CURRICULUM VITAE
(Spring 2016)
Brian Castellani, Ph.D.

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Head, Complexity in Health Group
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RESEARCH PROFILE

Methods and methodology; complexity science/complex networks; computational modeling; medical sociology; community health (place and health); allostatic load (stress and coping); health trajectories and longitudinal analysis; social (clinical) psychology (mental health and addiction); globalization.

In terms of methods, my expertise includes mixed methods, i.e. quantitative, qualitative and computational simulation techniques. More specifically, I have expertise in computational modeling (including agent-based and mathematical modeling); dynamical systems theory; case-based modeling; comparative methods; artificial neural networks; data visualization; data science; social network analysis, statistics (for social surveys); longitudinal research (including quantitative/qualitative methods).

Education

1997	Ph.D.	Medical Sociology, Kent State University.
1992	M.A.	Clinical Psychology, Fuller Graduate School of Psychology.
1988	B.A.	Psychology, Kent State University.

Current Appointments

2012—present	*Professor of Sociology*, Kent State University.
2005—present	*Adjunct Professor of Psychiatry*, Northeast Ohio Medical University.

Previous Appointments

2006—2011	*Associate Professor,* Department of Sociology, Kent State University.
2002—2006	*Assistant Professor,* Department of Sociology, Kent State University.
1997—2002	*Assistant Professor,* Behavioral Sciences Department, Northeast Ohio Medical University.

Fellowships and Visiting Appointments

Autumn 2012	*Leonard Slater Fellowship*, University College, Durham University, UK.
August 2012	*Visiting Scholar*, Institute for Creative Technologies, University of Southern California, USA.

PUBLICATIONS

Books (Forthcoming or In Development)

- Castellani, B. *Human Complexity: From Simple Cells to Global Society*. Routledge, 2017.
- Castellani, B. *Global Commitment and its Defiance: A Meditation of Freud's Civilization and its Discontents*.

Peer Reviewed Articles in Review

- Rajaram, R., and B. Castellani "Kinetic energy and the limiting law of restricted diversity." *In review, Physica A.*

Books/Monographs

2015 Castellani, B. R. Rajaram, G. Buckwalter, M. Ball and F. Hafferty. *Place and Health as Complex Systems: A Case-Based Study and Empirical Test*. In *Springer Briefs in Public Health Series*. New York: Springer.

2009 Castellani, B. and F. Hafferty. *Sociology and Complexity Science: A New Area of Inquiry*. Germany: Springer.

2000 Castellani, B. *Pathological Gambling: The Making of a Medical Problem*. Albany New York: State University of New York Press.

Peer Reviewed Articles

2016 Castellani, B., and R. Rajaram. "Past the Power Law: Complex Systems and the Limiting Law of Restricted Diversity." Forthcoming in April 2016, *Complexity*.

2016 Buckwalter, G., B. Castellani, B. John, B. McEwen, A. Rizzo, K. O'Donnell and T. Seeman. "Allostatic Load as a Complex Clinical Construct: A Case-Based Computational Approach." *Complexity, Early View* http://onlinelibrary.wiley.com/doi/10.1002/cplx.21743/abstract

2016 Rajaram, R., and B. Castellani. "An Entropy Based Measure for Comparing Distributions of Complexity." *Physica A: Statistical Mechanics and Its Application*. http://www.sciencedirect.com/science/article/pii/S0378437116001734

2015 Castellani, B., R. Rajaram, J. Gunn, and F Griffiths. "Cases, Clusters, Densities: Modeling the Nonlinear Dynamics of Complex Health Trajectories." *Complexity, Early View* http://onlinelibrary.wiley.com/doi/10.1002/cplx.21728/full

2014 Castellani. B. "FOCUS: Complexity and the Failure of Quantitative Social Science." Discover Society, 4 November 2014, Issue 14. http://www.discoversociety.org/2014/11/04/focus-complexity-and-the-failure-of-quantitative-social-science/

2014 Castellani, B. "Fifteen Years a Complexity Scientist." *Theory, Culture & Society*, 9 October 2014 http://theoryculturesociety.org/brian-castellani-on-the-complexity-sciences/

2014 Rajaram, R, and B. Castellani. "The Utility of Non-equilibrium Statistical Mechanics, Specifically Transport Theory, for Modeling Cohort Data." *Complexity*, Early View

2013 Hafferty, F., B. Castellani, P. Hafferty, and P. Wojciech. "Anatomy and histology as socially networked learning environments: Some preliminary findings" *Academic Medicine,* Sept 88(9): 1315-1323.

2012 Rajaram, R and B. Castellani. "Modeling Complex Systems Macroscopically: Case/Agent-Based Modeling, Synergetics and the Continuity Equation." *Complexity*, 18(2): 8-17.

2012 Castellani, B and R. Rajaram. "Case-Based Modeling and the SACS Toolkit: A Mathematical Outline." *Computational and Mathematical Organizational Theory*, 18(2): 153-174

2012 Castellani, B., Rajaram, R., Buckwalter, J., Ball, M., and Hafferty, F. 2012. "Place and Health as Complex Systems: A Case Study and Empirical Test." *Proceedings of the Complexity in Health Group, Kent State University at Ashtabula*, 1(1):1-35.

