

# Elisa Jayne Bienenstock

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**Clearance: Secret / TS (SCI Eligible)**

## **Professional Experience**

- 2015-present      **College Research Professor**  
Watts College of Public Service and Community Solutions  
School of Public Affairs  
Arizona State University  
<https://search.asu.edu/profile/2877811>
- 2010-2015      **Associate Research Professor**  
Department of Human Science  
Georgetown University, Washington, DC
- 2011-2013      **Program Manager (50%)**  
Army Research Office (ARO)  
Managed ~26 Social Science research programs totaling ~\$55M in research funds
- 2008-2010      **Chief Human Science Officer**  
National Security Innovations (NSI), Inc., Ballston, VA
- 2003-2008      **Associate**  
Booz Allen Hamilton  
– Social network analysis, game theory and statistical consultant for government agencies  
– Science/Engineering Technology Advisor (SETA) to Defense Advanced Research Project Agency (DARPA) and Office of Naval Research (ONR)
- 2001-2003      **Visiting Assistant Professor**  
Department of Sociology  
University of California, Irvine, CA
- 1996-2001      **Assistant Professor**  
Department of Sociology  
Stanford University, Palo Alto, CA
- 1994-1996      **Assistant Professor**  
Department of Sociology  
University of North Carolina, Chapel Hill, NC

## **Education**

- 1988-1992      Ph.D.      **University of California, Los Angeles**  
Sociology, Emphasis; Mathematical sociology and social psychology  
*Thesis:* Game Theory Models for Exchange Networks: An Experimental Study  
Advisor: Phillip Bonacich  
Committee: Marilyn Brewer, Peter Kollock, David McFarland and Lloyd Shapley (2012 Nobel laureate in Economic Sciences)
- 1986-1988      M.A.      **University of California, Los Angeles**  
Sociology, Emphasis: Social networks  
*Thesis:* Network Homogeneity and Density on Political and Social Attitudes  
Advisors: Phillip Bonacich and Melvin Oliver
- 1980-1984      B.A.      **University of California, Los Angeles**  
Political Science

**Funded Research** *Proprietary or classified funded research not listed below can be provided under appropriate circumstances.*

**Active**

2019-2024      **Networked Palynology Models of Pollen and Human Systems (NYMPHS)**, ~\$6,250,000  
Sponsor: Army Research Office, Multidisciplinary University Research Initiative (MURI)  
Role: PI

**Completed**

2021-2022      **COVID-19 After-Action Report and Improvement Plan**, ~\$84,075  
Prime: High Street Consulting, LLC; Sponsor: State of Michigan  
Role: Co-PI

2019-2021      **REsilience & Stability In DENse Terrains (RESIDENT Phase II)**, ~\$460,000  
Sponsor: Defense Advanced Research Project Agency,  
Prime: Boston Fusion, Inc,  
Role: Co-PI / PI for ASU

2017-2022      **Big Open Source Social Science (BOSSS II)**, ~\$700,000  
Sponsor: Army Corp of Engineers' Construction Engineering Research Laboratory  
Prime: Boston Fusion, Inc,  
Role: Co-PI / PI for ASU

2018-2019      **REsilience & Stability In DENse Terrains (RESIDENT Phase I)**, ~\$58,000  
Sponsor: Defense Advanced Research Project Agency  
Role: PI

2017            **Social-CORE: Social Science Laboratory via Common Research Experimentation Platform**,  
~\$15,000  
Sponsor: Defense Advanced Research Project Agency (DARPA)  
Role: PI

2016-2017      **Identifying Key Actors in Heterogeneous Networks**, ~\$50,000  
Sponsor: Army Research Office  
Role: PI

2016-2017      **Big Open Source Social Science (BOSSS)**, ~\$50,000  
Army Corp of Engineers' Construction Engineering Research Laboratory  
Role: PI

2013-2014      **Understanding the use of Social Media for Mobilization, Coordination and Interpretation**,  
~\$125,000  
Sponsor: Office of Naval Research  
Role: PI

2009-2013      **Methods and Algorithms for Gleaning Meaning from Real World Behavioral Dynamic Social  
Networks**, ~\$900,000  
Sponsor: Office of Naval Research  
Role: Co-PI

2009-2011      **Ethnic Conflict, Repression, Insurgency and Social Strife (ERIS)**, ~\$1,200,000  
Sponsor: Combating Terrorism Technical Support Office (CTTSO) / Human Social Cultural and  
Behavioral Modeling Program  
Role: PI

2009-2010      **Multi-Method, Multi-Community Study of Islamic Diaspora (SID)**, ~\$200,000  
Sponsor: Office of Naval Research / Human Social Cultural and Behavioral Modeling Program  
Role: PI

2008            **Knowledge Acquisition for the Human Terrain**, ~\$60,000

- Sponsor: Defense Advanced Research Project Agency (DARPA)  
Role: PI
- 2008-2009      **Goals-Means Leadership Decision Model**, ~\$1,500,000  
Sponsor: Air Force Research Laboratory (AFRL) / Proactive Intelligence / Intelligence Advanced Research Project Agency (IARPA)  
Role: PI
- 2007-2008      **Social Network Analysis Simulator**, ~\$2,000,000  
Sponsor: Air Force Research Laboratory (AFRL) / Proactive Intelligence / Intelligence Advanced Research Project Agency (IARPA)  
Role: PI
- 2007            **Multi-Player Online Game**, ~\$300,000  
Sponsor: Defense Advanced Research Project Agency (DARPA)  
Role: PI
- 2005            **Model of State Failure in two Countries**, ~\$1,200,000  
Sponsor: Pre-Conflict Anticipation and Shaping (PCAS) / Defense Advanced Research Project Agency (DARPA)  
Role: PI
- 2000-2003      **Academic Senate Council on Research, Computing and Library Resources (CORCLR)**, \$18,000  
Sponsor: University of California, Irvine  
Role: Co-PI
- 1992-1994      **Exchange in Negatively Connected Networks**, ~\$200,000  
Sponsor: National Science Foundation (SES-9210058)  
Role: Co-PI
- 1991-1992      **Game Theory Models for Exchange Networks**, \$5,000  
Sponsor: National Science Foundation (SES-910043)  
Dissertation Fellowship

## Publications

Citation index: 1,469 (Oct. 2022)  
h-index: 15  
Source: Google Scholar  
IF: Impact Factor  
*Italicized: works in progress*

## Books

**Bienenstock EJ**, Smith-Heisters S. Economyths. *Manuscript under contract.*

**Bienenstock EJ**, Brashears, M. Handbook of Mathematical Sociology. *Manuscript under contract.*

## Book Chapters

**Bienenstock EJ**. Chapter 9: “Operationalizing Social Science for National Security.” In: *Adaptive Engagement for Undergoverned Spaces: Concepts, Challenges, and Prospects for New Approaches*. Aaron B. Frank, Elizabeth M. Bartels, Editors. Rand Corporation. July 2022.

