The Mathematical Sociologist

Newsletter of the Mathematical Sociology Section of the American Sociological Association

Fall 2003

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From the Newsletter Editor
Barbara Meeker, University of Maryland

This is the second issue for 2003, and contains information about the 2003 ASA meetings, notices about activities coming in 2004, commentary by Gene Johnsen about curriculum, and announcements of new publications. Chair David Heise has provided an excellent and very useful history of the Section. I might add just a bit about the history of the newsletter. There was a Newsletter for the years 1996 and 1997, during the time we were a Section-in-formation and a new Section (one issue each year), edited by Phil Bonacich. I took over for a two year term, producing three issues for 1998-99 and 1999-2000. During Kathleen Carley's term as Chair we moved to electronic distribution of the newsletter. The years 2000-01 and 2001-02 have a gap, with no newsletter. I am doing it again, with one issue for 2002-2003 and (I hope) 2 issues for 2003-04. Any ideas about giving these volume and issue numbers? □

Chair's Comments:
David Heise, Indiana University

This year the Section's website will move to the American Sociological Association server to facilitate its maintenance by future webmasters. The new website will import the substantial core of web pages created by Phillip Bonacich and Sampsa Samila for the Section's current website, at http://www.sscnet.ucla.edu/soc/groups/mathsoc/mathsoc.htm . Jun Kobayashi—the webmaster this year, is in charge of moving the site, bringing it up to date, and filling in holes.

I've been working on some related matters. First, the current website has a page titled "What is mathematical sociology?" However, the text on that page consists of just one sentence, "We do not have a good definition yet." I hope we can get that problem fixed this year. Second, some other ASA sections are archiving key parts of their history by maintaining web pages listing past officers and award winners. I want our section to emulate that good idea. Third, I've written a statement on why sociologists should join our section, and some variation of this statement might be useful to have on the website.

I'm presenting the work I've done in this newsletter in order to turn all these projects into collaborative efforts. I invite you to correct my texts, expand them, revise them, rewrite them—anything but jettison them.

What Is Mathematical Sociology?

Having taken this question as a self-imposed essay assignment, my most important preparatory source was Christofer Edling's, "Mathematics in sociology," *Annual Review of Sociology*, 28 (2002):197-220. Edling's contemporary view of our field offers a delineation of sociological topics incorporating mathematics that is wide-ranging even if not exhaustive. (Hey! Where is mention of affect control theory as a purposive actor model that minimizes meaning disruption rather than maximizing utilities?) Most important, Edling quotes extemporaneous remarks of some mathematical sociologists whom he interviewed, and their spontaneous statements (along with a quote from Herbert Simon) are particularly insightful in identifying the essence of our sub-discipline. The text below uses words and phrases from the Edling article, especially from the interview quotes.

> Mathematical sociology is sociology beyond words. Sociologists deal with subtle nuances of social relations multiplied throughout large populations, and the phenomena ultimately get too complex to be handled verbally. That is when sociology has to become mathematical sociology. Understandings we want to have about social life cannot be achieved without employing non-verbal symbol systems that allow clear and rigorous reasoning in the face of titanic complexity. The essence of mathematical sociology is transcending verbalizations in order to achieve coherent formulations regarding sociological topics

Mathematical representations relinquish some intuitions that are implicit in words—we can say more about society than we can represent in any particular symbol formulation. Since dealing with sociological complexity is the justification for mathematical sociology, it is ironic that a sociologist potentially could lose contact with sociological subtleties by resorting to abstract symbols. Thus, the central challenges in this field are to incorporate crucial sociological intuitions into one's model, use the model for clear and rigorous reasoning, and apply the model to sort out social myriads.

What kind of mathematics characterizes mathematical sociology? Graph theory was developed partly in the service of sociology, and it is hard to imagine a symbolic representation of multiple actors or multiple actions that does not employ matrix algebra. However, important works in mathematical sociology employ diverse other mathematical systems, such as abstract algebras, differential calculus, symbolic logics, game theory, Markov chains, etc. Also, computer programming has become an important way to symbolize social matters, with deduction of social implications through computer simulations. Thus, no particular form of symbolization stands as the hallmark of mathematical sociology.

Nor is any substantive area of sociology characteristic. Network analysis arguably is the area of greatest achievement for mathematical sociologists, but important contributions have been made in other areas, too, including organizational research, stratification theory, social institutions, interpersonal influence, decision theory, collective behavior, sociology of emotions, and narrative analysis.