2010 Hafferty, F. and B. Castellani. "The Increasing Complexities of Professionalism." *Academic Medicine*, Flexner Centenary Issues, 85(2): 288-301

2010 Castellani, B., Hafferty, F. and Ball, M. "E-Social Science from a Systems Perspective: Applying the SACS Toolkit." *Journal of Sociocybernetics*, 7(2): 89-106.

2009 Hafferty, F.W. and B. Castellani "A Sociological Framing of Medicine's Modern-Day

Professionalism Movement." *Medical Education*, 43(9): 826-828.

2003 Castellani, B. J. Castellani, and S. Spray. "Grounded Neural Networking: Modeling Complex Quantitative Data." *Symbolic Interaction*, 26(4): 577-589.

2003 Castellani, B. and J. Castellani. "Data Mining: Qualitative Analysis with Health Informatics Data." *Qualitative Health Research*, 13(7): 1005-1018.

2002 Castellani, B., R. Wedgeworth, J. Buckwalter, B. Taber, G. Bartlett, D. and D. Wear. "Do Clinical Faculty Endorse Preparation for Today's Changing Healthcare System?" *Journal of Managed Care Medicine,* 6(2):28-31.

2002 Wear D. and B. Castellani. "Medicine and Motherhood: The Experience of Double Consciousness." *Annals of Behavioral Science and Medical Education*, 8(2): 92-96.

2001 Castellani, B. "Is Pathological Gambling Really a Problem?–You Bet!" *Psychiatric Times*, 28(20):64-66.

2000 Castellani, B. and D. Wear. "Physician Views on Practicing Professionalism in the Corporate Age." *Qualitative Health Research*, 10(4): 490-506.

2000 Wear, D. and B. Castellani. "(Re)considering Context in Patient-Doctor Relationships." *Annals of Behavioral Science and Medical Education*, 7(1):13-22.

2000 Wear, D. and B. Castellani. "Development of Professionalism: Curriculum Matters." *Academic Medicine* 75(6): 602-611.

1999 Wear, D. and B. Castellani. "Conflicting Plots and Narrative Dysfunction in Health Care." *Perspectives in Biology and Medicine*, 42(4):544-558.

1999 Castellani, B. "Michel Foucault and Symbolic Interactionism: The Making of a New Theory of Interaction." *Studies in Symbolic Interaction*, 22:108-137.

1997 Castellani, B., R. Wedgeworth, E. Wootton, and L. Rugle. "A Bi-Directional Theory of Addiction: Examining Coping and the Factors Related to Substance Relapse." *Addictive Behaviors,* 22(1): 139-144.

1996 Castellani, B., E. Wootton, L. Rugle, R. Wedgeworth, K. Prabucki, and R. Olson. "Homelessness, Negative Affect, and Coping Amongst Veterans with Gambling Problems who Misused Substances." *Psychiatric Services*, 47(3):298-299.

1995 Castellani, B., and L. Rugle. "A Comparison of Pathological Gamblers to Alcoholics and Cocaine Misusers on Impulsivity, Sensation Seeking, and Craving." *The International Journal of the Addictions*, 30(3), 275-289.

1995 Rugle, L., and B. Castellani. "Understanding and Treating Pathological Gambling." *Treatment Today*, 7(3), 7-9.

Book Sections

2016 Dister, C., R. Rajaram and B. Castellani. "Modeling Social Complexity in Infrastructures: A Case-based Approach to Improving Reliability and Resiliency." In E. Mitleton-Kelly, A. Paraskevas, and C. Day's (Eds) *Handbook of Research Methods in Complexity Science: Theory & Application*. Edward Elgar Publishing, forthcoming 2016.

2014 Castellani, B. *Map of Complexity Science*. Cleveland, OH. Courtesy of Arts and Science Factory, LLC. In "9th Iteration (2013): Science Maps Showing Trends and Dynamics," *Places & Spaces: Mapping Science*, edited by Katy Börner and Todd N. Theriault. http://scimaps.org.

2014 Castellani, B. "Map of the Complexity Sciences." Art and Science Factory. Accessed December 5.1:928-940. Vienna: The Austrian Institute of Technology Press.

2013 Castellani, B., C. Schimpf and F. Hafferty. "Medical Sociology and Case-Based Complexity Science: A User's Guide." In Martin and Sturmburg (Eds) *Handbook of Systems and Complexity in Health*. Springer. pp. 521-535.

2011 Hafferty, F. and B. Castellani. "Theories of Social Relations." In Olle Sahler and John Carr's (Editors.) *The Behavioral Sciences and Health Care, 2nd Edition*, Cambridge MA: Hogrefe & Huber Publishers.

2010 Hafferty, F.W. and Castellani, B. "The Two Cultures of Professionalism: Sociology and Medicine." In *The Handbook of Health, Illness and Healing: blueprint for the 21st Century*, Bernice Pescosolido, Jack Martin, Jane McLeod, and Anne Rogers (ed.). New York: Springer.

2010 Castellani, B. "Complexity Art: An Introduction to the work of Damon Soule." In

Mars-1, Edonna, Vernon, Matsuyama, Soule, Choong Lee and Hardgrave's *Further*. New York.

2009 Hafferty, F.W. and Castellani, B. "The Hidden Curriculum: A Theory of Medical Education" In *Handbook of the Sociology of Medical Education*, Caragh Brosnan and Brian S. Turner (eds.). London: Routledge.

2007 Hafferty, F. and B. Castellani. "Theories of Social Relations." In Olle Sahler and John Carr's (Editors.) *The Behavioral Sciences and Health Care, 2nd Edition*, Cambridge MA: Hogrefe & Huber Publishers.