**Bienenstock, EJ**, and Salwen, M. “Covert Network Analysis: An Exchange Network Theory Perspective.” In: *Illuminating Dark Networks: The Study of Clandestine Groups and Organizations*. Gerdes, L.M. (Ed.). Cambridge, UK: Cambridge University Press. 2015.

**Bienenstock EJ** and Astorino-Courtois A. Chapter 12: “Decision Science: A Subjective Decision Modeling Approach for Identifying Intent.” In: *From the Mind to the Feet: Assessing the Perception-to-Intent-to-Action Dynamic*. Astorino-

- Courtois A, Kuznar L, Canna S, eds. Air University Press. Maxwell Airforce Base, AL. 2011. [https://www.airuniversity.af.edu/Portals/10/AUPress/Books/B\\_0123\\_KUZNAR\\_ASTORINO\\_COURTOIS\\_CANNA\\_MIND\\_TO\\_FEET.pdf](https://www.airuniversity.af.edu/Portals/10/AUPress/Books/B_0123_KUZNAR_ASTORINO_COURTOIS_CANNA_MIND_TO_FEET.pdf)
- Singh L, **Bienenstock EJ**, Mann J. Perspectives on Social Network Analysis for Observational Scientific Data. In: *Handbook of Social Networks: Technologies and Applications*. Furht B, ed. Springer, New York, NY. 2010.
- Salwen M, **Bienenstock EJ**, McCune B, Arana A. “Modeling Social Conflict: Theory, data and integration across multiple levels.” In: *Advances in cross-cultural decision making*. Schmorrow D, Nicholson D. eds., 2010. CRC Press.
- Bienenstock EJ**. “Peter Blau.” In: *Encyclopedia of Social Theory*. Ritzer G, ed. Sage. Beverly Hills, CA, 2004.
- Bienenstock EJ**, Bonacich P. “Balancing Efficiency and Vulnerability in Social Networks.” In: *Dynamic Social Network Modeling and Analysis: Summary and Papers*. Breiger R, Carley K, Pattison P, eds. The National Academies Press. Washington, DC, 2003.
- Bonacich P, **Bienenstock EJ**. “Strategy in Exchange Networks: Exploitation versus Accommodation.” In: *Status, Networks and Structure: Theory Development in Group Processes*. Sznatka J, Skvoretz J, Berger J, eds. Stanford University Press, 1997.
- Reprinted** in: *Social Network Analysis (Volume 4)*. Freeman, L.C. ed. Sage Publications Ltd, 2008.

### **Articles**

- Tamrakar, S., Helderop, E., Nelson, J. R., Palladino, A., Farelo, D. G., Bienenstock, E. J., ... & Valenti, A. Correspondence between spectral reflectance and features of the built environment for community resilience. *Journal of Applied Remote Sensing*, 17(1), 018504-018504, 2023. <https://doi.org/10.1117/1.JRS.17.018504>.
- Mu W, Tong D, Grubestic TH, Liu H, Helderop E, Miller JA, **Bienenstock EJ**. *Improving Geoforensics with Pollen Quantification: A Spatial Perspective*. *Annals of the American Association of Geographers*, 113(9), 2031-2047, 2023. <https://doi.org/10.1080/24694452.2023.2211155>.
- Pardee GL, Ballare KM, Neff JL, Do LQ, Ojeda DJ, **Bienenstock EJ**, Brosi BJ, Grubestic TH, Miller JA, Tong D, Jha S.(2023). *Local and landscape factors influence plant-pollinator networks and bee foraging behavior across an urban corridor*. *Land*, 12(2), 362. <https://doi.org/10.3390/land12020362>.
- Nelson JR, **Bienenstock EJ**, Palladino A, Barrerad E, Grubestic TH. Social infrastructure as a proxy for social capital: A spatial exploration into model specification and measurement impacts in Los Angeles, California. *Journal of Urban Affairs*, in press, 2023. doi: 10.1080/07352166.2022.2133724. **IF: 2.559**
- Palladino A, Nelson JR, Tamrakar S, **Bienenstock EJ**, Grubestic TH, Narayan S, Farelo DG, Valenti A. *Infrastructure as a proxy for relative deprivation in dense urban communities*. *SPIE Defense + Commercial Sensing April 2022 Orlando Florida. Paper 12122-16, April 2022*.
- Nelson JR, Helderop E, Palladino A, Tamakar S, Farelo DG, **Bienenstock EJ**, Grubestic TH, Valenti A. Correspondence between spectral reflectance and features of the built environment for community resilience. *Geospatial Informatics XII*: 12099, 1209902. SPIE, 2022. doi: 10.1117/12.2619008.
- Kelkar V, Driver EM, **Bienenstock EJ**, Palladino A, Halden RU. Stability of human stress hormones and stress hormone metabolites in wastewater under oxic and anoxic conditions. *Science of the Total Environment* 11: 159377, 2022. doi: 10.1016/j.scitotenv.2022.159377. **IF: 10.75**
- Watts, DJ, Beck, ED, **Bienenstock, EJ**, Bowers, J, Frank, A, Grubestic A, Hofman, J, Rohrer, JM, Salganik, M. Explanation, prediction, and causality: Three sides of the same coin? October 31, 2018. doi: 10.31219/osf.io/u6vz5. **Views: 2,915; Downloads: 4,922**
- Helderop E, **Bienenstock EJ**, Grubestic TH, Miller J, Tong D, Brosi B, Jha S. Network-based geoforensics: Connecting pollen and plants to place. *Ecological Informatics* 66, 101443, 2021. doi: 10.1016/j.compenvurbsys.2021.101615. **IF: 4.498**
- Tong D, Grubestic TH, Mu W, Miller JA, Helderop E, Jha S, Brosi BJ, **Bienenstock EJ**. Identifying the Spatial Footprint of Pollen Distributions Using the Geoforensic Interdiction (GOFIND) Model. *Computers, Environment and Urban Systems* 87: 101615, 2021. doi: 10.1016/j.compenvurbsys.2021.101615. **IF: 6.54**
- Bienenstock EJ**, Bonacich P. Eigenvector centralization as a measure of structural bias in information aggregation. *The Journal of Mathematical Sociology* 46(3): 227-245, 2021. doi: 10.1080/0022250X.2021.1878357. **IF: 1.152**