I like this statement as I send it off to newsletter editor Barbara Meeker, but I am willing to see it changed a lot or even replaced. Send your notions of how it should read to Barbara for publication in the next newsletter. (Lacking any suggestions, the above will go up on the website, and it probably will be there a long time by virtue of social inertia.)

History, Past Officers, Award Winners

A section history with lists of section officers and award winners can help new members of the section appreciate their roots and recognize section stars. Such an archive also can help nomination committees identify viable new candidates for section offices and awards.

I sought help from others in compiling the accompanying charts—most notably John Skvoretz, Eugene Johnsen, and Barbara Meeker. Gene provided all of the text concerning formation of the section. I also filled in some cells of the charts by reading past newsletters. Still, I'm uncertain about the accuracy of some cells, and I invite you to send me your corrections (heise@indiana.edu).

Section Formation, 1994-6

The first formal activity leading to the Mathematical Sociology Section occurred at a Professional Workshop instigated and chaired by John Angle at the 1994 American Sociological Association annual meeting in Los Angeles. After this workshop revealed genuine interest in creating a section, Eugene Johnsen, with the assistance of a Steering Committee, produced a Mission Statement for a Mathematical Sociology Section and, later, the By-Laws. The Steering Committee consisted of most of those involved in the 1994 Workshop: John Angle, Stephen Berkowitz, Phillip Bonacich, Scott Feld, Sharlene Hesse-Biber, James Hollander, Guillermina Jasso, Eugene Johnsen, Joel Levine, Timothy Liao, David McFarland, Alton Okinaka, John Skvoretz, and Geoffrey Tootell.

A determined effort was made in the early years to bring the group's interests to the attention of sociologists in general and to display vital activities to the ASA. Eugene Johnsen organized and chaired a Professional Workshop on "The Practice of Mathematical Sociology" at the 1995 ASA Meeting in Washington D.C., with five invited speakers presenting papers. For the 1996 ASA Annual Meeting in New York the section-in-formation proposed and received ASA approval for a Didactic Seminar by Stanley Wasserman on social network analysis. At the 1997 ASA Meeting in Toronto, Phillip Bonacich presented a Didactic Seminar, sponsored by the recently formed Mathematical Sociology Section.

Mathematical Sociology Section Officials

	Officers		Council Members	Student Members of Council
	Chair	Secretary-Treasurer		
1996-7	Eugene Johnsen	John Skvoretz	Joseph Berger, Thomas Fararo, Katherine Faust, Noah Friedkin, Barbara Meeker, Harrison White	Paul Munroe
1997-8	Phillip Bonacich	John Skvoretz		
1998-9	Thomas Fararo	John Skvoretz	Ron Breiger, Patrick Doreian, Scott Feld, David Willer, Kazuo Yamaguchi	James Moody
1999-2000	Kathleen Carley	Joseph Whitmeyer	Douglas Heckathorn, Michael Macy	Carter Butts
2000-1	John Skvoretz	Joseph Whitmeyer		
2001-2	Patrick Doreian	Joseph Whitmeyer	Diane Felmlee, Murray Webster	
2002-3	Noah Friedkin	Lisa Troyer	James Montgomery, James Moody	
2003-4	David Heise	Lisa Troyer	Robert Hanneman, Noah Mark	Ju-Sung Lee
2004-5	Kenneth Land	Lisa Troyer		

Mathematical Sociology Section Awards

	Distinguished Career	Outstanding Book	Outstanding Article Publication	Outstanding Graduate Student Paper
1998-9		Noah Friedkin		Carter Butts
1999-2000				
2000-1			Philip Bonacich	Vincent Buskens
2001-2	Harrison White	--	Andrew Noymer	Andrew Noymer
2002-3	--	Not awarded	Lásló Pólos and Michael Hannan	Kirby Schroeder and Fabio Rojas
2003-4	--	--	--	--

Why join the Mathematical Sociology Section?