2006 Castellani, B. and F. Hafferty. "The Complexities of Professionalism: A Preliminary Investigation." In Delese Wear and Julie Aultman's (Editors)) *Professionalism in Medicine: Critical Perspectives*. New York: Kluwer Academic Publishers.

2006 Hafferty, F and B. Castellani. "Medical Sociology." In Clifton Bryant and Dennis Peck's (Editors) *Handbook of 21st Century Sociology.* California: Sage Publications.

2004 Castellani, J. and B. Castellani. "Data Mining Process and Analysis Strategies for Special Education Technology Decision-Making." In D. Edyburn, K. Higgins, & R. Boone (Editors), *Handbook of Special Education Technology.* Milwaukee, WI: Knowledge by Design, Inc.

2003 Hafferty, F. and B. Castellani. "Theories of Social Relations." In Olle Sahler and John Carr's (Editors) *The Behavioral Sciences and Health Care*, Cambridge MA: Hogrefe & Huber Publishers, pp. 109-114.

Academic Blog Posts

(http://sacswebsite.blogspot.com – (Between 2009 and 2016 a total 119,341 hits)

2014 Castellani, B. "The Limits of Social Engineering: A Complexity Science Critique." (4/28/14)

2014 Castellani, B. "The Limits of Statistics, Yet Another Example. Will Anything Change?" (4/14/14)

2014 Castellani, B. "Case-Based Complexity, Nonlinear Statistical Mechanics, and Modeling the Dynamics of Temporal Social Complexity." (4/12/14)

2014 Castellani, B. "Big Data, Little Questions!" (3/16/14)

2014 Castellani, B. "Videos, Videos and More Videos on Complexity, Agent-Based Modeling and all Things Complex." (2/10/14)

2014 Castellani, B. "Big Brains, Small Films, Benoît Mandelbrot, The Father of Fractals." (1/12/14)

2013 Castellani, B. "Non-Equilibrium Social Science." (12/19/13)

2013 Castellani, B. "Big Data, Big Data, and More Big Data." (12/10/13)

2013 Castellani, B. "Complexity Map Wins Award for Mapping Science." (12/10/13)

2013 Castellani, B. "Data Stories: 25 Podcasts on Data Visualization by Enrico Bertini and Moritz Stefaner." (8/19/13)

2013 Castellani, B. "The Mysteries of Life and the Cosmos Are too Complex, Even for Science; So, Humility Please in all Endeavors." (7/27/13)

2013 Castellani, B. "New Version of Complexity Map – The Complexity Map Version 5." (7/13/13)

2013 Castellani, B. "Social Science Departments Need to Innovate the Teaching of Method by Embracing New Approaches to Big Data, Statistics, Computational Modeling and Complexity." (7/9/13)

2013 Castellani, B. "The Complexities of Space and Place." (7/8/13)

2013 Castellani, B. "Complexity Map Translated into Portuguese." (6/24/13)

2013 Castellani, B. "Punching Clouds; Or, Complexity Science Meets Public Decision Making." (5/11/13)

2013 Castellani, B. "Keynes Was Right: Government Austerity in Times of Trouble Is a Bad Idea." (4/24/13)

2013 Castellani, B. "Complex Systems Are not Networks, They Are Cases." (4/12/13)

2013 Castellani, B. "Complexity Science and the UK's new Quantitative Methods (QM) Programme." (4/8/13)

2013 Castellani, B. "Art as Research, Expanding the Ideas of Visual Complexity." (1/31/13)

2013 Castellani, B. "Evolutionary Psychology, I Don't Think We Can Date." (1/13/13)

2012 Castellani, B. "Complexity and Architecture." (11/30/12)

2012 Castellani, B. "Case-Based Modeling and Sociology and the Complexity Sciences." (11/25/12)

2012 Castellani, B. "New Version of Complexity Map." (11/23/12)
2012 Castellani, B. "Tomás Saraceno, HangarBicocca and The Center for Art, Science and Technology at MIT" (11/15/12)
2012 Castellani, B. "Complexity Art, Latour, Global Compositions and the Agency of Unrealized Projects." (10/21/12)
2012 Castellani, B. "Computational Art, Complexity, Design." (9/12/12)
2012 Castellani. B. "Wolfe von Lenkiewicz: Art History, Complexity and the (Im)Possibility of New Compositions and Cosmologies." (9/1/12)
2012 Castellani, B. "Modeling Complex Systems Macroscopically: Case/Agent-Based Modeling, Synergetics, and the Continuity Equation." (8/9/12)
2012 Castellani, B. "Saraceno, Latour, Networks, Complexity and Visual Complexity." (7/20/12)