- Palladino A, **Bienenstock EJ**, West BM, Nelson JR, Grubestic TH. "Information fusion to estimate resilience of dense urban neighborhoods", Proc. SPIE 11018, Signal Processing, Sensor/Information Fusion, and Target Recognition XXVIII, 110180K, 2019. doi: 10.1117/12.2519304.
- Palladino A, **Bienenstock EJ**, Smith-Heisters S, Perkins TK, Salwen M. Relevancy, bias, and coverage in news data scraped for automated social science analytics. 10th International Conference on Applied Human Factors and Ergonomics (AHFE). Session: Artificial Intelligence and Social Computing I, 2019.
- Palladino A, **Bienenstock EJ**, George CA, Moore KE. "Big open-source social science: capabilities and methodology for automating social science analytics", Proc. SPIE 10653, Next-Generation Analyst VI, 106530D, 2018. doi: 10.1117/12.2306500.
- Hyatt JPK, **Bienenstock EJ**, Tilan JU. A student guide to proofreading and writing in science. *Advances in Physiology Education*. 41: 324-331. 10.1152/advan.00004. 2017. **IF: 1.723; Altmetric Score: 88; Downloads: 16,393 (Jul. 2022)**
- Delabaere L, Ertl HA, Massey DJ, Hofley CM, Sohair F, **Bienenstock EJ**, Sebastian H, Chiolo I, Larocque JR. Aging impairs double-strand break repair by homologous recombination in Drosophila germ cells. *Aging Cell*, 16: 320-328, 2017. doi:10.1111/accel.12556. **IF: 11.000**
- Mann J, Stanton MA, Patterson EM, **Bienenstock EJ**, Singh LO. Social networks reveal cultural behaviour in tool-using dolphins. *Nature Communications* 3: 1181, 2012. doi: 10.1038/ncomms1983. **IF: 17.69; Altmetric Score: 211; Downloads: >14,000 (Jul. 2022)**
- Bonacich P, **Bienenstock EJ**. Structural Implications of Reciprocal Exchange: A Power-Dependence Approach. *Social Psychology Quarterly* 72(3): 226-240, 2009. <https://www.jstor.org/stable/25593925>. **IF: 1.078**
- Glanville J, **Bienenstock EJ**. A Typology for Understanding the Connections among Different Forms of Social Capital, *American Behavioral Scientist* 52(11): 1507-1530, 2009. doi: 10.1177/0002764209331524. **IF: 1.009**
- Bienenstock EJ**, Bianchi AJ. Activating Performance Expectations and Status Difference through Gift Exchange: Experimental Results. *Social Psychology Quarterly* 67(3): 310-318, 2004. <https://www.jstor.org/stable/3649114> **IF: 1.000**
- Bienenstock EJ**, McBride M. Explication of the Cultural Transmission Model. *American Sociological Review* 69(1): 138-143, 2004. doi: 10.1177/000312240406900108. **IF: 3.694**
- Johnson Jr. JH, **Bienenstock EJ**, Farrell Jr. WC. Bridging Social Networks and Female Labor Force Participation in a Multi-ethnic Metropolis. *Urban Geography*, 20(1): 3-30, 1999. doi: 10.2747/0272-3638.20.1.3
- Reprinted in:** *Prismatic Metropolis: Analyzing Inequality in Los Angeles*. Bobo L, M. Oliver, J. H., Johnson, Jr. and A. Valenzuela, eds. Russell Sage pp. 383-416, 2000.
- Stoloff JA, Glanville JL, **Bienenstock EJ**. Woman's Participation in the Labor Force: The Role of Social Networks. Volume 4. *Social Networks* 21(1): 91-108, 1999. doi: 10.1016/S0378-8733(99)00003-9.
- Bienenstock EJ**. Response to "Network Games." *Rationality and Society* 9(3): 378-382, 1997. doi: 10.1177/104346397009003007.
- Bienenstock EJ**, Bonacich P. Network Exchange as a Cooperative Game. *Rationality and Society* 9(1): 37-65, 1997. doi: 10.1177/104346397009001002.
- Reprinted in:** *Models of the Strategic Formation of Networks and Groups*. Jackson MO, Dutta B, eds. Springer, 2003.
- Bonacich P, **Bienenstock EJ**. Latent Classes in Exchange Networks: Sets of Positions with Common Interest. *Journal of Mathematical Sociology* 22(1): 1-28, 1997.
- Johnson Jr. JH, **Bienenstock EJ**, Stoloff JA. An Empirical Test of the Cultural Capital Hypothesis. *The Review of Black Political Economy* 23(4): 1-27, 1995. doi: 10.1007/BF02689909.
- Bonacich P, **Bienenstock EJ**. When Rationality Fails: Unstable Exchange Networks With Empty Cores. *Rationality and Society* 7(3): 293-320, 1995. doi: 10.1177/1043463195007003004.
- Bienenstock EJ**, Bonacich P. Game Theory Models for Exchange Networks: Experimental Results. *Sociological Perspectives* 36(2): 117-135, 1993. doi: 10.2307/1389425.

