

THE MINERVA INITIATIVE

FOSTERING A COMMUNITY OF STRATEGIC SCHOLARSHIP



September 16

Fort Lesley J. McNair

Marshall Hall, Rm 155





The Minerva Initiative: Fostering a Community of Strategic Scholarship



A Forces Transformation and Resources Seminar
Fort Lesley J. McNair, Washington, D.C. 20319
Marshall Hall, Room 155

Thursday, September 16

0730-0800 Registration

0800-0830 Welcome

Ms. Amanda Dory, Deputy Assistant Secretary of Defense for Strategy, Office of the Under Secretary of Defense for Policy

Dr. Robin Staffin, Director for Basic Science, Office of the Director for Defense Research and Engineering Acquisition, Technology, and Logistics (AT&L), Department of Defense

0830-1000 Social, Cultural and Political Factors in Regime Dynamics

Dr. Tai Ming Cheung, Associate Research Scientist, Institute on Global Conflict and Cooperation, University of California, San Diego

Dr. Amy Smithson, Senior Fellow, James Martin Center for Nonproliferation Studies

Dr. Erica Frantz, Political Analyst, Institute for Physical Sciences

Dr. David Beaver, Associate Professor, Department of Linguistics, University of Texas at Austin

Commentator: Dr. Bradley T. Gericke, US Army, Strategist Office of the Secretary of Defense (Policy)

1000-1015 Break

1015-1045 Conflict Records Research Center at NDU

Mr. David Palkki, Acting Director, Conflict Records Research Center

1045-1200 Understanding Transregional Social Movements: Strategic Impacts of Religious and Cultural Change

Dr. Beth Mitchneck, Professor of Geography and Associate Dean, Colleges of Letters, Arts, and Science, University of Arizona

Dr. Katherine Meyer, Professor and Associate Provost, Department of Sociology and Office of Academic Affairs, Ohio State University

Dr. Mark Woodward, Associate Professor Department of Religious Studies, Arizona State University

Commentator: Mr. Richard Johnson, Strategist, Office of the Secretary of Defense (Policy)

1200-1330 Lunchtime Keynotes

Dr. James N. Miller, Principal Deputy Under Secretary of Defense for Policy, Office of the Secretary of Defense

Mr. Alan Shaffer, Principal Deputy, Office of the Director at Defense Research and Engineering

1330-1445 Drivers of Peace and Conflict: Dynamics of Terrorist Organizations and Groups

Dr. Martha Crenshaw, Senior Fellow, Center for International Security and Cooperation (CISAC), Stanford University

Dr. David Matsumoto, Professor of Psychology, College of Behavioral and Social Sciences, San Francisco State University

Dr. Steve Shellman, Director, VIPCAT Lab, Institute for the Theory and Practice of International Relations, College of William and Mary

Commentator: **Dr. Jacob Shapiro**, Assistant Professor of Politics and International Affairs, Princeton University

1445-1500 Break

1500-1615 New Dimensions of National Security, Conflict and Cooperation: Emerging Areas of Study

Dr. Nazli Choucri, Professor of Political Science, Massachusetts Institute of Technology

Dr. Idean Salehyan, Professor of Political Science, University of North Texas

Ms. Ashley McIlvain Moran, Program Manager, Robert S. Strauss Center for International Security and Law, University of Texas at Austin

Commentator: **Mr. Shawn Brimley**, Special Assistant to the Under Secretary of Defense for Policy

1615-1715 Workshop Summation and Implications: Insights from the Social Sciences

Dr. Saskia Sassen, Professor, Department of Sociology, Columbia University

Dr. Robert Albro, International Communication, School of International Service, American University

Response and Closing Remarks: Dr. Pauline Kusiak, Office of Under Secretary of Defense for Policy, DUSD Strategy, Plans & Forces / Strategy Office