2012 Castellani, B. "A Complex Systems Science Approach to Healthcare Costs and Quality in the USA." (6/29/12)
2012 Castellani, B. "Robert Kosara and the Fields of Visual Complexity, Information Design and Complexity Art." (6/27/12)
2012 Castellani, B. "Complexity Art and Visual Complexity." (6/27/12)
2012 Castellani, B. "Complexity Art and the Complex Systems Society." (6/27/12)
2012 Castellani, B. "Complexity as an Alternative Possible Reality." (6/11/12)
2012 Castellani, B. "Tomás Saraceno, Complexity Art and Networks." (6/1/12)
2012 Castellani, B. "Case-Based Method and Complexity Science, Part II (The SACS Toolkit)." (2/14/12)
2012 Castellani, B. "Case-Based Method and Complexity Science, Part I (Byrne, Ragin, Complexity and Case-based Method)." (2/2/12)
2012 Castellani, B. "I am truly an Embodied Mind, A Socio-Biological Concert of Self." (1/22/12)
2012 Castellani, B. "Proceedings of the Complexity in Health Group." (1/5/12)
2012 Castellani, B. "Definitional Test of Complex Systems." (1/5/12)
2012 Castellani, B. "Place and Health as Complex Systems: A Case Study and Empirical Test."(1/5/12)
2011 Castellani, B. "Steven Pinker versus Complexity, Part 11."
2011 Castellani, B. "Steven Pinker versus Complexity, Part 1."
2011 Castellani, B. "Psychology and Complexity Science Website."
2011 Castellani, B. "Complexity, Professionalism and the Hidden Curriculum."
2010 Castellani, B. "Complexity Theory, Managerial Science and the Problems of Definitions." (8/29/10)
2010 Castellani, B. "Making Definitions of Complexity Clear." (8/22/10)
2010 Castellani, B. "Defining and Testing Complex Social Systems." (8/18/10)
2010 Castellani, B. "How Should Complex Systems Be Tested." (6/13/10)
2010 Castellani, B. "Complexity Definitions Need to Be Tested as a Whole."
2010 Castellani, B. "Operationalizing Metaphor."
2010 Castellani, B. "Is What You Are Studying a Complex System?"
2010 Castellani, B. "Testing the Validity of Complex Systems."
2010 Castellani, B. "Homage to Michelangelo and Complexity."
2010 Castellani, B. "The Increasing Complexities of Professionalism." (2/7/10)
2010 Castellani, B. "Cesar Hidalgo: Complexity Art and Science." (1/8/10)
2009 Castellani, B. "What Is Generative Art? Complexity Theory as a Context for Art Theory." (10/13/09)
2009 Castellani, B. "Grounded Neural Networking." (9/1/09)
2009 Castellani, B. "Foucault and Complexity." (6/23/09)
2009 Castellani, B. "The Built Environment: Communities as Complex Systems." (6/17/09)
2009 Castellani, B. "Social Science & Medicine: Special Edition on Health & Complexity." (5/30/09)
2009 Castellani, B. "Interview with David Byrne." (5/22/09)
2009 Castellani, B. "Health & Place: An International Journal." (5/20/09)
2009 Castellani, B. "Placing Health by Tim Blackman." (5/19/09)
2009 Castellani, B. "Three Different Approaches to Community Health." (5/18/09)
2009 Castellani, B. "SACS Toolkit: E-Social Science from a Systems Perspective." (5/8/09)

2009 Castellani, B. "Assemblage: Complexity Science Art." (4/25/09)
2009 Castellani, B. "The SAGE Handbook of Case-Based Methods." (4/7/09)
2009 Castellani, B. "Grounded Neural Networking." (4/1/09)
2009 Castellani, B. "Qualitative/Narrative Complexity Science." (3/31/09)
2009 Castellani, B. "Is Michel Foucault a Complexity Scientist?" (3/17/09)
2009 Castellani, B. "Reprise: Intersecting the Study of Social and Complex Networks." (3/10/09)
2009 Castellani, B. "Complexity 5." (3/4/09)
2009 Castellani, B. "Widening the Study of Global Networks." (3/3/09)
2009 Castellani, B. "What Are We? Complexity Science, Complexity Theory, Complex Systems, Complex Self-Organizing Systems, Etc?" (3/1/09)
2009 Castellani, B. "What Does 6-Degrees of Separation Mean? Or, Why Sociology Is Important to Complexity Science." (2/27/09)
2009 Castellani, B. "What Happened to Neural Networking?" (2/23/09)
2009 Castellani, B. "CALRESCO: A Good Educational Website on Complexity." (2/19/09)
2009 Castellani, B. "Springer Book on Sociology and Complexity Science." (2/18/09)

Book Reviews

2013 Castellani, B. "The Transformation of Contemporary Healthcare: The Market, the Laboratory, and the Forum." April 2013, *Sociology of Health and Illness*.
2012 Castellani, B. "Social Understanding: On Hermeneutics, Geometrical Models and Artificial Intelligence (Theory and Decision Library A:). *Journal of Artificial Societies and Social Simulation*. ***http://jasss.soc.surrey.ac.uk/15/2/reviews/4.html***
2010 Castellani, B. "A Review of Mind and Society: Special Issue on Social Simulation, Volume 8, Number 2, 2009." *Journal of Artificial Societies and Social Simulation*.
1996 Castellani, B. Adolescent Gambling, Is It a Problem?: A Review of a Recent Book by Griffiths. *Addiction,* 91(10):1556-1557.