- Bonacich P, **Bienenstock EJ**. Assignment Games, Chromatic Number, and Exchange Theory. *Journal of Mathematical Sociology* 17(4): 243-259, 1993. doi: 10.1080/0022250X.1993.9990110.
- Bienenstock EJ**, Bonacich P. The Core as a Solution to Negatively Connected Exchange Networks. *Social Networks* 14(3): 231-243, 1992. doi: 10.1016/0378-8733(92)90003-P.
- Bienenstock EJ**, Bonacich P, Oliver ML. The Effect of Network Density and Homogeneity on Attitude Polarization. *Social Networks* 12(2): 153-172, 1990. doi: 10.1016/0378-8733(90)90003-R.

### **Technical Papers**

- Bienenstock EJ**, Dolan K, Kurz, A. HEP-M Report: Social Network Analysis Pilot. 2021.
- Bienenstock EJ**, Troy KK, Lovell Pfautz S. Overview of Collaboration in the National Security Arena: A Multidisciplinary Collection of Perspectives. In: *Collaboration in the National Security Arena: Myths and Reality - What Science and Experience Can Contribute to its Success*. O'Connor J, **Bienenstock EJ**, Briggs RO, Dodd C, Hunt C, Kiernan K, McIntyre J, Pherson R, Rieger T, eds. Topical Strategic Multi-Layer Assessment (SMA) Multi-Agency/Multi-Disciplinary White Papers in Support of Counter-Terrorism and Counter WMD, 2009.
- Bienenstock EJ**, Troy KK. Collaboration in the National Security Arena as a Social Dilemma. In: *Collaboration in the National Security Arena: Myths and Reality - What Science and Experience Can Contribute to its Success*. O'Connor J, **Bienenstock EJ**, Briggs RO, Dodd C, Hunt C, Kiernan K, McIntyre J, Pherson R, Rieger T, eds. Topical Strategic Multi-Layer Assessment (SMA) Multi-Agency/Multi-Disciplinary White Papers in Support of Counter-Terrorism and Counter WMD, 2009.
- Bienenstock EJ**, Toman P. Social Network Analysis for Detecting the Web of Rare Event Planning and Preparation. In: *Anticipating Rare Events: Can Acts of Terror, Use of Weapons of Mass Destruction or Other High Profile Acts Be Anticipated? A Scientific Perspective on Problems, Pitfalls and Prospective Solutions*. Chesser N, ed. Topical Strategic Multi-Layer Assessment (SMA) Multi-Agency/Multi-Disciplinary White Papers in Support of Counter-Terrorism and Counter WMD, 2008.

### **Abstracts, Proceedings, and Reviews**

- Bienenstock EJ**, Wang C. “Applying a bipartite network approach to conceptualize COVID-19 policy design.” International Network for Social Network Analysis 2023 Sunbelt Conference. Portland, OR, 2023 and online.
- Bienenstock EJ**, Helderop E, Grubestic TH. (June 21 – July 10). “Repurposing Social Network Metrics for Forensic Palynology.” Networks 2021: Combined Conference for the International Network for Social Network Analysis & the Network Science Society. Washington, D.C. – Virtual.
- Kim Y, Mossberger K, **Bienenstock EJ**, Won Y. What Drove States’ Decision to Reopen Businesses during COVID-19? 2021 Midwest Political Science Association (MPSA) Annual Conference. (Withdrawn)
- Bienenstock EJ**, Bonacich P. “Better Use of the Underutilized Eigenvector Centrality” (Section on Mathematical Sociology. Open Topics in Mathematical Sociology). American Sociological Society Annual Meeting, San Francisco, CA. August 8-11, 2020
- Bienenstock EJ**, Bonacich P. “Computational Modeling approach for improved Social Network Analysis Model Specification” (Section on Computational Social Science and Network Theory). Sunbelt XL: Virtual Conference 2020, Paris, France. July 13-17, 2020
- Hyatt JPK, Caprio L, **Bienenstock EJ**, Kim JA, McCall GE. Introduction of a High-fat/sucrose Diet Modulates Voluntary Wheel Running Activity in Adult Female Rats. *Medicine & Science in Sports & Exercise*, 49(5S), 440, 2017.
- Hyatt JPK, Brown EA, **Bienenstock EJ**, McCall GM. Acute exercise stress elicits differential gene expression profiles in sedentary vs. detrained soleus muscles. Integrative Biology of Exercise Conference (Phoenix, AZ) Nov. 2-4, 2016.
- Desouza, KC, **Bienenstock EJ**. “What Simulators Could Do for Public Management” *Governing*. September 26, 2016. <http://www.governing.com/gov-institute/voices/col-benefits-simulators-public-management-training.html>
- Bienenstock, EJ**. Massively Parallel Globalization: Explorations in Self-Organization and World Politics. *Contemporary Sociology: A Journal of Reviews*, 45(6), 739-741. 2016.