Sociologists joining the Mathematical Sociology Section open up their career options with an expanded reward structure. They gain opportunities to present papers in Section-sponsored sessions at the ASA meetings, at mini-conventions with other sections (like Rationality and Society), and at Section-sponsored international conferences (like the ongoing series with Japanese sociologists). Members of the Section also gain opportunities to attain the appointive offices of newsletter editor and webmaster, and the elective offices of Council member, Secretary-Treasurer, and Chair. Serving in these positions within the Section not only provides a means for benefiting the discipline, it also gives promotion and tenure committees impressive evidence of one's professional service at the national level. The Section gives awards for outstanding article-length publications—separately to graduate students and to employed sociologists—and the Section gives another award for an outstanding book publication. Senior sociologists may be recognized by the Section's Distinguished Career Award. From the collective standpoint, all these awards identify exemplars defining what mathematical sociology is supposed to be. From the individual standpoint, reception of any such award becomes an important career milestone, possibly launching one into better professional positions.

A rich reward structure like that in the Mathematical Sociology Section has its pragmatic—maybe even mercenary—aspects, but it is a foundation for idealism as well. If you respect the rigor, the beauty, and the potential contributions of sociological work conducted via non-verbal symbol systems, then you should support the Section and the reward structure that it provides. That is the way to recruit, socialize, and retain generations of sociologists who do mathematical sociology—a sub-discipline that embraces not just theoretical modeling, but also quantitative research, rigorously logical studies, and specialized computer analyses. □

Section activities at ASA annual meetings, 2003

Section on Mathematical Sociology Paper Session.
Saturday, 8/16/2003 from 4:30 p.m. - 6:10 p.m.
Organizer and Presider Noah E. Friedkin - University of California, Santa Barbara
1. Yoosik Youm - University of Illinois, Chicago
Network Approaches to the Division of Household Labor: Autonomy and Cohesion
2. James Fisher Hollander - Texas Instruments Incorporated
Linking Status Characteristics Theory with Social Influence Network Theory: Where the Weights Come From
3...Phillip Bonacich and Paulette Lloyd University of California, Los Angeles
Calculating Status with Negative Relations
4. Geoffrey H. Tootell - San Jose State University Paul Thomas Munroe - Towson State University
Normalizing Square Real Matrices to Model Approximate Solutions: Safe and Unsafe Perturbations of Matrices
5.Ju-Sung Lee - Carnegie Mellon University
Examining Centrality and Aggregation Issues of Cognitive Social Structures

Pictures from ASA, Atlanta, August 2003 business meeting:

Section chair Noah Friedkin

Chair-Elect (now Chair) David Heise

And, at the Reception

Minutes of the 2003 Business Meeting of the Mathematical Sociology Section (37)

August 16, 2003
(Prepared by Lisa Troyer)

Thirty-one members of the Mathematical Sociology Section attended the Business Meeting.

1. Election Results

Section Chair Noah Friedkin announced the results of the Mathematical Sociology Chair and Council Elections. Kenneth C. Land is the Chair-Elect; James Montgomery and James Moody are the new Council Members; Ju-Sung Lee is the new Student Council Member.

2. Section Awards

Noah Friedkin announced the winners of the Mathematical Sociology Section Awards:

Outstanding Article Publication: Lásló Pólos and Michael T. Hannan for their publication in *Sociological Methodology*, "Reasoning with Partial Knowledge" (volume 32(1), pp. 133-189).

Graduate Student Paper Award: Kirby D. Schroeder and Fabio G. Rojas for their paper, "A Game Theoretical Analysis of Sexually Transmitted Disease Epidemics."

No award was given for Outstanding Book Publication. The Outstanding Book Publication Committee noted that it received nominations from presses, but the books lacked adequate sociological and/or mathematical content to be considered. The Committee suggested that in the future, the call for nominations for this award specify that nominations should come from American Sociological Association members. This specification will be included in future announcements calling for nominees for the award that are placed in the Section newsletter and in *Footnotes*.

3. Communications

Barbara Meeker agreed to continue as the editor of the Section's newsletter. Noah Friedkin noted that the Section's Web site needed updating and suggested that it be moved from the UCLA server to the American Sociological Association's (ASA's) server. Locating the site on the ASA server will help ensure that the site remains up and will also facilitate updating. Jun Kobayashi agreed to assume the role of webmaster for the Section and will work with ASA

4. **Third Joint Conference on Mathematical Sociology**

The 2005 Joint Conference on Mathematical Sociology, co-sponsored by the Mathematical Sociology Section of the ASA and the Japanese Association for Mathematical Sociology is scheduled to be held at **Hokkaido University in Sapporo, Japan, June 24-26, 2005**. This reflects a rescheduling from 2004 due to difficulties imposed on the planning process by the SARS epidemic. The U.S. organizers are Noah Friedkin and Herm Smith. The Japan organizer is Toshio Yamagishi. Section members should look for announcements regarding the conference on the Section listserv and in the newsletter.

