

Ethno-Sociology (2007)
DOUGLAS R. WHITE, UC-Irvine

Abstracts and supplementary: <http://eclectic.ss.uci.edu/~drwhite/links2pdf.htm>
Practicum <http://eclectic.ss.uci.edu/~drwhite/pub/Ethno-Sociology-Practicum.pdf>

George Marshall (1947) spoke of the enormous complexity facing the postwar era that made it “exceedingly difficult for the man in the street to reach a clear appraisal of the situation.” Bill Gates, echoing Marshall in a Harvard address (2007) sixty years later, “thought about how a host of technological” advances have helped erase those complexities.” “The internet for instance, allows the best minds in an area to work together on common problems in ways they couldn’t do before” (WSJ 6-8-07).

Gates, however, has it wrong. Selection of the best minds in an area to work with common technology to solve problems has not made complexity more comprehensible, and the problems created are often worse than those solved. What Gates does not understand is that it is diverse minds working at different scales and different speeds on different platforms that need to be understood and nurtured, through understanding and nurturing of layer-embedded networks, which are not a reduction of complexity to simplicity but a much more profound and realistic appraisal of the human situation in all its manifest conditions and historicities.

-- Doug White

COMPARATIVE: interdependence, autocorrelation, regionality, complex temporal interaction

1968 Societal Research Archives System: Retrieval, Quality Control and Analysis of Comparative Data. *Social Science Information* 7(3): 78-94. <http://eclectic.ss.uci.edu/~drwhite/SRAS/SRAS1968.pdf>

1969 Standard Cross-Cultural Sample (G. P. Murdock & drw) *Ethnology* 8:329-369.
<http://eclectic.ss.uci.edu/~drwhite/pub/SCCS1969.pdf>

1982 Multivariate Modeling with Interdependent Network Data. (M. M. Dow, drw, M .L. Burton) *Behavior Science Research* 17:216-245.

1982 Network Autocorrelation: A Simulation Study of a Foundational Problem in the Social Sciences (M.M. Dow, M.L. Burton, drw) *Social Networks* 4(2):169-200. <http://tinyurl.com/yuvqrv>

1988 Rethinking Polygyny: Co-Wives, Codes, and Cultural Systems. *Current Anthropology* 29:529-558, 568-572.
<http://eclectic.ss.uci.edu/~drwhite/pw/Polygyny1988.pdf>

1991 World-System and Regional Linkages as Causally Implicated in Local Level Conflicts at the Ethnographic Horizon. *Zeitschrift fur Ethnologie* 115:111-37. <http://eclectic.ss.uci.edu/~drwhite/pub/Zeitschrift.pdf>

2007 Population Dynamics and Internal Warfare: a Reconsideration (P. Turchin, A. Korotayev) *Social Evolution and History* <http://www.eeb.uconn.edu/people/turchin/PDF/PopWar%20preprint.pdf>


2007 Standard Cross-Cultural Sample. *International Encyclopedia of the Social Sciences*, 2nd edition.
<http://eclectic.ss.uci.edu/~drwhite/pub/SCCSencycl1.1.pdf>

MATHEMATICAL FOUNDATIONS: process, optimization, structural contingency, decomposing roles and groups

1974 Mathematical Anthropology. In J. J. Honigmann, ed., *Handbook of Social and Cultural Anthropology*, pp 369-446. <http://eclectic.ss.uci.edu/~drwhite/pub/MathAnth74-1.pdf>

1977 Entailment Theory and Method: A Cross-Cultural Analysis of the Sexual Division of Labor. (drw, M. Burton, L. Brudner) *Behavior Science Research* 12:1-24. <http://eclectic.ss.uci.edu/~drwhite/pub/Entail77.pdf>

1983 Graph and Semigroup Homomorphisms. (drw & K. P. Reitz) *Social Networks* 5:193-234.
<http://eclectic.ss.uci.edu/~drwhite/pub/whitereitz.pdf>