- Bienenstock, EJ**, Salwen M. “Modeling Coalitions Within Constraints: An Integration of Social Network and Game Theories.” Sunbelt 36: Int’l Social Network Conference. Newport Beach, CA, 2016.
- Delabaere L, Ertl HA, Massey DJ, Hofley CM, Sohail F, **Bienenstock EJ**, LaRocque JR. “The effects of aging on double-strand break repair.” American Federation on Aging Research Conference. Santa Barbara, CA., 2014.
- Bienenstock, EJ**. A Weakness of Dyadic Ties. Sunbelt XXXIV: Int’l Social Network Conference. St. Pete Beach, FL, 2014.
- Bienenstock, EJ**. Aligning simulations of networks with experimental results, International Studies Association Annual Conference, San Fransisco, CA, 2013.
- Bonacich P, **Bienenstock EJ**. Coalitions in Exchange Networks: Some New Research. Sunbelt XXXI: Int’l Social Network Conference. St. Pete Beach, FL, 2011.
- Bienenstock EJ**, Singh L, Samuel N, Bansal SK, Stanton M, Mann J. Identifying Bias and Its Effects on Interpreting Behavioral Social Network Data. Sunbelt XXXI: Int’l Social Network Conference. St. Pete Beach, FL, 2011.
- Mann J, Patterson EM, **Bienenstock EJ**, Sargeant BL, Stanton MA, Krzyszczyk EB. Is Dolphin Sponging a Culture? A Social Network Approach. Sunbelt XXX: Int’l Social Network Conference. Riva Del Garda, Italy, 2010.
- Bienenstock EJ**, Stanton MA, Mann J. Models of Quasi-Symmetry Relate Sex to Dominance in Wild Dolphin Males. Sunbelt XXX: Int’l Social Network Conference. Riva Del Garda, Italy, 2010.
- Stanton MA, Mann J, **Bienenstock EJ**, Gibson QA, Sargeant BL, Bejder L. Snapshot or Movie: How Sampling Methods Bias Social Network Methods. Sunbelt XXX: Int’l Social Network Conference. Riva Del Garda, Italy, 2010.
- Salwen M, **Bienenstock EJ**, McCune B, Arana A. Modeling Social Conflict: Theory, Data and Integration Across Multiple Levels. FL, 2010.
- Kelton K, Toman P, **Bienenstock EJ**. Cognitive Adaptation to Social Structure, Sunbelt XXX: Int’l Social Network Conference. San Diego, CA, March, 2009.
- Bienenstock EJ**, Kelton K. Social Network Data Validation Techniques. Human Social Cultural Behavioral Science (HSCB) Focus 2010. Chantilly, VA, 2009.
- Bienenstock EJ**, Kelton K. Empirical Verification and Validation of HSCB Models. Human Social Cultural Behavioral Science (HSCB) Focus 2010. Chantilly, VA 2009.
- Leets L, Pagano S, **Bienenstock EJ**. Ethical Lapses and Collapses: Detecting Moral Meltdowns Before it is too Late. Human Social Cultural Behavioral Science (HSCB) Focus 2010. Chantilly, VA, 2009.
- Lovell Pfautz S, **Bienenstock EJ**. Semi-Automated Quantification of Qualitative Social Science Data. Human Social Cultural Behavioral Science (HSCB) Focus 2010. Chantilly, VA, 2009.
- Bianchi AJ, **Bienenstock EJ**, Lancianese DA, Hunter VL. Gift Exchange and Status Differences: An Experimental Test of Behavior-Status and Social Exchange Theories. American Sociological Association 86th Annual Meeting. Philadelphia, PA, 2005.
- Glanville J, **Bienenstock EJ**. A Typology for Understanding the Connections among Different Forms of Social Capital. American Sociological Association 86th Annual Meeting. Philadelphia, PA, 2005.
- Bienenstock EJ**, Sageman M, Warner EA. Operationalizing Terror in the Name of God: Using Two-Mode Networks To Link Terrorism To Islamic Institutions. Sunbelt XXV: Int’l Social Network Conference. Redondo Beach, CA, 2005.
- Bienenstock EJ**. The Evolution of Reputation and Cooperation in Emergent Social Networks: A Generalized Exchange Model. Proceedings of the Public Choice Society and the Economic Science Association. 2002.
- Bienenstock EJ**. Review of: Advances in Group Processes, by Lawler EJ, Skvoretz J, Szmatka J. Contemporary Sociology- A Journal of Reviews 30 (2): 153-154, 2001
- Bienenstock EJ**. Networks and Cooperation. Proceedings of the Sunbelt XX International Sunbelt Social Network Conference, 2000.
- Bienenstock EJ**. Measuring Social Exchanges. Abstracts of the Marschak Colloquium at UCLA published in *Mathematical Social Sciences*, 1999.
- Bienenstock EJ**, Rice E. Finding Status in Structured Clustered Data: Using Log-linear Models. Proceedings of the Sunbelt XIX International Sunbelt Social Networks Conference, 1999.

- Bienenstock EJ**, Rice E. Keeping Count of Fish using Log-linear Methods. Proceedings of the Sunbelt XIX International Sunbelt Social Networks Conference, 1999.
- Glanville JL, Stoloff JA, **Bienenstock EJ**, Johnson Jr. JH. Women's Participation in the Labor Force: The Role of Social Networks. Proceedings of the American Sociological Association 93rd Annual Meeting, 1998.
- Bienenstock EJ**, Paxton P. Empirically Defining Social Capital. Proceedings of the International Sunbelt Social Networks Conference XVII, 1997.
- Bienenstock EJ**, Johnson JC. Exchange in the Field. Proceedings of the International Sunbelt Social Networks Conference XVII, 1997.
- Bienenstock EJ**. Social Psychology and Network Theory: Should There be a Link? Proceedings of the International Sunbelt Social Networks Conference XVII, 1997.
- Bienenstock EJ**. In the Absence of Rational Choice. Proceedings of the Annual Meeting of the Society for the Advancement of Socio-economics, 1993.
- Bienenstock EJ**, Bonacich P. Assignment Games and Exchange Theory. Presented at the 87th Annual Meeting of the American Sociological Association, 1992.
- Bienenstock EJ**. Assignment Games and Exchange Theory. Proceedings of the Sunbelt Social Networks Conference XII, 1992.
- Bienenstock EJ**. Game Theory Models for Exchange Networks: Implications for Equality. American Sociological Association 86th Annual Meeting. 1991:41.
- Bienenstock EJ**. Game Theory and Exchange Networks. Proceedings of the Sunbelt Social Network Conference X, 1991:10.
- Bienenstock EJ**, Bonacich P. Fraud and Networks. Proceedings of the Sunbelt Social Network Conference XI, 1991:37.
- Bienenstock EJ**. New Models for Exchange Networks: A Research Proposal. Conference on Social Networks, University of California at Santa Barbara, 1990:2.
- Bienenstock EJ**. Fuzzy Logic: An Artificial Intelligence Solution for Direct Marketing. Direct Marketing Association 73rd Annual Conference, 1990.
- Bienenstock EJ**, Bonacich P. Power in Exchange Networks: A New Approach. Proceedings of the Sunbelt Social Network Conference X, 1990:50.
- Bienenstock EJ, Bonacich P, Oliver ML. The Effect of Network Homogeneity and Density on Political and Social Attitudes: An Extension of Laumann. Proceedings of the Sunbelt Social Network Conference IX, 1989:2.

