to Social Networks” ~ Carter T. Butts, University of California-Irvine

“Theoretical Mathematics and Endogenous Social Models” ~ David L. Sallach, University of Chicago

“The Mathematics of Superstars: Two Theories of Cultural Consumption” ~ Charles F. Seguin, University of North Carolina - Chapel Hill

“The Comparison of Networking Strategies for Knowledge Gains” ~ Christina Prell, University of Maryland and Tom A.B. Snijders, University of Oxford

*Organizer: Matthew E. Brashears, Cornell*

## Session 2 ~ Tue, August 19, 8:30 to 10:10am, TBA

“Did You Feel It? Spatial Filtering Techniques for Detection of Local Disaster Events” ~ Sean Fitzhugh and Charles Gibson, University of California - Irvine, and Emma S. Spiro, University of Washington

“Activity-Space Extensions of Residential Segregation Indexes: Sampling and Inference in the Space-Time Aquarium” ~ John R.B. Palmer, University of Barcelona

“The Case for Spatially-Sensitive Data: How Data Structure Affect Spatial Measurement and Substantive Theory” ~ Anjanette Marie Chan Tack, University of Chicago

“Spatial Models of Population Processes” ~ Joseph M. Whitmeyer, University of North Carolina - Charlotte

*Presider: Mark Fossett, Texas A&M*

**Session 3 ~ Tue, August 19, 10:30am to 12:10pm, TBA**

## Presentations:

“Affect, Structure, and Small Groups: A Process Model” ~ Jonathan Howard Morgan, Duke University

“Being Different vs. Being Special: A Simulation Study on the Macro-effects of Alternative Differentiation Mechanisms” ~ Michael Maes, University of Zurich, Andreas Flache, University of Groningen, and James A. Kitts, University of Massachusetts

“Is Greed? An Ecological Analysis of Organization Membership” ~ Yongren Shi, Cornell University, Matthew E. Brashears, Cornell University, and Michael Genkin, Cornell University

“The Impact of Status Differences on Gatekeeping: A Theoretical Bridge” ~ Mamadia Corra, East Carolina University

*Organizer: Brent Simpson, University of South Carolina*

*Presenter: Ashley Lauren Harrell, University of South Carolina*

**Coleman Award Address ~ Tue, August 19, 12:30 to 1:30pm, TBA**

*Presenter: John Skvoretz, University of South Florida*

**Mathematical Sociology Business Meeting ~ Tue, August 19, 1:30 to 2:10pm, TBA**

*Chair: Jane Sell, Texas A&M*

**Joint Reception: Section on Rationality and Society; Section on Evolution, Biology and Society; Section on Mathematical Sociology ~ Sat, August 16, 6:30 to 8:30pm, TBA**



## Featured Book:

# *Analytical Sociology: Actions and Networks*

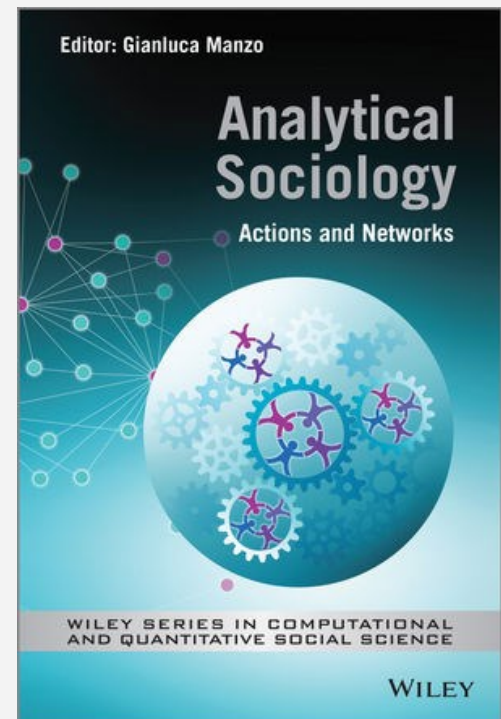
*Edited by Gianluca Manzo*

*Analytical Sociology: Actions and Networks* presents the most advanced theoretical discussion of analytical sociology, along with a unique set of examples on mechanism-based sociology. Leading scholars apply the theoretical principles of analytical sociology to understand how puzzling social and historical phenomena including crime, lynching, witch-hunts, tax behaviours, Web-based social movement and communication, restaurant reputation, job search and careers, social network homophily and instability, cooperation and trust are brought about by complex, multi-layered social mechanisms. The analyses presented in this book rely on a wide range of methods which include qualitative observations, advanced statistical techniques, complex network tools, refined simulation methods and creative experimental protocols. This book ultimately demonstrates that sociology, like any other science, is at its best when it dissects the mechanisms at work by means of rigorous model building and testing.

Advanced graduate students and researchers working in sociology, methodology of social sciences, statistics, social networks analysis and computer simulation will benefit from this book.

*Analytical Sociology:*

- Provides the most complete and up-to-date theoretical treatment of analytical sociology.
- Looks at a wide range of complex social phenomena within a single and unitary theoretical framework.
- Explores a variety of advanced methods to build and test theoretical models.
- Examines how both computational modelling and experiments can be used to study the complex relation between norms, networks and social actions.
- Brings together research from leading global experts in the field in order to present a unique set of examples on mechanism-based sociology.