END



SPEAKER BIOGRAPHIES



Dr. Robert Albro

Robert Albro received his Ph.D. in sociocultural anthropology from the University of Chicago in 1999. Since 1991 Dr. Albro has maintained long-term ethnographic research, and published widely, on popular and indigenous politics in Bolivia, with a particular focus on the changing terms of citizenship, democratic participation, and indigenous movements in this country. His current research is concerned with global cultural policy making, as it meaningfully shapes the ongoing terms of globalization, including the relevance of culture in contexts of security. Dr. Albro's research and writing have been supported over the years by the National Science Foundation, the Mellon Foundation, the Rockefeller Foundation, and the American Council for Learned Societies, among others. Dr. Albro has also been a Fulbright scholar, and has held fellowships at the Carnegie Council for Ethics in International Affairs, the Kluge Center of the Library of Congress, and the Smithsonian Institution. Dr. Albro has held several leadership positions in the American Anthropological Association, including Chair of the Committee for Human Rights and Chair of the Commission on Anthropology's Engagement with the Security and Intelligence Communities. He is also currently a member of the National Research Council's Committee on Unifying Social Frameworks. Dr. Albro was given the AAA's President's Award in 2009 for outstanding contributions to the Association. Most recently he has taught at Wheaton College (MA) and at George Washington University. He currently teaches in the School of International Service at American University.

Dr. David Beaver

With graduate degrees in Artificial Intelligence and Cognitive Science, and fourteen years of teaching and research in linguistics, David Beaver's work centers on the semantics and pragmatics of natural languages. Methodologies include computational studies of large text corpora, experimental work, and theoretical modeling using logic and statistics. His main empirical topics are presupposition (how what we take for granted is reflected in what we say), anaphora (how pronouns pick up their meaning from prior context), and topic/focus (how we use melody and other linguistic features to indicate what question is being addressed). He also works on temporal and event semantics, in the automatic extraction of psychological and social features in text and dialogue, and in broader philosophical, psychological and computational themes from cognitive science. As well as serving on editorial boards, and reviewing for numerous journals and scientific organizations, Beaver is joint founding editor of *Semantics and Pragmatics*.

Mr. Shawn Brimley

Shawn Brimley is Special Advisor to the Under Secretary of Defense for Policy. He works on a wide range of issues, to include global force posture, cross-domain strategy issues (sea, air, space, cyberspace), and overall



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strategy and guidance development. He was the primary drafter of the 2010 Quadrennial Defense Review, and has contributed to a number of other capstone DoD strategy and guidance documents. He was previously a fellow at the Center for a New American Security (CNAS), and a research associate at the Center for Strategic and International Studies (CSIS). His writing has appeared in a wide range of publications, to include the New York Times, Foreign Policy, the Washington Quarterly, and numerous defense journals. He holds a Masters degree from George Washington University and is completing a doctorate in War Studies from King's College, London.

Dr. Tai Ming Cheung

Dr. Tai Ming CHEUNG is an associate research scientist at the University of California Institute on Global Conflict and Cooperation, and an associate adjunct professor at the School of International Relations and Pacific Studies at UC San Diego. He is a specialist on Chinese and East Asian security, technology, and political economy affairs. His latest book is *Fortifying China: The Struggle to Build a Modern Defense Economy*, (Cornell University Press, 2009).

Dr. Nazli Choucri

Nazli Choucri is Professor of Political Science at the Massachusetts Institute of Technology and Associate Director of MIT's Technology and Development Program (TDP). Her primary research focus is on causes of international conflict and prospects for cooperation. She is the architect and Director of the Global System for Sustainable Development (GSSD) a multi-lingual web-based knowledge networking system focusing on the management of dynamic strategic challenges. The author of nine books and over 120 articles Professor Choucri's current research is on CyberPolitics in international relations. She is a member of the European Academy of Sciences, and has been re-elected President of the Scientific Advisory Committee of UNESCO's Management of Social Transformation (MOST) Program. Professor Choucri has been involved in research or advisory work for national and international agencies, and for a number of countries, including: Abu Dhabi, Algeria, Canada, Colombia, Egypt, France, Germany, Greece, Honduras, Japan, Kuwait, Mexico, North Yemen, Pakistan, Qatar, Sudan, Switzerland, Syria, Tunisia, and Turkey.