Encyclopedia Entries

2009 Castellani, Brian. *Social Complexity*. Wikipedia
2009 Castellani, Brian. 2009. *Complexity Map*. Wikipedia

Educational Resource

2009 Castellani, Brian. 2009 The Complexity Map: An Internet Resource.
Map was jury-selected to be part of the Science Maps Showing Trends and Dynamics (2013) for the Places & Spaces: Mapping Science

Websites

2010 Castellani, B., and M. Ball. The Complexity and Health Group Website
2009 Castellani, B. The Sociology and Complexity Science Blog
2008 Castellani, B. Sociology and Complexity Science Website

RECENT GRANT ACTIVITY

Reviewer

2015 - present (**Reviewer**) *"HORIZON 2020 FET-OPEN."*
2014 (**Reviewer**) Alberta Gambling Research Institute 2014 Grants Program
2014 (**Reviewer**) National Science Foundation Cultural Anthropology Grant Program
2014 (**Reviewer**) Università degli Studi di Macerata, International Research Office, Italy.
2014 (**Reviewer**) Future Research Leaders (early scholars award) Economic and Social Research Council, UK.
2013 (**Reviewer**) "*Partnership University Fund*," through the Office for Science & Technology (OST) of the Embassy of France in the United States of America
2012 (**Reviewer**) "*Dynamics of Multi-Level Complex Systems Area*" of the *Future and Emerging Technologies (FET) Proactive* in DG Information Society and Media (DG INFSO) of the European Commission, Call 8.

Consultant

2013 (**Consultant**) *La construction de la dépendance au jeu d'argent comme problème de santé publique. Genèse et usages d'une catégorie* (translated: The social construction of gambling addiction as a public health problem. Genesis and uses of a category) Directed by prof. Sophie Rodari, Applied University of Social Work (Haute Ecole de Travail Social), Geneva, and prof. Ellen Hertz, Institute of Ethnology, University of Neuchâtel, Switzerland. Grant of the Swiss National Science Foundation, Bern (2 years) **UNDER REVIEW**

2013 (**Consultant) YEAR 2** of *Stress Resilience in Virtual Environments: The STRIVE Project*. Principal Investigator: J. Galen Buckwalter. Amount: $1,250,000. The Telemedicine and Advanced Technology Research Center (TATRC), U.S. Army Medical Research and Material Command (USAMRMC). **AWARDED**

2012 (**Consultant)** *Office of Naval Research Stress Sensing Project*. Principal Investigator: J. Galen Buckwalter. Amount: $850,000. Office of Naval Research. **AWARDED**

2011 (**Consultant)** *Stress Resilience in Virtual Environments: The STRIVE Project*. Principal Investigator: J. Galen Buckwalter. Amount: $1,250,000. The Telemedicine and Advanced Technology Research Center (TATRC), U.S. Army Medical Research and Material Command (USAMRMC). **AWARDED**

PI or Co-PI Grants

2014 (**Co-PI)** Exploring the use social network analysis to understand faculty development impacts. *AMEE Research Grant, 2014-2015*, (PI) Lieff S, Department of Psychiatry, University of Toronto Medical School, **AWARDED,** $15,295.

2013 (**Co-PI**) Complexity and Method in the Social Sciences: An Interdisciplinary Approach. Research Seminars Competition 2012-2013. **Economic and Social Research Council**, **(PI)** Emma Uprichard, Centre for Interdisciplinary Methodologies, Warwick University, **AWARDED** £29,603

2013 (Co-PI) Controlling Community Health across Time: Cases, Regions and Densities versus Nodes, Sub-graphs and Networks) *Strategic Award, the Warwick Research Development Fund, Warwick University,* **(PI)** Emma Uprichard, Centre for Interdisciplinary Methodologies, Warwick University, **AWARDED** £9,709

2013 **(Co-PI)** Complexity and Case Based Methods Research *Development Award, Warwick Research Development Fund, Warwick University,* **(PI)** Emma Uprichard, Centre for Interdisciplinary Methodologies, Warwick University, **AWARDED** £2,647

2010 **(PI)** Field Experience to Establish a Center for Complexity in Health. Professional Development Award, Regional Campuses, Kent State University. **AWARDED** $10,000.

In Progress or Under Review

2014 (PI) Collaborative Research, US-UK: Modeling Dynamical, Aggregate Health Trajectories Across Time: A Case-Based, Density, Network Approach. *Catalyzing New International Collaborations (CNIC), National Science Foundation*. (PI) Brian Castellani, Kent State University, (Co-PI) Rajeev Rajaram, Kent State University. (The collaboration is with Emma Uprichard and colleagues, Centre for Interdisciplinary Methods and Centre for Complexity Science, Warwick University, UK.) **UNDER REVIEW**, $67,000.

2014 (Co-PI) Risk-Based Compliance: A Complex Systems and Network Perspective: Mapping critical trends and patterns among key players in the power industry and their corresponding misoperations, violations and risks. Proposal submitted to *ReliabilityFirst Corporation,* (PI) Carl Dister, ReliabilityFirst Corporation, (PI) Brian Castellani, Kent State University, (PI) Rajeev Rajaram, Kent State University, **UNDER REVIEW,** $40,000**.**

SELECTED PRESENTATIONS

Byrne, David, B. Castellani and E. Uprichard 2015 to 2017. Three-year seminar, meeting three times a year, at the University of Warwick. Complexity and Interdisciplinary Methods, based on a seminar grant from the ESRC – see grants for more information.

Byrne, David, B. Castellani and E. Uprichard 2013. "Understanding Complex Social Systems: The Use of Multiple Methods to Provide Multiple Perspectives." *European Consortium Political Research*.

Hafferty, F and B. Castellani 2012. "Medical School Mission Statements: An Analysis of Behavioral Science Themes." Association for the Behavioral Sciences and Medical Education, 42nd Annual Meeting, San Antonio, TX, October 4-6, 2012.

Castellani, et al 2011. "Complexity, Professionalism and the Hidden Curriculum in Medical Education." Pre-Conference Workshop, at the International Association for Medical Education Conference, Vienna, Austria.