**26th Annual Group Processes  
Conference at Stanford  
August 15, 2014**

The Group Processes Conference will be held the day before the American Sociological Association's Annual Meeting (August 16th - 19th).

Following the tradition of the conference, we are putting forth our best effort to develop a conference that fosters advances in the scientific study of group processes.

We are happy to announce the full conference schedule for the 2014 Group Processes Conference! Please feel free to check out our [Schedule of Events](#) and register at <http://groupprocesses2014.blogspot.com/p/registration.html>.

With your involvement, we are sure to make the Group Processes Conference a continuing success. Please feel free to bring this website to the attention of colleagues and students who may be interested in attending this year, particularly those who have not participated in previous years.

For those of you planning to attend, please register at your earliest convenience. See you in August!

Organizers

Karen Cook, Stanford University

Shelley Correll, Stanford University

Cecilia Ridgeway, Stanford University

Robb Willer, Stanford University

*The Journal of Applied Mathematics*  
Call for Papers  
Experimental Game Theory and Its Application in  
Sociology and Political Science

We invite authors to submit original research and review articles that seek to study sociological or political phenomena using laboratory or field experiments that are based on game-theoretical benchmarks. *Mathematical rigor will be appreciated.* We especially invite articles providing explicit theoretical backing for the hypotheses to be tested. We also welcome papers that use behavior observed in experiments to modify such benchmarks. Potential topics include, but are not limited to:

- The role of trust and reciprocity within and between social groups
- The origins and evolution of human cooperation
- Explaining solidarity amongst strangers
- Causes and consequences of exploitation and power asymmetries
- The emergence of social networks through strategic network formation
- The stability of social networks when there is a conflict of interests
- Coevolution of networks and behavior in strategic settings
- The effects of information on voter turnout
- Strategic voting in committees
- Strategic lobbying
- Party entry in proportional representation and winner-takes-all elections
- Other applications of experimental game theory in sociology or political science
- Applications of mathematical modeling as an underpinning of experiments in sociology or political science

Timeline:

Manuscript Due: Friday, 5 December 2014

First Round of Reviews: Friday, 27 February 2015

Publication Date: Friday, 24 April 2015

For more information: <http://www.hindawi.com/journals/jam/si/910468/cfp/>



# Call for Manuscripts



An opportunity for you to share your work with the interdisciplinary community through authored or edited books in a major new series published by Springer: *Computational Social Sciences*.

If you're developing a proposal for the series, feel free to get in touch with me to talk about it.

James A. Kitts, Co-Director,  
Computational Social Science Institute

([jkitts@soc.umass.edu](mailto:jkitts@soc.umass.edu))

<http://www.jameskitts.com>

For more information: <http://www.springer.com/series/11784>

## Recent Articles from Volume 38 Issue 3 of *Mathematical Sociology*

**“Dissonance Minimization as a Microfoundation of Social Influence in Models of Opinion Formation”** BY: PATRICK GROEBER, JAN LORENZ & FRANK SCHWEITZER, pages 147-174

**“The Economics of Social Stratification in Premodern Societies”** BY: ROBERT ROWTHORN, RICARDO ANDRÉS GUZMÁN & CARLOS RODRÍGUEZ-SICKERT, pages 175-202

**“The Size of a Political Club”** BY STANISLAV MOLCHANOV & JOSEPH WHITMEYER, pages 203-218

**“Procedurally Rational Volunteers”** BY: ANDREAS TUTIĆ, pages 219-232

### **Please consider contributing to the newsletter! We would welcome submissions on:**

- ◆ “Graduate Students on the Market” - Write a short blurb about yourself (i.e. research and teaching interests, dissertation synopsis, etc) and please include a picture.
- ◆ “Words of Wisdom”- For those seasoned sociologists, if you could go back in time, what would you tell yourself in grad school or in your early career? These pearls would be a fabulous addition to the newsletter.
- ◆ “What are you reading?” - Have you finished a good book? Even if its not an academic text, consider writing a short book review.
- ◆ As always, open submissions are welcome!



Thank you for your timely contributions to the spring/summer Issue of the *Mathematical Sociologist*. Please continue to send us your announcements, articles, book reviews, conference announcements, etc. The more you are involved with the newsletter, the better it will be.

Please feel free to send us your comments, concerns, corrections, or any ideas you have for the newsletter.

Have a great summer and watch your email for future newsletter editor requests.

Newsletter Co-Editors

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## Mission Statement of the Mathematical Sociology Section

The purpose of the Mathematical Sociology Section of the American Sociological Association is to encourage, enhance and foster research, teaching and other professional activities in mathematical sociology, for the development of sociology and the benefit of society, through organized meetings, conferences, newsletters, publications, awards and other means deemed appropriate by the Section Council. The Section seeks to promote communication, collaboration and consultation among scholars in sociology in general, mathematical sociology and allied scientific disciplines.

*Archimedes* Quoted in D MacHale

There are things which seem incredible to most men who have not studied mathematics.