Dr. Martha Crenshaw

MARTHA CRENSHAW is a Senior Fellow at the Center for International Security and Cooperation (CISAC) and the Freeman Spogli Institute for International Studies, as well as Professor of Political Science by courtesy, at Stanford University. She is also Professor of Government Emerita at Wesleyan University, where she taught from 1974 to 2007. She is a lead investigator with the National Center for the Study of Terrorism and the Response to



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Terrorism (START) at the University of Maryland, funded by the Department of Homeland Security. Her current research focuses on why the United States is a target of terrorism and the effectiveness of countermeasures against terrorism. In 2009 she received an award from the National Science Foundation/DOD Minerva Initiative for research on “mapping terrorist organizations.” She recently edited *The Consequences of Counterterrorism*, published by the Russell Sage Foundation in 2010. Another book, *Explaining Terrorism*, a collection of her work since 1972, is in production with Routledge.

Ms. Amanda Dory

Amanda J. Dory currently serves as the Deputy Assistant Secretary of Defense for Strategy in the Office of the Secretary of Defense. She is a career member of the Senior Executive Service. From 2007-2008, Amanda served as the Principal Director, Policy Planning responsible for strategy development, oversight of contingency and campaign plans, and long-term trends analysis and futures. In 2006-2007, she served as the chief of staff for the Irregular Warfare and Building Partnership Capacity Quadrennial Defense Review (QDR) Execution Roadmaps. From 2003-2006, Amanda served as the Director for Planning and Integration in the Office of the Assistant Secretary of Defense for Homeland Defense, focusing on strategic planning, strategic communications, Congressional and White House affairs, analytical support, education/training initiatives, and knowledge management. In 2002-2003, Amanda was a Council on Foreign Relations International Affairs Fellow based at the Center for Strategic and International Studies (CSIS). During her fellowship tenure, she conducted an independent research project on civil security -- the role of the American public within homeland security. She established a Civil Security Working Group at CSIS and was the author of a CSIS report *Civil Security: Americans and the Challenge of Homeland Security* and a related Washington Quarterly article. She also participated in the Beyond Goldwater-Nichols project on defense reform. From 1996-1999, Amanda served as the Country Director for Southern Africa and the Country Director for West Africa. In the former capacity, she helped establish the new post-apartheid defense relationship with South Africa. Amanda joined OSD as a Presidential Management Intern in 1994 and conducted rotational assignments related to European and African security affairs as well as international arms control negotiations. Amanda's non-government experience includes positions with the Carnegie Endowment for International Peace (Foreign Policy magazine and Nuclear Non-Proliferation Project) and the World Bank. She received an M.A. in International Affairs from the Johns Hopkins School of Advanced International Studies and a B.S. in Foreign Service from Georgetown University. She is a member of the Council on Foreign Relations.

Dr. Erica Frantz

Erica Frantz (Ph.D., UCLA, 2008) is a political analyst at IPS, a not-for-profit



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multidisciplinary research institute in the Washington, DC area. Dr. Frantz specializes in authoritarian politics and has regional expertise in Latin America and the Middle East. She is currently working on a project examining the relationship between leadership time horizons in dictatorships and conflict propensity.

Dr. Bradley Gericke

Bradley T. Gericke earned a commission in armor from the United States Military Academy in 1988. He holds a Ph.D. from Vanderbilt University and is a graduate of the National War College. He has published a number of essays regarding military affairs as well as several college history texts, and is currently writing *Spearhead: America's Third Armored Division in Peace and War*. His Army assignments include duty in the 3d Armored Division in Germany and the Persian Gulf, and in the 2d Infantry Division in Korea. As a strategic plans and policy officer he has served on the Army Staff in the Pentagon, at headquarters, Multi-National Force Iraq, and in the Office of the Secretary of Defense for Policy.