- 1995 The Distribution of Avoidances in Human Societies. (drw & R Wille), fig. p.5, *in*, **Lattice Theory and its Applications: In Celebration of Garrett Birkhoff's 80th Birthday**, by K. A. Baker, G. Birkhoff, and R. Wille. Lemgo, Germany: Heidermann Verlag. <http://eclectic.ss.uci.edu/~drwhite/Avoidances.htm>
- 1993 Using Galois lattices to represent network data. (L. C. Freeman & drw) **Sociological Methodology** 1993 (23):127-146. <http://eclectic.ss.uci.edu/~drwhite/pw/Galois.pdf> <http://tinyurl.com/2v9pvg>
- 2001 The Cohesiveness of Blocks in Social Networks: Node Connectivity and Conditional Density. (drw & Frank Harary), **Sociological Methodology** 2001 (31):305-359. <http://eclectic.ss.uci.edu/~drwhite/sm-w23.PDF>
<http://www.ingentaconnect.com/content/bpl/some/2001/00000031/00000001;jsessionid=caew7r81aa3c.henrietta>
- NETWORKS: structural cohesion, tie-generation dynamics, organizational and field dynamics, complex networks social circles model, parameterized simulation of feedback networks
- 2003 Structural Cohesion and Embeddedness: A Hierarchical Conception of Social Groups. (J. Moody, drw) *American Sociological Review* 68(1):1-25.  2004 Outstanding Article Award in Mathematical Sociology. American Sociological Association. <http://www2.asanet.org/journals/ASRFeb03MoodyWhite.pdf>
- 2005 Network Dynamics and Field Evolution: The Growth of Interorganizational Collaboration in the Life Sciences. (W. W. Powell, drw, K. W. Koput & J. Owen-Smith) *American Journal of Sociology* 110(4):901-975.  Viviana Zelizer Best Paper in Economic Sociology Award (2005-2006), American Sociological Association. <http://www.journals.uchicago.edu/AJS/journal/contents/v110n4.html>
- 2004 Networks, Fields and Organizations: Micro-dynamics, scale and cohesive embeddings (drw, W. W. Powell, J. Owen-Smith, J. Moody) *Computational and Mathematical Organization Theory* 10(1):95-117. <http://repositories.cdlib.org/postprints/10/> <http://tinyurl.com/39f5a8>
- 2004 Network Analysis, Social Dynamics and Feedback in Social Systems. *Cybernetics and Systems* 35(2-3):173-192. http://eclectic.ss.uci.edu/~drwhite/pub/White_EMCSR2a.pdf <http://tinyurl.com/3beqq2/>
- 2006 A Generative Model for Feedback Networks. drw, Nataša Kežar, Constantino Tsallis, Doyne Farmer, and Scott White. *Physical Review E*, 016119 11pp. <http://arxiv.org/abs/cond-mat/0508028> <http://tinyurl.com/ylpbn3>
http://en.wikipedia.org/wiki/Social-circles_network_model
- KINSHIP NETWORKS: cohesive structural endogamy, social class, complexity, evolutionary resilience
- 1996 Kinship Networks and Discrete Structure Theory: Applications and Implications. (drw & P. Jorion). *Social Networks* 18:267-314. <http://eclectic.ss.uci.edu/~drwhite/pw/White-Jorion1992.pdf>
- 1996 Les structures réticulaires de la pratique matrimoniale. (M. Houseman & drw) *L'Homme* 139: 59-85. <http://tinyurl.com/2k5czp> <http://eclectic.ss.uci.edu/~drwhite/pub/StructureReticulaire.pdf>
- 1997 Structural Endogamy and the Graphe de Parenté. *Mathématiques, Informatique, et Sciences Humaines* 137:107-125. <http://eclectic.ss.uci.edu/~drwhite/pw/str-endo.pdf>
- 1997 Class, Property and Structural Endogamy: Visualizing Networked Histories. (L. A. Brudner & drw). *Theory and Society* 25(2):161-208. <http://repositories.cdlib.org/postprints/3/>
- 1998 Network Mediation of Exchange Structures: Ambilateral Sidedness and Property Flows in Pul Eliya (M. Houseman & drw). pp. 59-89 in **Kinship, Networks and Exchange**, eds. T. Schweizer and drw. Cambridge University Press. <http://eclectic.ss.uci.edu/~drwhite/pub/PUL-CAMB1a.pdf> <http://tinyurl.com/2lb2gu>
<http://www.ivry.cnrs.fr/spafrican/chercheurs/articles/Network%20Mediation.pdf>
- 1999 Controlled Simulation of Marriage Systems. *Journal of Artificial Societies and Social Simulation* 2(3). <http://jasss.soc.surrey.ac.uk/2/3/5.html>
- 2002 Navigability of Strong Ties: Small Worlds, Tie Strength and Network Topology. (drw & M. Houseman). *Complexity* 8(1):72-81 <http://eclectic.ss.uci.edu/~drwhite/Complexity/SpecialIssue.htm>