5. Bylaw Amendment on Award's Policy

Noah Friedkin noted that the Section's four awards (Graduate Student Paper Award, Outstanding Article Publication Award, Outstanding Book Publication Award, and Distinguished Career Award) had not been formalized in the Section bylaws. He noted that in 1999 Tom Fararo had drafted a policy for the awards with the recommendation that it be formalized in the Section bylaws after a few years (see attached "Awards Policy of the Mathematical Sociology Section"). Friedkin noted that the policy seemed to be working well and suggested that the following changes be made and that the policy should be forwarded to the membership for a vote as a proposed amendment to the bylaws:

a. The Section does not have adequate funds to provide travel support for the graduate student winner of the Graduate Student Paper Award. Thus, the policy for this award would be revised to strike reference to travel funds.

b. Nominees for the Outstanding Book Award would be considered in odd years. Authors of books published in the four years leading up to and including the award year would be eligible for this award.

c. The Outstanding Book Award would be re-named the "Harrison White Outstanding Book Award."

d. Nominees for the Distinguished Career Award would be considered in even years.

e. The Distinguished Career Award would be re-named the "James S. Coleman Distinguished Career Award"

f. No changes would be made to the Outstanding Article Publication Award.

g. Point (a) of policy would be stricken, as it is no longer relevant.

The membership at the business meeting unanimously voted in favor of the above changes. David Heise will draft an amendment to the Section bylaws reflecting these changes to the current policy and submit it for a membership vote.

6. Budget Report

Lisa Troyer's budget report was presented to the membership. In the report, she noted that she was unable to track the source of expenditures for $2,292 in the category "Other Meeting Expenses." Noah Friedkin and Eugene Johnson clarified that this line item involved the Joint Conference in Mathematical Sociology in Vancouver, BC held in 2002 (co-sponsored by the Mathematical Section of the American Sociology Association and the Japanese Association for Mathematical Sociology). Registration fees for the Joint Conference in Vancouver were deposited into the Mathematical Sociology Section's account earlier, and the expenditure reflected their withdrawal. Thus, there are not additional meeting expenses that the membership should anticipate.

7. Membership Report

Lisa Troyer's membership report was presented. In the report, she noted a decline in the membership, continuing a trend since 1999. Noah Friedkin indicated that the Section is quite vital in terms of several indicators that the ASA considers: attendance at business meetings, publication of a section newsletter, organization of external conferences (like the Joint Conference). Consequently, the Section is not in danger with its membership at the level of 158 members (as of 7/29/2003). The Section receives an allocation of $2 per member at this level and one session per ASA meeting

(unless the Section Day is the last day of the ASA meeting, in which case it receives an additional session). Friedkin also suggested that members of the Section could also propose an open ASA session related to mathematical sociology and mathematical analyses of social phenomena. Open session organizers can also request additional sessions, if they receive a large number of outstanding submissions, unlike section sessions, which are limited by the size of the membership. It was also suggested that the Section partner with the Rationality and Society Section to perhaps co-organize an open session. Although the Mathematical Section's membership is vital, the Council did decide to appoint Bob Shelly as the Membership Chair in order to ensure that recruitment remained steady and to investigate additional ways to preserve the vitality of the membership.

8. Mini-Conference with Rationality and Society

Noah Friedkin is taking the lead on pursuing the possibility of a mini-conference with Rationality and Society around the time of the Annual ASA Meeting in the future. The mini-conference might be organized along the same lines as the Group Processes Conference (which usually precedes or follows the Annual ASA Meeting by one day, depending on the Social Psychology Section Day), but not conflict with it. The joint mini-conference would showcase work in overlapping areas of interest across the memberships of the two sections. It was noted that this kind of activity contributes to both sections' vitality.

9. New Chair

David Heise was welcomed as the new Chair of the Mathematical Sociology Section. □

AWARDS POLICY OF THE MATHEMATICAL SOCIOLOGY SECTION
Revised, August, 1999

The types of awards

- **Graduate Student Paper Award**. Each year, the section will form a Committee for Outstanding Graduate Student Paper in Mathematical Sociology. The awardee will be provided with sufficient funds by the section to cover roundtrip transportation to the meeting at which the award is conferred.