Castellani, B and R. Rajaram 2011. "Case-Based Modeling and the SACS Toolkit: A Mathematical Outline." Eighth International Conference on Complex Systems, hosted by the New England Complex Systems Institute (NESI), Boston, MA, June 6th.

Castellani, B. and J. Castellani 2010. "The Reflexive Strengths of the SACS Toolkit for Modeling Complex Systems. International Sociological Association Meetings, 2010, Gothenburg, Sweden.

Hafferty, F and B. Castellani 2010 "Professionalism and Mayo: An Opportunity to Redefine the Future of Medicine," Department of Medicine Grand Rounds and The S. Brenndan Moore Annual Lecture, Mayo Clinic, Rochester, MN, January 25, 2010.

Hafferty, F., Castellani B., and Antiel 2010 "New Tools for Mapping Medicine's Modern Day Professionalism Movement," Faculty of Medicine, McGill University, Montreal, Canada, February 4, 2010.

Hafferty, F., and B. Castellani 2010. "Decoding the Learning Environment of Medical Education: A Hidden Curriculum Perspective on Faculty Development as a Process of Tacit Learning." Background paper for a conference on *A 2020 Vision of Faculty Education Development Across the Medical Education Continuum*, Baylor College of Medicine, Houston, TX, February 26, 2010.

Hafferty, F. and B. Castellani 2009 "The Complexities of Professionalism: A Research Agenda," Presentation in preparation for a special Flexner Centennial Issue of Academic Medicine, Association of American Medical Colleges, Washington, D.C., April 20, 2009

Castellani, B. Hafferty, F and Ball, M. "The SACS Toolkit: E-Social Science from a Systems Perspective." Sociocybernetics Conference, Urbino Italy, June 2009.

Castellani, B. "Pareto, Schelling and Social Mobility: Addressing the U.S. Housing/Financial Crisis." ICAM Conference, *Center for the Study of Complex Systems*, Department of Physics, *University of Michigan*, Ann Arbor MI, November 2008.

Hafferty, FW and Castellani, B. "Using Social Network Analysis to Study Medical Education." *Pritzker School of Medicine*, October 24, 2008.

Hafferty, FW and Castellani, B. "Professionalism as a Social Movement." *American College of Physicians: Internal Medicine* 2008, Washington, D.C., May 15, 2008.

Castellani, B. "The Sociology and Complexity Website: An E-learning Tool for Social Scientists." ICAM Conference, *Center for the Study of Complex Systems*, Department of Physics, *University of Michigan*, Ann Arbor MI, November 2007.

Hafferty, FW and Castellani, B. "Professionalism and the Hidden Curriculum." *Brody School of Medicine*, Greenville, NC, January 15, 2007.

Hafferty, FW and Castellani, B. "The Hidden Curriculum: A Faculty Development Workshop. *Mayo Medical School*, Rochester MN, April 17, 2007.

Hafferty, F. and B. Castellani. 2007. "Exploring Professionalism: A Workshop for Fourth Year Medical Students." *Northeastern Ohio University College of Medicine*, Ohio.

Castellani, B. 2005 Greed and the American Dream of Success. *Seven Deadly Sins Series*. Kent State University, Ashtabula Campus, Ashtabula, Ohio, USA. (Spring 2005).

Castellani, B. 2005. "The Sociology of Complexity: Tools for 21st Century Sociology." *Society for the Study of Symbolic Interactionism Conference*. Philadelphia, PA.

Castellani, B. 2003. "Teaching Culture to Medical Students." *The Felix Padilla Conference on Teaching Diversity in Higher Education*, KSU, Ashtabula.

Castelllani, B., and F. Hafferty 2002. "The New Professionalism in Medicine: What Medical Sociology Has to Offer." Organizer and Presenter. *The Annual American Sociology Association Meetings*. Chicago: Illinois.

Hafferty, F., Eckenfelds, E., Castellani, B., and Calderon, J. 2001. The Perils of Becoming an Altruistic Physician: The "Me" Generation Enters Medical School." *The 30th Annual Meeting of the Association for the Behavioral Science and Medical Education*. Cape Cod.

Castellani, B. and D. Deckert 2000. What Does Culture have to do with Mental Health? *The 29th Annual Meeting of the Association for the Behavioral Science and Medical Education*. Santa Fe, New Mexico.

Castellani, B. 2001 Development of Professionalism: Curriculum Matters. *Joint Meeting of the Association for Surgical Education and the Association of Program Directors in Surgery*. Nashville, Kentucky, USA (Spring 2001).

Castellani, B. J. Varley, and D. Deckert 2000. Isn't Cultural Sensitivity Just Competent Psychiatry?: Teaching Culture to Psychiatry Residents. *The 29th Annual Meeting of the American Association of Directors of Psychiatric Residency Training*. Puerto Rico

Castellani, B. and S. Lee Spray 1999. Decentralization and the Professional Practice of Medicine. *The Annual American Sociology Association Meetings*. Chicago: Illinois.

Calderon, Jose, Fred Hafferty, Brian Castellani, Kenneth Wolf, Nancy Chin, and Alicia Monroe 1999. AIME: Dvelopment of a Template for Auditing the Preparedness of Medical Schools to Conduct Programs in Cultural Diversity. *28th Annual Meeting of the Association for the Behavioral Science and Medical Education*. Savannah, Georgia.