### **Invited Talks**

- Interdisciplinarity, Inclusion and Innovation at a Southwest University*. Department of Sociology Colloquium, University of Iowa, December 1, 2023
- Preemptive mapping of interpersonal ties for EMHC*. Arizona State University, Center for Emergency Management and Homeland Security. December 07, 2022.
- The Structure of Collaborative Research at Arizona State University 2000 – 2020*. Linköping University. The Institute for Analytical Sociology Seminar. February 10, 2022.
- Presentation of Soc in the Wider World*. University of Georgia, Department of Sociology. Fall 2021 Colloquium Series. September 21, 2021.
- Education through Computer Simulation: What and How to Teach in the Classroom*. Panel Discussion at NASPAA, on October 12, 2018 in Atlanta, GA.
- The Role of Social Network Analysis (SNA) in Law Enforcement Investigations and Prosecution*. Office of Justice Programs Diagnostic Center Symposium: 21<sup>st</sup> Century Violence Reduction Strategies on December 6-7, 2016, in Phoenix, Arizona.



- The evolution of reputation and norms of generalized reciprocity in emergent social networks: a simulation.* Presentation to the Social Insect Research Group, School of Life Sciences, Arizona State University, Tempe AZ. November 5, 2015.
- The Importance of Social Science Rigor in Government.* Presentation at College of Public Practice, Arizona State University, Phoenix AZ. March 26, 2015.
- Appreciating Data Limitations for Improved Decision Support.* Presentation at Arizona State University, Tempe, AZ. May 16, 2014.
- Stopping SNA Abuse II: Revealing the exploitation of immature metrics.* West Point Workshop on Methodological Advances in the Study of Dark Networks, West Point, NY. September 5, 2014.
- Stopping SNA Abuse: Some proposed preventative measures.* Presentation to the Department of Sociology, Cornell University, Ithaca, NY. April 27, 2012.
- Networked Games: Empirical and Analytical Nexus.* Presentation for the Study of Innovation and Technology in China at the Institute on Global Conflict and Cooperation, UCSD. San Diego, CA, September 26, 2011.
- Conflict and Cooperation: Game and Theory.* Thematic Session: “Conflict and Cooperation in Social Networks.” Organizer: Michael Macy. Presented at the 106th American Sociological Association Annual Meeting, Las Vegas, NV. August 21, 2011.
- Game Theory and Possible Applications for Predicting Terrorist Groups Financial Condition.* Presentation at the Outreach Conference on Tools and Trends in Combating Terrorist Structures and Networks. McLean, VA March 9 2011.
- Social Science: Disciplined Study of the Social World.* Military Operations Research Society (MORS) mini-symposium on the Social Science Underpinnings of Complex Operations (SSUCO). George Mason University, Arlington Campus. October 19, 2010.
- Learning What We Don’t Know: Developing Social Science Methods to Fill Gaps.* Army Research Office, Durham, NC. May 10, 2010.
- SNA and the USG: Negotiating Meaning and Expectations.* Links Center, University of Kentucky, Lexington December 8, 2009.
- Social Network Analysis: Methods and Myths.* Presentation made to the Psychology Department Colloquium, Georgetown University, November 6, 2009.
- Beyond Outliers: Social Science’s Role in Threat Assessment and Prevention.* Interagency Council for Applied Homeland Security Technology (ICAHST) Counter-IED Symposium, December 1-3, 2009.
- Update on the Inter-Agency Limited Objective Experiment.* JASON 2009 Summer Study: DOD Anticipating Rare Events, San Diego, CA. July 9, 2009.
- Quantitative Social Science: Filling the Gap between inductive approaches and Tool Development.* Air Force Research Lab. Rome, New York, 2008.
- Social Network Analysis, Application: Terrorism.* Presentation to AAAS Fellows at Department of State, Washington, D.C., March 7, 2008.
- To Use Social Network Analysis: The Challenge of Utilizing SNA.* Presentation for the DTRA/ASCO Workshop on Dynamic Social Network Analysis: Present Roots and Future Fruits. Fort Belvoir, VA February 14, 2008.
- The State and Future Direction of Social Network Analysis.* Information Briefing to the Defense Threat Reduction Agency (DTRA) Threat Reduction Advisory Committee. Fort Belvoir, Va. January 22, 2008.
- Quantitative-Deductive Social Sciences Approaches.* JIEDDO Dynamic Theory of Attacking Networks (DTAN) Workshop. Ballston, VA. October 18, 2007.
- Integrating Game Theory and Social Network Analysis Methods to Model Strategy in Large Human Networks: A Formal Approach.* Conference on Social Networks and Complexity, Collegium Budapest Institute for Advanced Study, Budapest, Hungary, July 31- August 2, 2006.
- Combining Game Theory and Social Network Analysis: An Empirical Example.* Presentation for the Culture and Adversary Modeling Workshop, San Antonio TX., November 30-December 1, 2005.