A call for nominations will be placed in the section's newsletter and in the ASA Footnotes. Eligible papers must have been written while the author was still a graduate student and over the past three years. Papers can be published or unpublished. A dissertation chapter, but not the entire dissertation, is eligible, as is a paper based on the dissertation.

- **Outstanding Article Publication Award**. Each year, the section will form a Committee for Outstanding Article Publication in Mathematical Sociology.

A call for nominations will be placed in the section's newsletter and in the ASA Footnotes. Eligible articles must have been published over the past three years.

- **Alternating Outstanding Book Publication Award and Distinguished Career Award**. In alternating years, the Section will form a committee that, depending upon the year, will decide upon an award for outstanding book publication or a distinguished career in mathematical sociology.

A call for nominations will be placed in the section's newsletter and in the ASA Footnotes.

Size and formation of the award committees

Each committee will have five members. After consultation with and advice from the Council, the various award committees will be formed by the section chair, who also will appoint the chair of each such committee.

Additional considerations

(a) At Council meetings in the next few years, the awards situation will be assessed with a view to affirming this policy or further revising it.

(b) The award committees are urged to come to a decision that excludes a tie. However, if this is not possible, then at most two authors may share a given award in a given year.

(c) The designation "Honorable Mention" may be used in the case of a stronger contender who is not given the award. At most one such mention may be made in a given category of award, except for the Distinguished Career Award, where it may not be used. The names of any such honorably mentioned individuals will be printed in the section's newsletter when awards are announced therein.

(d) The committees have the right to decide no submission or nomination merits an award in a given year. This may reflect a quality judgment, but it also may reflect a desire to see greater competition for any given type of award. However, the general policy of the section is that committees should actively encourage nominations in sufficient number to enable an award on merit to be given each year for each category of award.

(e) Since in 1999 an award was given for an outstanding book, the first Distinguished Career Award will be made in 2000. □

Nominations needed for 2004 Awards and Officers

Please send your nominations to the following committee chairs!

Distinguished Career Award: The Distinguished Career Award recognizes a lifetime of contributions to the field of Mathematical Sociology. The last award was given to Harrison White in 2002. A letter of nomination should outline the candidate's activities of lasting significance in mathematical sociology, conducted over the course of her or his career. The nomination also should include a copy of the candidate's curriculum vitae, and an assurance that the candidate has given permission to be nominated for the award. Please submit nominations by **March 1, 2004, to Diane Felmlee** (dhfelmlee@ucdavis.edu), Department of Sociology, University of California - Davis, One Shields Avenue, Davis CA 95616.

Outstanding Article Publication Award: This award is given for an outstanding article published in mathematical sociology in the past three calendar years (2001-2003). The award will be shared equally if the publication has more than one author. A formal nomination, five copies of the nominated article, and contact information for the author(s) must be sent to the committee Chair by **March 1, 2004. The committee chair is Murray Webster** (mawebste@email.uncc.edu), Department of Sociology, University

of North Caroline - Charlotte, 9201 University City Blvd., Charlotte NC 28223.

Graduate Student Paper Award: The award is for the best paper written or published during the past three calendar years (2001-2003). Papers can be published or unpublished. A dissertation chapter, but not the entire dissertation, is eligible, as is a paper based on the dissertation. All authors of a nominated paper must have been graduate students at the time the paper was written. An award for a multiply authored paper will be shared equally by the authors. Self-nominations are acceptable. A nomination consists of a cover letter in which the nominator gives a detailed justification for granting the award to the nominated paper, plus five copies of the paper and an associated abstract, and contact information (name, address, telephone number, email address) for the author(s). The deadline for nominations is **March 1, 2004. Please send nominations to: Robert Hannenman** (robert.hannenman@ucr.edu), Department of Sociology, University of California - Riverside, Riverside CA 92521.

MathSoc Section Committees 2004.