Mr. Richard Johnson

Richard Johnson is a UK exchange officer embedded within the Strategy Office of the Office of the Secretary of Defense. His portfolio includes risk management and the establishment of the Conflict Records Research Center at NDU. In his 21 years with the UK Ministry of Defence, Richard has worked on policy issues relating to counter-terrorism, equality and diversity, defense sales, operations in Iraq, Bosnia, and Kosovo, spent 4 years living and working in Saudi Arabia, and served as the Private Secretary to the Armed Forces Minister.

Dr. James Keagle

Dr. James M. Keagle is the Director of the Transforming National Security seminar series at the Center for Technology and National Security Policy at the National Defense University. Prior to this position, Dr. Keagle was the National Defense University's Provost (effective 2004) and Vice President for Academic Affairs. Prior to these positions, he served as a professor of National Security Strategy at NDU. In that role Dr. Keagle worked as a research faculty member assisting with NDU's modeling and simulation and work with interagency education and training. Accepting an appointment to the U.S. Air Force Academy, he graduated second academically in his class in June 1974. Following graduation, he went to the University of Pittsburgh to complete his Master's of Arts degree in political science and earned a graduate certificate in Latin American studies. After a tour as a munitions maintenance officer, Dr. Keagle went on to become an assistant professor of political science at the U.S. Air Force Academy. In 1980, he went on to Princeton University where



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he completed both a Master's of Arts degree and Ph.D. in politics. He proudly notes his honorary Ph.D from the Military Technical Academy of Romania--the only United States citizen so honored. Following his extensive education, Dr. Keagle's next six tours were political-military assignment that included direct access and interaction with Cabinet-level government officials on national security related matters. These assignments included work for two Combatant Commanders as a senior strategist; for the Office of Secretary of Defense pertaining to Cuba; Deputy Director, Office of the Secretary of Defense Bosnian Task Force; and for the Deputy Under Secretary of the Air Force in International Affairs as Senior Strategist. Military medals include the Defense Superior Service Award, the Legion of Merit, and the Purple Heart. Since leaving military service, Dr. Keagle has held the position of adjunct professor at a number of institutions to include: Syracuse University, American University, Central Michigan University, Catholic University, University of Colorado, and Lake Superior State College. He also holds an honorary professorships with Transilvania University in Brasov, Romania, as well as the Mongolian Defense University--again, the only American so honored . Dr. Keagle and wife Kay are the proud parents of three children.

Dr. Pauline Kusiak

Dr. Pauline Kusiak joined the Office of the Secretary of Defense for Policy in January of 2009. Before coming to the Pentagon, she worked as a Sub- and Trans-Saharan Africa social and cultural research specialist and analyst at Fort Bragg, NC. In this position, she was extensively involved in the U.S. military's Operation Enduring Freedom - Trans-Sahel program. In February of 2008, she was detailed to the Strategy directorate of the Office of the Deputy Assistant Secretary of Defense for Policy Planning where she served as a strategist and subject matter expert on social science research and analysis issues for the Department. In this position, she helped launch and implement Secretary Gate's Minerva Initiative as that program's first program manager. In 2009, she worked for the Deputy Assistant Secretary of Defense for Partnership Strategy and Stability Operations where, among other issues, she worked on foreign language, regional expertise and cross-cultural competence capabilities in the 2010 QDR. She returned to the Strategy office and the Minerva Initiative in January 2010. Before joining the government, Dr. Kusiak was a postdoctoral fellow at Northwestern University where she taught undergraduate courses and conducted independent research on the culture and politics of sub-Saharan Africa. She received her Ph.D. from Cornell University in the Department of Science and Technology Studies, an interdisciplinary social science field that combines sociology of knowledge ; anthropology of science, technology and medicine; and history of science and technology. Combining ethnographic and archival research, her dissertation focused on social, cultural and political aspects of technology transfer to colonial and postcolonial Francophone West Africa. She completed her undergraduate education in interdisciplinary studies at the University of California at Berkeley.