Castellani, B. and B. Minogue 1999. "Managed Care and Foregoing Treatment." *Annual Bioethics Network of Ohio (BENO) Conference*. Cleveland, Ohio.

Castellani, B and P. Hartung 1998. Preparing Medical Students for Careers in the Changing Health Care Context. *27th Annual Meeting of the Association for the Behavioral Science and Medical Education*. Jackson Hole, Wyoming.

Castellani, B. 1998. Pathological Gambling: A Case Study in the Sociology of Knowledge. *The Annual American Sociological Association Meetings*. San Francisco: California.

Castellani, B. 1998 Pathological Gambling in Historical Context. *The 12th National Conference on Problem Gambling*. Las Vegas: Nevada.

Castellani, B. 1998. Pathological Gambling, the Making of a Medical Problem. *The 5th Annual Florida Conference on Compulsive Gambling*. Orlando, Florida.

Castellani, B. 1997. Pathological Gambling, the Birth of a New Medical Object of Investigation. *The 22nd Annual Meeting of the Association for Humanistic Sociology*. Pittsburgh,PA.

Castellani, B. 1997. Discursive Negotiations: A New Theory of Knowledge. *Society for the Study of Symbolic Interactionism Conference*. Toronto, Canada.

Castellani, B. 1997. "Constructing the Classroom as a Postmodern, Student-Run Government."' *The Annual American Sociological Association Meetings*. Toronto, Canada.

Castellani, B. 1996. "Humanistic Teaching Methods." *The 21st Annual Meeting of the Association for Humanistic Sociology*. Hartford, Connecticut.

Castellani, B. 1996. "Symbolic Interaction and the Postmodern Terrain." Discussant for four papers by Stanford Lyman, Douglas Kellner, Jonathan Epstein, and Simon Gottschalk. *Society for the Study of Symbolic Interactionism Conference*. New York.

Castellani, B. 1996. "Are the Rules of Engagement Between Philosophy and the Social Sciences Hostile or Friendly: Comments from a Sociologist of Knowledge." *The 3rd Annual Kent State University May 4th Philosophy Graduate Student Conference.*

Castellani, B. 1995 "Interpretive Archeology: Knowledge, Power, and Social Practice." *The Association for Humanistic Sociology Conference.* Columbus, Ohio.

Castellani, B. and F. Falk 1994. "Smoothing Polynomials Using Partial Least Squares Estimates." *The Midwest Sociological Association Conference.* St. Louis, Missouri.

Castellani, B. and C. Ritter 1994. "Interaction Terms: Using Partial Least Squares Estimates." *The Midwest Sociological Association Conference.* St. Louis, Missouri.

RECENT HONORS AND AWARDS

Recent Award Highlights

2013 Complexity Map was selected to become part of the Science Maps Showing Trends and Dynamics (2013) for the Places & Spaces: Mapping Science

2012 Nominated for the Outstanding Scholar of the Year Award, Kent State University

2010 Nominated in 2010 by the Provost of Kent State University as one of three professors to represent Kent State University in the *2010 Carnegie Foundation for the Advancement of Teaching U.S. Professors of the Year Award.*

2010 Received the *Academic Medicine Classics Award* (given by the journal to its highest citation articles) for my article "The Development of Professionalism: Curriculum Matters"

2011 In summer 2011 was highlighted in Ashtabula Living Magazine for my excellence in teaching.

2011 In spring 2011 asked by Dr. David Lane (Rice University) to be a reviewer on his *NSF grant* to revise his *Rice Virtual Lab in Statistics* and his *HyperStat Online Statistics Textbook*—click here to see website.

2009 Invited in 2009 to be on the board for the *Center for Complex Systems Studies* at Kalamazoo College, one of the top ten educational centers on complexity in the USA—click here to see the center.

2003 Inducted into the *Kent State University Chapter* of the *Golden Key International Honor Society*.

2002 Nominated for the *Arts and Sciences Distinguished Teacher Award*.

2002 *Faculty of the Year Award* at Kent State, Ashtabula.

Recent Invited Addresses

2014 Keynote Speech "Modeling Complexity: A Case-Based Density Approach." *Simplifying Assumptions in Models of Complex Systems: Break, Make Justify*, University of Birmingham, 7 May 2014.

2014 Keynote Speech *10th Annual Alberta Gambling Research Institute's Conference*. Banff, Alberta, April 4 and 5, 2014.

2013 Castellani, B and R. Rajaram 2013. "Modeling Big Data Longitudinally: The Importance of Cases, Densities, Trajectories, and Complexity." Invited presentation at the *Centre for Interdisciplinary Methodologies, Warwick University*. November 2013

2013 Castellani, B and R. Rajaram 2013. "Managing the Dynamical Complexities of Community, Place and Health: Control Theory, Network Science, Case-Based Modelling and Complexity Theory." Invited presentation at the *Centre for Interdisciplinary Methodologies, Warwick University*. August 2013.

2012 Invited to run a Master Class on Complexity, *School of Applied Social Sciences Seminar Series 2012-2013*, Durham University, U.K. (Fall 2012).

2011 Invited to be the guest speaker and complexity methods expert for the *National Board of Internal Medicine (ABIM) Foundation's Roundtable on Professionalism in Practice*, Philadelphia, PA.

2011 Invited in summer 2011 to co-chair a pre-conference session in Vienna on complexity science and medical education at the *2011 Association for Medical Education in Europe Conference*—click here to see program.