- Constraints on Free Will: Combining Network Analysis and Game Theory to model Structure and Agency.* Workshop on Formal Modeling Methods for Advanced Collaborative Networked Organizations, sponsored by ThinkCreative. Funchal (Madeira), Portugal, February 13-14, 2003.
- Balancing Efficiency and Vulnerability in Social Networks.* Workshop on Dynamic Social Network: Modeling and Analysis, sponsored by the National Academy of Sciences and National Research Council. Washington D. C., November 7-9, 2002.
- Networks and Norms: A Computational Model.* Conference on Mathematical and Statistical Issues in Social Network Analysis, sponsored by the Institute for Mathematical Behavioral Sciences, University of California, Irvine, August 5, 2002.
- Social Psychological Explanations in Macro-Phenomena* Group Processes/Rational Choice Annual Mini-conference, August 17, 2001.
- The Evolution of Networks, Reputation and Cooperation.* Stanford Institute for Theoretical Economics (SITE) Workshops, III. SEGMENT 3: Economic Implications of Networks, July 17 - 20, 2000.
- Generalized Exchange and the Emergence of Cooperation.* Invited talk to the Department of Sociology. The University of California at Irvine. January 2000.
- Social Networks Analysis and Computing.* University of California at Berkeley Human Centered Computing Retreat, July 9, 1999.
- Agency and Structure in Networks of Exchange.* The Human Centered Computing Seminar, University of California at Berkeley, April 13, 1999.
- Measuring Social Exchanges.* Marschak Colloquium at University of California at Los Angeles, April 9, 1999.
- Game Theory and Social Exchange.* Eleventh Annual Group Processes Conference, August 1998.
- Status and Bonds: Rethinking the Nature of Man.* West Coast Small Group Processes Annual Conference, Stanford University May, 1998.
- Didactic Seminar on Game Theory.* American Sociological Association Annual Meeting, August 1997.
- Agency in Experimental Networks.* Organizational Behavior Seminar Series, Stanford University, April 1997.
- Experimental Exchange Networks: An Application for Game Theory.* UNC Social Psychology Colloquium, Department of Psychology, University of North Carolina at Chapel Hill, Spring 1995.
- Social Networks as Restricted Assignment Games.* UNC-Duke Micro Theory Workshop, Department of Economics, Duke University, 1994.
- Why Be Nice?* FEMBA 409, Anderson Graduate School of Management, Winter 1993.
- Rational Behavior / Social Creatures.* Management 282, Anderson Graduate School of Management, Spring 1992.
- Applying Game Theory Solutions to Exchange Networks: Experimental Results and Theoretical Implications.* UCSB Social Network Seminar." University of California, Santa Barbara, Spring 1992.
- Game Theory Solutions for Exchange Networks: Experimental Results.* Social Science Colloquium, University of California at Irvine, Fall 1991.
- Task Group Processes.* Management 282, Anderson Graduate School of Management, Spring 1991.

**Teaching Experience** (UG: undergraduate; G: graduate)

**Arizona State University**

2017	Introductory Social Network Analysis (G)
2016	Social Capital (G)
2016- present	Public Service Research I (G)
2021 - present	Public Service Research II (G)

### **Georgetown University**

2008-2012      Research Theory and Communication in Science and Healthcare (UG)  
2012            Social Networks (UG)  
2011            Introduction to Sociology (UG)  
2003-2005      Social Networks (G)  
2004            Research Methods (G)

### **University of California, Irvine**

2002            Research Methods (UG)  
2002            Research Methods (G)  
2002            Experimental Methods (UG)  
2002            Social Psychology Practicum (UG)  
2001            Introduction to Social Psychology (UG)  
2001            Social Network Theory (G)

### **Stanford University**

2000            Social Exchange Theory (G)  
1997-2000      Social Psychology and Social Structure (UG)  
1996-2000      Senior Seminar: Writing in the Major (UG)  
1999            Topics in Mathematical Sociology (G)  
1999            Friendship, Status and Social Processes (UG)  
1999            Honors Seminar: Writing in the Major (UG)  
1998-1999      Sociology Methods IV: Structural Equations Models (G)  
1998            Advanced Seminar in Social Networks (G)  
1997            Seminar in Social Networks (G)  
1996            Social Networks (UG)

### **University of North Carolina, Chapel Hill**

1996            Social Networks (G)  
1995-1996      Data Analysis in Sociological Research (UG)  
1995            Statistics for Sociologists (G)  
1995            Social Psychological Theory (G)  
1994-1995      Measurement and Data Collection (UG)

### **University of California, Los Angeles**

1993            Mathematical Sociology (UG)  
1992            Introduction to Statistics (UG)

### **Awards and Honors**

2006            Team Appreciation Award, Booz Allen Hamilton  
2005            Team Appreciation Award, Booz Allen Hamilton  
2003            Team Appreciation Award, Booz Allen Hamilton  
1999-2000      Annenberg Faculty Fellow, Stanford University  
1998-1999      Annenberg Faculty Fellow, Stanford University  
1998-1999      Presidential Grant for Junior Faculty, Stanford University  
1997            Hoefler Prize for Excellence in Undergraduate Writing, Stanford University

### **Academic Appointments, Research Positions, Affiliations**

2022-present    **Senior Global Futures Scientist**, Julie Ann Wrigley Global Futures Laboratory, ASU  
2021-present    **Affiliate**, Center for Emergency Management and Homeland Security, ASU

- 2017-present **Affiliate**, Center for Organization Research and Design (CORD), ASU  
2019-present **Affiliate**, Center for the Future of War, ASU  
2017-present **Affiliate**, Institute for Social Science Research, ASU  
2009-2016 **Affiliate**, Department of Psychology, Georgetown University  
2011-2013 **Adjunct Professor**, Department of Sociology, Georgetown University  
2008-2010 **Adjunct Professor**, Department of Human Science, Georgetown University  
2006-2008 **Adjunct Professor**, Culture Communication and Technology, Georgetown University  
2003 **Independent Consultant** (Subject Matter Expert), Booz Allen Hamilton  
2000-2001 **Visiting Scholar**, Department of Sociology, UCLA  
1999-2001 **Consultant**, Institute for Physical Sciences, Los Alamos NM  
1991-1994 **Statistical Computer Consultant** to faculty, staff and students, Office of Academic Computing  
(Currently: *The Institute for Digital Research and Education*), UCLA  
1990-1994 **Research Assistant**, Center for the Study of Urban Poverty, UCLA  
- Conducted research on data management, regression, discriminant analysis and the use of  
statistical programs  
1993 **Lecturer**, Department of Sociology, UCLA  
1984-1992 **Research Assistant**, Department of Sociology, UCLA  
- Statistical analysis, database management and computer programming; projects included  
comparable worth, graphical presentation of population data, employment patterns among U.S. males  
and exchange theory  
1988-1991 **Manager of Modeling Applications**, American Computer Group  
- Statistical consultant to private list-management company  
1986-1990 **Academic Part Time / Computer Consultant**, Jet Propulsion Laboratory, NASA  
- Designed programs to aid Earth and Space Science Division to integrate computer systems. Lectured  
on relevant software. Procured computer systems and peripherals  
1989 **Teaching Assistant** for Lloyd Shapely, *2012 Nobel Memorial Prize in Economic Sciences*  
Department of Mathematics, UCLA  
- Topics included: Games in extensive form, 2-person zero sum games, saddlepoints, N-person games  
with transferable and nontransferable utility, linear programming  
1984-1986 **Computer Consultant**, Social Science Computing Facility, UCLA