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Dr. David Matsumoto

David Matsumoto is an internationally acclaimed author and psychologist. He received his B.A. from the University of Michigan in 1981 with High Honors in Psychology and Japanese. He subsequently earned his M.A. (1983) and Ph.D. (1986) in psychology from the University of California at Berkeley. He is currently Professor of Psychology and Director of the Culture and Emotion Research Laboratory at San Francisco State University, where he has been since 1989. He is also Director of Humintell, LLC, a company that provides research, consultation, and training on nonverbal behavioral analysis. Dr. Matsumoto has studied culture, emotion, social interaction and communication for over 25 years. His books include well-known titles such as *Culture and Psychology* and the *Cambridge Dictionary of Psychology*. He is the recipient of many awards and honors in the field of psychology, including being named a G. Stanley Hall lecturer by the American Psychological Association. He is the series editor for Cambridge University Press' series on Culture and Psychology. He is also Editor-in-Chief for the *Journal of Cross-Cultural Psychology*. Matsumoto is also a judo coach and official. He holds a 7th degree black belt in judo, a Class A Coaching Certificate from the US Judo Federation, Teaching Certificates in seven katas of judo, and a Class A International Referee License from the International Judo Federation. He is the head instructor of the East Bay Judo Institute, located in El Cerrito, California. He received the U.S. Olympic Committee's Developmental Coach of the Year Award in Judo in 1999, the U.S. Judo Federation's Senior and Junior Female Coach of the Year Award in 2001, the U.S. Judo Federation's Senior Female Coach of the Year Award in 2002 and 2003, the U.S. Olympic Committee's Coach of the Year Award in 2003, and an acclamation from the City and County of Honolulu, HI in 1977. Under his leadership as the Director of Development for USA Judo from 1996-2000, the U.S. claimed its first gold medal in 12 years at the 1999 World Judo Championships, and qualified a full team of athletes (14 categories) to the 2000 Sydney Olympic Games, one of only four countries in the world to achieve that feat. In the third year of his directorship (1999) American judo athletes stood on the medal podium at international competition a total of 124 times, an unprecedented accomplishment. His personal students have distinguished themselves by obtaining medals in national and international competition over 200 times in the past 18 years under his tutelage, including a silver medal at the 2000 World Junior Judo Championships by his daughter, Sayaka. He is the author of *The History and Philosophy of Kodokan Judo (本の友社)*, *Judo: A Sport and a Way of Life (International Judo Federation)*, and *Judo in the US: A Century of Dedication (US Judo Federation and North Atlantic Books)*.

Dr. Katherine Meyer

Dr. Meyer studies conflict, social networks, political participation and support for democracy in the Middle East. Currently, she is co-principal investigator on a three-year



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National Science Foundation Minerva Initiative grant for "Deciphering Civil Conflict in the Middle East " that includes sociologists, an economist and a geographer from The Ohio State University. Meyer's publications on political participation and democratic attitudes and practices have derived from survey data from longitudinal general social surveys of Kuwaiti citizens, the World Values surveys, survey of U.S. farm populations, and citizen surveys in South Korea.

Dr Jim Miller

Dr. James N. Miller was confirmed by the U.S. Senate as the Principal Deputy Under Secretary of Defense for Policy on April 2, 2009. He serves as the principal staff assistant to the Under Secretary of Defense for Policy and provides advice and assistance to the Secretary of Defense and Deputy Secretary of Defense on all matters concerning the formulation of national security and defense policy and the integration and oversight of DoD policy and plans to achieve national security objectives. Prior to his confirmation, Dr. Miller served as Senior Vice President and Director of Studies at the Center for a New American Security. Previous positions include serving as Senior Vice President (2003-2007) and Vice President (2000-2003) at Hicks and Associates, Inc.; Deputy Assistant Secretary of Defense for Requirements, Plans, and Counterproliferation Policy (1997-2000); assistant professor at Duke University (1992-1997); and senior professional staff member for the House Armed Services Committee (1988-1992). A member of the International Institute for Strategic Studies, Dr. Miller has served as an advisor to the Combating WMD Panel of DoD's Threat Reduction Advisory Committee and the Defense Science Board, as senior associate at the Center for Strategic and International Studies, and as senior associate member at St. Antony's College, Oxford. In 2000 he received the Department of Defense Medal for Outstanding Public Service. Dr. Miller received a B.A. degree with honors in economics from Stanford University, and Master's and Ph.D. degrees in public policy from the John F. Kennedy School of Government at Harvard University.