Nominations Committee:
Chair: Noah Friedkin
All council members are members of this committee.
Distinguished Career Award:
Chair: Diane Felmlee
James Moody
Noah Mark
Two non-Council members selected by Diane Felmlee
Outstanding Article Publication Award:
Chair: Murray Webster Jr.
James Montgomery
Ju-Sung Lee
John Skvoretz
Graduate Student Paper Award:
Chair: Bob Hanneman
Ken Land
Lisa Troyer
Two non-Council member selected by Bob Hanneman
Program Committee:
Chair: David Heise
All council members are members of this committee.

James F. Hollander has agreed to organize and preside over the Section's ASA-allotted session at the 2004 meetings, accepting papers relating to any topic in mathematical sociology. □

From Robert Shelly, Chair, Membership Committee:

It is time once again to renew your membership in the American Sociological Association. As you do this, please remember to renew your section membership as well. We are small in numbers and need to grow to show that we are a viable section. Presently, we have fewer than 200 members and would like to reach this plateau this year. One feature of our section that is of concern is that we have very few student members. Many other sections have the majority of their numbers in the student category. We can do better if we simply encourage our students to join. Offer to pay their section dues. It is inexpensive. Do remember to renew your own section membership, encourage colleagues to join the section, and convince your students this is an important part of the future for them. □

Commentary

"Is Sociology ready for a Scientific Bachelor of Science Degree?" by *Eugene Johnsen*, University of California, Santa Barbara

Some of you have heard me hold forth on this topic, with what seemed to me to be varying degrees of skepticism and interest. I would now like to put it forward for open discussion as I believe the time is ripe (perhaps even overripe) to do so.

Sociology seems to be showing increasing symptoms of becoming a regular science. As this is my impression, it must be qualified to say that it refers to advancements with which I am familiar. Over recent years I have become increasingly attuned to the sociological enterprise and have picked up on the widely acknowledged fact that, for the most part, undergraduates who eventually become sociology majors (and then sociology graduate students) are not initially attracted to the field by the time they are freshmen (or even sophomores) as is typical in the natural sciences. In quizzing some of you about this I have gotten a sense of why this is so, but not of why this must be so.

I believe that the undergraduate training of scientific sociologists should be enhanced. If typical sociology majors finally decide on the major only in their junior or senior year, then this is too late to efficiently train them as scientists, particularly as future graduate students in the field. To avoid upsetting the more traditional sociology curriculum and the more traditional faculty who teach it, it seems appropriate to propose adding a new track of study, the Bachelor of Science degree, to a department's already existing B.A. degree program.

In this light, I have looked into the status and revalence of B.S. programs in U.S. sociology departments. The situation, as I see it, is curious. Much to my surprise (since no sociologist with whom I have had discussions on this had mentioned it to me) there are many sociology departments throughout the U.S. that have B.S. degree programs in sociology. They are a mixture which varies from well known departments at well known research institutions to less well known departments at less well known universities and colleges. Except for a very few, they generally do not have a serious requirement in the natural and mathematical sciences as part of their B.S. programs over and above that for their B.A. programs, and the very few that do have only a modest requirement in college level science and mathematics. The sociology major which seems most often to justify the B.S. designation is one which has an applied flavor, such as counseling, criminal justice, demography, gerontology, public administration and social work. It appears that in the large majority of B.S. programs the curriculum is just a minor tweaking of the B.A. program. For those curious about this I suggest googling "B.S. in sociology" on the Internet.

My belief is that we need a stronger science component in the B.S. program in sociology. Let me exhibit a curriculum which I believe will be appropriate for a scientifically oriented B.S. degree in sociology. Admittedly, this is a rather rigorous program, but to start I think we need to set the bar high. Note that this assumes the student has had adequate precollege preparation in algebra, real functions and analytic geometry.

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Proposed Model for the B.S. Degree in Sociology (Semester System)

Note: General Education courses are not mentioned here and would be taken under the category of "Electives". The total baccalaureate program is thus filled out with an appropriate distribution across General Education areas.