2005 Chapter1 **Network Analysis and Ethnographic Problems: Process Models of a Turkish Nomad Clan**. drw & Ulla Johansen. Boston: Lexington Press. 2006 Paper <http://eclectic.ss.uci.edu/~drwhite/pub/PMContFwd01.pdf>
2004 Ring Cohesion Theory in Marriage and Social Networks. *Mathématiques et sciences humaines* 43(#168):5-28
<http://www.ehess.fr/revue-msh/recherche.php?numero=168> <http://eclectic.ss.uci.edu/download/MarriageNetTools.htm>

2004 Matrimonial Ring Structures (Klaus Hamberger, Michael Houseman, Isabelle Daillant, Douglas R. White and Laurent Barry). *Mathématiques et sciences humaines* 43(#168):83-121.
<http://eclectic.ss.uci.edu/download/MarriageNetTools.htm>

2005 Multiple Measures of Alyawarra Kinship. (Woodrow W. Denham and drw) *Field Methods* 17: 70-101.
<http://eclectic.ss.uci.edu/~drwhite/pw/MultiMeas03a.pdf> <http://fm.sagepub.com/content/vol17/issue1/>

WORLD TRADING NETWORKS: regular role equivalence, network theory of mobility, flow centrality, truly generalized blockmodeling

1992 Structure and Dynamics of the Global Economy: Network Analysis of International Trade 1965-1980. (D. Smith & drw) *Social Forces* 70:857-894. <http://eclectic.ss.uci.edu/~drwhite/WorldTrade/Cray.pdf>
<http://eclectic.ss.uci.edu/~drwhite/pw/GlobalEcon1992.pdf>

1994 Centrality Measures for Oriented Graphs. (drw & S. Borgatti) *Social Networks* 16:335- 346.
<http://eclectic.ss.uci.edu/~drwhite/pub/FlowCentrality1991.pdf>

2007 Role Models for Complex Networks, (Jörg Reichart, drw). Passed Editorial Review at *PNAS*.
http://eclectic.ss.uci.edu/~drwhite/pub/RW_6Page_JournalFormat.pdf

DYNAMICAL COMPLEXITY: HISTORICAL, ETHNOGRAPHIC, AND URBAN

I am interested in a layer-embedded networks (LEN) approach to emergence and complexity. Unlike discovery of simple interactive principles that generate complex emergent behavior (e.g., agent-based modeling, self-organized criticality), networks of interaction in the multi-layer approach occur between elements with internal processing and time-delayed responses, such as humans with biosocial and cogni-cultural reactivities. In several of these studies, response times are at generational time-scales. LEN models allow multiple levels of embedding, with some interactions occurring at faster time scales and others that affect them occurring at successively slower scales. The principles here may be simple, but how these levels interact requires a very delicate and new understanding of layering and feedback.

1971 Natchez Class and Rank Reconsidered. (Difference equations, royal genealogies, prosopography of an Indigenous American nobility, and solution to the historical-demographic Natchez Paradox) (drw, G. P. Murdock, R. Scaglione) *Ethnology* 10:369- 388. <http://eclectic.ss.uci.edu/~drwhite/pub/NatchezPeople.pdf>

2005 **Network Analysis and Ethnographic Problems: Process Models of a Turkish Nomad Clan**. Paperback '06. drw & Ulla Johansen. Boston: Lexington Press/AltaMira. <http://www.worldcatlibraries.org/oclc/122927949?tab=details>

2007 Oscillatory dynamics of city-size distributions in world historical systems. (drw, L. Tambayong, and N. Kejžar). In, G. Modelski, T. Devezas and W. Thompson, eds. **Globalization as Evolutionary Process: Modeling, Simulating, and Forecasting Global Change**. London: Routledge.
http://eclectic.ss.uci.edu/~drwhite/pub/WhiteKejzarTambaVienna_Q.pdf

2007 Networks, Hierarchies, and Cohesion. (Draft) Final version to appear in, David Lane, Geoff West, Sander van der Leeuw, and Denise Pumain, eds., **A New Perspective on Innovation and Social Change**. Dordrecht: Springer Methodos Series. <http://eclectic.ss.uci.edu/~drwhite/pub/ch5revMay-20.pdf>

2007 City system vulnerability and resilience: oscillatory dynamics of urban hierarchies. (drw and Laurent Tambayong). For submission to *Nature*.

2007 Under Contract. Dynamics of Human Behavior, 15-20pp. **Encyclopedia of Complexity and Systems Science**. Heidelberg: Springer DE. (suggestions welcome)