Dr. Beth Mitchneck

Dr. Mitchneck conducts research mainly on migration and governance issues in Russia and the Caucasus. Her research focuses on the intersection of societal change, state engagement, and human activities be it migration processes or the daily experience of large-scale societal change. She is currently working on two international, multidisciplinary projects funded by National Science Foundation (Forced Migrants Living in Post-Conflict Situations: Social Networks and Livelihood Strategies; People, Power, and Conflict in the Eurasian Migration System).

Ms. Ashley Moran

Ms. Ashley Moran is an Associate at the Robert S. Strauss Center for International Security



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and Law and manages the program on Climate Change and African Political Stability. Her work focuses on democratic legal and institutional reform, comparative law, and rule of law. She previously served as parliamentary advisor in the Republic of Georgia for the National Democratic Institute for International Affairs (NDI), ran parliamentary and political reform programs in Azerbaijan and Iraq for NDI, and designed rule of law programs in Kyrgyzstan for the Organization for Security and Co-operation in Europe (OSCE). Her previous policy work includes various political and legislative posts in the United States. She holds an MA in international law and development economics from the Fletcher School of Law and Diplomacy.

Mr. David Palkki

David Palkki is the Deputy Director of the Conflict Records Research Center (CRRC) at the National Defense University. Before coming to the CRRC, Mr. Palkki worked on various Iraq-related research projects at the Institute for Defense Analyses, including co-editing a book-length study for the Office of the Secretary of Defense based on captured audio files from Saddam Hussein's Iraq. He has also worked on proliferation issues as a military analyst for the US Government, on international trade issues for the House Ways and Means Trade Subcommittee, and as an election observer in seven countries for the Organization for Security and Cooperation in Europe. Mr. Palkki has a BA in political science from Brigham Young University, and is a PhD candidate in political science at UCLA. His dissertation is on "Deterring Saddam's Iraq: Theory and Practice."

Dr. Idean Salehyan

Dr. Idean Salehyan is an Assistant Professor of Political Science at the University of North Texas. He is also an Associate at the John Goodwin Tower Center for Political Studies at Southern Methodist University, at the Peace Research Institute Oslo, and at the University of Texas' Robert S. Strauss Center for International Security and Law. Dr. Salehyan is the author of *Rebels Without Borders: Transnational Insurgencies in World Politics*, and his articles appear in journals such as the *American Journal of Political Science*, *Journal of Politics*, *International Organization*, *International Studies Quarterly*, and *World Politics*. Dr. Salehyan has also published several articles, reports, and op-eds on the relationship between environmental degradation and armed conflict. Dr. Salehyan holds a PhD in Political Science from the University of California, San Diego.

Dr. Saskia Sassen

Saskia Sassen is the Robert S. Lynd Professor of Sociology and Member, The Committee on Global Thought, Columbia University (www.saskiasassen.com). Recent books are *Territory, Authority, Rights: From Medieval to Global Assemblages* (Princeton University Press 2008) and *A Sociology of Globalization* (W.W.Norton 2007). For UNESCO she did a five-



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year project on sustainable human settlement with a network of researchers and activists in over 30 countries, as part of the 14 volume Encyclopedia of Life Support Systems (Oxford, UK: EOLSS Publishers) [<http://www.eolss.net>]. The Global City came out in a new fully updated edition in 2001. Her books are translated into twenty-one languages. She has received several awards, most recently doctor honoris causa from Delft University (Netherlands), from DePaul University (USA) and from Universite de Poitiers (France). She is the Chair of the new Urbanism competition at the Venice Biennale of Architecture (2010). She contributes regularly to www.OpenDemocracy.net and www.HuffingtonPost.com.