Required courses:

	No. of Courses	Semester Units
A. Mathematics:		
Differential Calculus (1)	1	4
Integral Calculus (1)	1	4
Matrix Theory (Linear Algebra) (1)	1	4
optional:		

Ordinary & Partial Differential Equations -	[1]	[4]
Discrete/Finite Mathematics	[1]	[4]
B. Probability & Statistics: (preferably based on calculus)		
Probability (Prob & Prob Distributions, etc.)	1	4
Statistics (Stats & Stat Tests)	1	4
C. Computational Methods:		
Computational Algorithms, Statistical Computation & Packages (e.g., SAS, SPSS, Gauss, MatLab)	1	4
D. Related Fields (intro or upper division courses):		
Biology (e.g., neurobiology)		
Psychology (e.g., cognitive psychology)		
Anthropology (e.g., ethnography, early societies)		
Communication (e.g., mass persuasion)		
Economics (e.g., markets, micro-behavior)		
Political Science (e.g., voting, macroinstitutions)		
Geography (e.g., spatial analysis)		
subtotal	3	12
E. Sociology Major Courses: (>= 8 courses; >= 32 units)		
Theory (2)		
Cultural Studies (1-2)		
Social Statistics (1-2)		
Research Methods (1-2)		
Social Network Analysis (2)		
Social Psychology (1)		
Organizational Analysis (intra- & inter-) (2)		
Criminal Justice (1) (if available)		
Demography (1) (if available)		
Public Administration (1-2) (if available)		
Social Work (1-2) (if available)		
optional: Senior Project (1-2) (if available)		
subtotal	>= 8	>= 32

Example B.S. Program (4 years)

Year 1	Fall Semester:	No. units	Spring Semester:	No. units	
	Differential Calculus	4	Integral Calculus	4	
	Intro Sociology 1	4	Intro Sociology 2	4	
	Elective	3-4	Elective	3-4	
	Elective	3-4	Elective	3-4	
	Subtotal	14-16	subtotal	14-16	
Year 2	Fall Semester:	No. units	Spring Semester:	No. units	
	Probability	4	Statistics	4	
	Intro Soc Psych	4	Intro Psych	4	
	Intro Pol Sci	4	Intro Econ	4	
	Elective	3-4	Elective	3-4	
	subtotal	15-16	subtotal	15-16	
Year 3	Fall Semester:	No. units	Spring Semester:	No. units	
	Matrix Theory	4	Comp Methods	4	
	Soc Theory 1	4	Soc Theory 2	4	
	Social Statistics	4	Research Methods	4	
	Elective	3-4	Elective	3-4	
	subtotal	15-16	subtotal	15-16	
Year 4	Fall Semester	No. units	Spring Semester	No. units	
	Soc Network Anal 1	4	Soc Network Anal 2	4	
	Intra-Org Anal.	4	Inter-Org Anal	4	
	Cultural Studies	4	Elective	4	
	Elective	3-4	Elective	3-4	
	subtotal	15-16	subtotal	15-16	
	Fall Totals	59 - 64	Spring Totals	58 - 64	

Total Units >= 120

N.B. There is a rough heirarchical structure to this program in that certain courses should be taken before other courses which could depend on them. ********** □

Mark your calendars!

ASA will be in San Francisco August 14 – 17, 2004. The deadline for submitting papers is January 15, 2004. All submissions must be made via the ASA online system on the ASA website (http:// www. asanet.org) There are two mathematical sociology possibilities: one is the **Mathematical Sociology Section session**, which invites submissions in all areas of mathematical sociology, organized by James F. Hollander, Texas Instruments inc., jimhollander@ti.com.

Also, an **ASA Regular Session** organized by Gene Johnsen. Department of Mathematics, University of California, Santa Barbara, CA 93106-3080, phone: (805) 966-9433 (has voice mail). e-mail: johnsen@math.ucsb.edu.

Session Title: "Mathematical Analysis and Public Issues", Description and Substantive Focus: Mathematical analysis, which in the broad sense of the term includes formal, logical, quantitative and statistical methods, brings rigor to the consideration of social problems and issues arising at any level, whether international, regional, national, or local. These problems and issues range from the treatment and prevention of HIV/AIDS, to alleviating destructive gang activity, to dealing with networks of terrorists, to the enhancement of self- esteem of minorities in task oriented situations. The organizer believes that a collection of interesting papers devoted to such topics as these, and applying significant mathematical analysis, will not only address well the theme of the 2004 ASA Meeting - Public Sociologies -, but also enrich the development of scientific sociology and of mathematical sociology within sociology. In addition, this session should have didactic value in showing the fruitfulness of mathematical analysis (in the broad sense mentioned above) in addressing important questions of social policy and social intervention.