## **Professional Service**

### **University Service (ASU)**

- 2017-19 Undergraduate Committee (School of Public Affairs)  
2019 Ad-hoc Committee on Non-Tenure Track Bylaws  
2016-19 Academic Senator for School of Public Affairs  
2016-17 Chair and Judge for Best Paper Award for CPSCS Doctoral Conference Best Paper Award  
2016-19 Judge for Institute for Social Science Research Graduate Student Poster Competition Award Committee  
2016 College of Public Service and Community Service Colloquium: Message Crafting Tips and Tricks  
2016 College of Public Service and Community Service Colloquium: Finding and Securing Research Support

### **International and National Associations**

- 2011-12 American Sociological Association Committee on Committees (member)  
2002 Referee for Graduate Student Paper Competition, ASA Mathematical Sociology Section  
2002 Discussant, Session on Terrorism, Public Choice Meetings in San Diego  
1998 Discussant, Session on Mathematical Sociology, ASA meetings in San Francisco  
1998 Committee to select Shills--Coleman award winner, ASA Theory Section.  
1998 Organizer, West Coast Small Group Processes Conference, Stanford University.  
1998 Session Chair, Game Theory and Networks, International Sunbelt Social Networks Conference in Barcelona,  
Spain

## **Editorial Service**

### **Editorial Boards**

2021-Present      Social Psychology Quarterly  
2003-Present      Journal of Mathematical Sociology  
1994-1996        *Social Forces* (Journal)

### **Proposal Reviews**

2010-2014        Army Research Office / Army Research Laboratory  
2010                Defense Threat Reduction Agency  
2008-2010        Air Force Office of Scientific Research (AFOSR)  
1996-present     National Science Foundation

### **Journal Reviews**

*American Journal of Sociology*  
*American Sociological Review*  
*BioScience*  
*Computers, Environment and Urban Systems*  
*Contemporary Sociology*  
*Journal of Mathematical Sociology*  
*Journal of Social Structure*  
*Journal of Technology Transfer*  
*Rationality and Society*  
*Social Forces*  
*Social Networks*  
*Social Network Analysis and Mining*  
*Social Problems*  
*Social Psychology Quarterly*  
*Sociological Theory*  
*Sociological Theory and Research*  
*Social Problems*  
*Tobacco Regulatory Science*

### **Press Reviews**

Princeton University Press  
University of Pennsylvania Press  
Cambridge University Press  
Roman & Littlefield

Programs Managed for the Army Research Office:

55859CHMRI	The Evolving Relationship Between Technology and National Security in China: Innovation, Defense Transformation, and China??s; Minerva Research Initiative (MRI); \$9,699K
55870CHMRI	Climate Change, State Stability, and Political Risk in Africa; Minerva Research Initiative (MRI); \$7,623K
61791LSMUR	Evolution of Cultural Norms and Dynamics of Socio-Political Change; MURI; \$6,250K
62511LSST1	Intelligent Automation Inc;Empires of Fortune: A Virtual Laboratory for Investigation of Collective Behavior and Inter-Group Conflict; STTR Phase 1; \$100K
61900LSMRI	The Military-Industrial-Scientific Complex and the Rise of New Powers: Minerva Research Initiative (MRI); \$1,000K
61884LSMRI	Quantifying Structural Transformation in China; Minerva Research Initiative (MRI); \$1,224K
55853CHMRI	Iraq??s Wars with the US from the Iraqi Perspective; Minerva Research Initiative (MRI); \$1,794K
61894LSMRI	China's Emerging Capabilities in Energy Technology Innovation and Development; Minerva Research Initiative (MRI); \$1,494K
54235LSMUR	Modeling Cultural Factors in Collaboration and Negotiation; MURI; \$6,875K
61915LSMRI	Strategic Response to Energy-related Security Threats; Minerva Research Initiative (MRI); \$173K
60190LS	An Examination of the Relationship between International Telecommunication and State Sponsorship of Terrorism; ARO Core Programs; \$296K
58261LS	Statistical Inference for Cultural Consensus Theory; ARO Core Programs; \$356K
61112LS	Energy and Environmental Drivers of Stress and Conflict in Multi-scale Models of Human Social Behavior; ARO Core Programs; \$500K
60627LSST1	High Risk Rapid Ethnographic Assessment Tool (HRREAT); STTR Phase 1; \$100K
54224LSMUR	Dynamic models of the effect of culture on collaboration and negotiation; MURI; \$6,250K
62514LSST1	SEmantic Context Aware Network Tools (SECANT); STTR Phase 1; \$100K
60628LSST1	Rapid Ethnographic Assessment and Data management Integration Toolkit (READ-IT); STTR Phase 1; \$100K
60315LS	Creating an Online Laboratory; ARO Core Programs; \$352K
62516LSST1	Inferring Social and Psychological Meaning in Social Media; STTR Phase 1; \$100K
57219RM	Administrative Support Services; ARO Core Programs; \$4,674K
58267LS	Games Theory, Culture and Institutional Path Dependence; ARO Core Programs; \$359K
62515LSST1	Social Media Analysis and Reasoning Tool (SMART); STTR Phase 1; \$100K
61929LSMRI	Global Value Chain Analysis of Food Security and Food Staples for Major Energy-Exporting Nations; Minerva Research Initiative (MRI); \$1,000K
60384LSCF	Algorithmic Decision Theory Workshop: The Science of Expert Opinion October 2011 Research Topic #9.5; ARO Conferences; \$10K
58153MAMUR	Measuring, Understanding, and Responding to Covert Social Networks: Passive and Active Tomography; MURI; \$6,241K