2011 Invited, spring 2011, to present on the SACS Toolkit at the *Eighth International Conference on Complex Systems*, hosted by the *New England Complex Systems Institute* (NESI), Boston, MA. NESI is one of the top five complexity centers in the United States.

TEACHING

Introductory Courses

Introduction to Sociology (SOC 12050)

Health/Medical Sociology Courses

Sociology of Health and Health Care (SOC 42563)
Culture and Psychiatry (Psychiatry Residency Program, Northeast Ohio Medical University)
Medical Sociology Lectures (Northeast Ohio Medical University)
Community Health Science Practicum (Northeast Ohio Medical University)

Methods and Methodology Courses

Special Topics: Complexity Science and Method (SOC 42905)
Statistics/Data Analysis (SOC 32220)
Data Analysis Lab (SOC 32221)
Epidemiology and Biostatistics (Northeast Ohio Medical University)
Advanced Data Analysis—Network Analysis, Artificial Intelligence, Agent-Based Modeling,
Advanced Data Analysis—Cluster Analysis (SOC 42224)
Special Topics: Sociology of Complexity and Computational Modeling (SOC 42095)
Sociological Analysis (SOC 22100)
Researching Society (SOC 32210)
Medical Sociology Research Skills (ILS 12037)
Medical Sociology Practicum (ILS 12036)

Theory Courses

Sociological Theories (SOC 42126)

Social Psychology Courses

Individual and Society (SOC 32400)

Globalization/International Studies Courses

Global Social Problems (SOC 22778)

Online (Asynchronous learning) Courses

Introduction to Sociology (SOC 12050)
Sociology of Health and Health Care (SOC 42563)
Statistics/Data Analysis (SOC 32220)
Data Analysis Lab (SOC 32221)
Global Social Problems (SOC 22778)

Recent Dissertations and Theses

- Stian Rice, Doctoral Candidate, Department of Geography, Kent State University, 2017
- Sandra Najar, Doctoral Candidate, Institute of Applied Linguistics, Kent State University, 2017
- Diana Kingsbury, Doctoral Candidate, Public Health, Kent State University, 2017
- Corey Schimpf, Doctoral Candidate, Systems Engineering, Purdue University 2015
- Scot Tribuzi, Doctoral Candidate, Hospitality Management, Kent State University, 2015
- Salem Othman, Doctoral Candidate, Computer Science, Kent State University, 2014
- Victor Lee, Doctoral Candidate, Computer Science, Kent State University 2012
- David Skubby, Doctoral Candidate, Sociology, University of Akron, 2011
- Corey Schimpf, Masters Candidate, Sociology, Purdue University 2010

Recent Supervised Internships

- Michael Ball, Masters candidate in Technology. Two semesters (6 credits total) supervised as he worked in the Center for Complexity in Health, Robert S. Morrison Health Sciences Building, Kent State University at Ashtabula.
- Kenneth Carvalho, Masters candidate in Technology. Two semesters (6 credits total) supervised as he worked in the Center for Complexity in Health, Robert S. Morrison Health Sciences Building, Kent State University at Ashtabula

Undergraduate Mentoring and Advisory Positions:

- Sociology Advisor, KSU Ashtabula Campus (2003 – present)
- Advisor, Sociology Club, KSU Ashtabula Campus (2003 – present) Undergraduate

SERVICE ACTIVITIES

University Committees:

- Member, Provost Advisory Committee for Regional Campus Reappointment, Tenure and Promotion (2007-2010, 2013 – present)
- Vice-Chair, Regional Campus Faculty Advisory Committee (2010)
- Member, Regional Campus Faculty Advisory Committee (2007-2010, 2013 – present)
- Member, KSU Diversity Council (2003 – 2006)

Campus Committees:

- Chair, Faculty Council, KSU Ashtabula—(2007-2010, 2013—Current)
- Member, Regional Campus, Faculty Advisory Committee (2007-2010, 2013—Current)
- Chair, RTP Committee (2007-2010, 2013—Current)
- Chair, NTT Reappointment Committee (2007-2010, 2013—Current)

Standing Sociology Department Committees:

- Member, Faculty Advisory Council, Sociology Department (2005 – 2007 & 2011- present)
- Member, RTP Committee (2012 – present)
- Member, Department Integration Committee for Sociology and Criminal Justice (2010)
- Member, Online Learning Committee (2009)

Conferences and Seminars

- The first International Conference on Systems and Complexity in Health. Co-hosted by Georgetown University Medical Center, November 13-14, 2014. Organizing Committee member. http://complexityandhealth.georgetown.edu
- ESRC Seminar on Complexity and Method in the Social Sciences. Three-year seminar based on an ESRC grant that my UK colleagues and I received – see Grants above for details. http://blogs.cim.warwick.ac.uk/complexity/about-us/

Book Series Editor

Editorial Board – Brian Castellani, Emma Uprichard and David Byrne
Routledge, Complexity in Social Science Series

Journal Reviews:

Editorial Board
Palgrave Communications
International Journal of Complexity for Leadership and Management

Ad hoc reviewer
Journal of Artificial Societies and Social Simulation
Milbank Quarterly
Journal of Evaluation in Clinical Practice
Sociology of Health and Illness
Social Science and Medicine
Academic Medicine
Medical Education
Addiction
Journal of Vocational Behavior
Political Studies
Psychiatry Research
Qualitative Health Research
Symbolic Interaction
Health Sociology Review