Check the ASA website 'call for papers' http://www.asanet.org/convention/2004/index.html for information about submission criteria and restrictions. □

New Publications

A new book:

Generating Images of Stratification: A Formal Theory
Thomas J. Fararo and Kenji Kosaka
Kluwer Academic Publishers
Dordrecht, The Netherlands
2003 ($96). □

John Angle draws our attention to a recent review of a textbook in which his mathematical sociology work is mentioned.
Mathematical Sociologist's Angle on Income Makes Its Mark in Inequality Modeling by Lee Herring, Public Affairs and Public Information Office. "With the August 2003 publication of Christian Kleiber's and Samuel Kotz's textbook*, Statistical Size Distributions in Economics and Actuarial Sciences*, sociologist John Angle was immortalized by virtue of an eponym bestowed upon his model of income distribution, otherwise known as the Inequality Process. Within a chapter of this Wiley series on probability and statistics, Kleiber and Kotz recognize Angle's discovery that the Inequality Process parsimoniously accounts for a variety of aspects of income distributions and statistics of income. Kleiber and Kotz discuss the inequality model under a section heading labeled the 'Angle Process.'

"Eponymy, naming a place or a thing (e.g., a mathematical formula), after a person, is a great honor and this instance of eponymy may stick, given the source of the eponym: Kotz is editor of the Encyclopedia of the Statistical Sciences and a well-known mathematical statistician.

"Generalizable Models. This example of eponymy is perhaps the first to arise from research in mathematical sociology and, as such, represents the crossing of an important threshold for mathematical sociology as a field.

"Kleiber and Kotz cite Angle's demonstration that the Inequality Process is a member of the class of interacting particle system models, nearly all of the other members of which are models of statistical physics. The oldest and best known of these is the "ideal gas" theory that explains the thermodynamics of a volume of gas in terms of gas molecules (the particles) colliding according to the laws of mechanics.

"For several decades physicists have sought to apply models from physics to sociology, what they call "sociophysics." Physicists have written manifestoes about how models (e.g., the interacting particle system) will revolutionize sociology. Other than the Inequality Process, there have been few successful examples of sociophysics to date. The Inequality Process is the work of a sociologist abstracting a model from a verbal theory of another sociologist, Gerhard Lenski, in power and Privilege.
In the past some sociologists have responded to the sociophysics challenge with statements to the effect that sociology— despite its origin in Auguste Comte's vision of a science of society like physics— can never be a mathematical science like physics. Perhaps a more adaptive response to the sociophysics challenge is to show, as Angle did, that an existing theory of mathematical sociology is formally in a class of a model of statistical physics.

"Angle, a statistician with the Economic Research Service of the U.S. Department of Agriculture, holds a PhD in sociology from the University of Michigan, and was formerly an assistant professor of sociology at the University of Arizona. His papers on the Inequality Process have appeared in Social Forces, the Journal of Mathematical Sociology, and the Proceedings of the American Statistical Association. " □

Articles in the most recent *Journal of Mathematical Sociology*
Publisher: Taylor & Francis Volume 27, Numbers 2-3 / April-September 2003.
Introduction pp. 85 - 87 Patrick Doreian, Frans N. Stokman
SOCIAL ROLES AND THE EVOLUTION OF NETWORKS IN EXTREME AND ISOLATED ENVIRONMENTS pp. 89 - 121 Jeffrey C. Johnson, James S. Boster, Lawrence A. Palinkas
A MULTILEVEL NETWORK STUDY OF THE EFFECTS OF DELINQUENT BEHAVIOR ONFRIENDSHIP EVOLUTION pp. 123 - 151 T. A. B. Snijders, Chris Baerveldt
EVOLUTION OF SOCIOLOGY FRESHMEN INTO A FRIENDSHIP NETWORK pp. 153 - 191 Marijtje A. J. van Duijn, Evelien P. H. Zeggelink, Mark Huisman, Frans N. Stokman, Frans W. Wasseur
AN EQUILIBRIUM-CORRECTION MODEL FOR DYNAMIC NETWORK DATA pp. 193 – 215 David Dekker, Philip Hans Franses, David Krackhardt
http://www.tandf.co.uk/journals/titles/0022250x.html □

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To join the Section, you must be a member of ASA. Print this application, fill it out, and send to ASA. Or, see the ASA Section membership web page; http://www.asanet.org/forms/sectionform.html (we are Section # 37)

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____ I am not an ASA member but am interested in joining the Section. Please send me information about joining ASA.