Mr. Alan Shaffer

Mr. Shaffer serves as the Principal Deputy Director, Defense Research and Engineering. In this position, Mr. Shaffer is responsible for formulating, planning, and reviewing the DoD Research, Development, Test, and Evaluation (RDT&E) programs, plans, strategy, priorities, and execution of the DoD RDT&E budget. Specifically, this position reviews the maturity of technology as part of the acquisition cycle, as well as develops options to reduce the overall technology development risk to DoD programs. Prior to entering the federal government, Mr. Shaffer served a 24-year United States Air Force career with assignments in weather, intelligence, science and technology management, acquisition oversight, and programming. His career included deployment to Honduras in support of Joint Task Force Bravo in the mid-1980s and direct support of the United States Army 3rd Armored Division at Hanau, Germany. During Operation DESERT STORM, he was responsible for deployment of the 500-person theater weather force. Other assignments included Wing Weather Officer supporting the 320th Bombardment Wing (Heavy) at Mather AFB, California; Intelligence Officer at Foreign Technology Division, Wright Patterson AFB, OH; Deputy Director of Weather for Air Combat Command, Langley AFB, VA, numerous staff assignments in the Air Staff and Office of the Secretary of Defense, in the Pentagon; and finally, the Air Force Weather Agency, Offutt AFB, Nebraska. Upon retirement from the United States Air Force in 2000, Mr. Shaffer was appointed to the Senior Executive Service as the Director, Multi-disciplinary Systems, Office of the Deputy Under Secretary of Defense for Science and Technology. In 2001, he assumed the position as Director, Plans and Programs, Defense Research and Engineering. Mr. Shaffer continues to serve as the Director while serving as the Principal Deputy. As the Director for Plans and Programs, Mr. Shaffer is responsible for the oversight of the Department of Defense science and technology portfolio totaling over \$10.5 billion. Mr. Shaffer has served as the Executive Director for several senior Task Forces. These included the Technical Joint Cross Service Group during the Base Realignment and Closure activity; DoD Energy Security Task Force in 2007 and most recently the Executive Director of the Mine Resistant Ambush Protection Task Force. In addition he serves as the tri-chair to the Department of Defense Modeling and Simulation Steering Committee. Mr. Shaffer earned a Bachelor of Science Degree in



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Mathematics from the University of Vermont in 1976. He earned a second Bachelor of Science in Meteorology from the University of Utah, a Master of Science in Meteorology from the Naval Postgraduate School, and a Master of Science in National Resource Strategy from the Industrial College of the Armed Forces. He has been awarded the Distinguished Executive Presidential Rank Award in 2007 and the Meritorious Executive Presidential Rank Award in 2004. Mr. Shaffer and his wife Jackie C.S. Shaffer have one son and reside in Fairfax, Virginia.

Dr. Jacob Shapiro

Jacob N. Shapiro is Assistant Professor of Politics and International Affairs at Princeton University. His primary research interests include political violence, aid, and security policy. His research has been published or is forthcoming in *International Security*, *International Studies Quarterly*, *Journal of Conflict Resolution*, *Security Studies*, *Foreign Affairs*, *Foreign Policy*, *Military Operations Research*, *Terrorism and Political Violence*, and a number of edited volumes. Shapiro co-directs the Empirical Studies of Conflict Project. He is a member of the editorial board of *World Politics*, a Research Fellow at the Center for Economic Research Pakistan (CERP), and served in the U.S. Navy and Naval Reserve. Ph.D. Political Science, M.A. Economics, Stanford University. B.A. Political Science, University of Michigan.

Dr. Stephen Shellman

Dr. Shellman directs the Violent Intranational Political Conflict and Terrorism (VIPCAT) Research Laboratory at The College of William & Mary where he conducts several projects funded by the National Science Foundation on political violence, terrorism, forced migration, and counter-insurgency. He also serves as President and Chief Scientist of Strategic Analysis Enterprises (SAE), Inc which participates in the Defense Advanced Research Projects Agency's (DARPA) Integrated Crisis Early Warning System (ICEWS) project and the Combating Terrorism Technical Support Office's (CTTSO) Pathways project. He is author of several research articles appearing in journals such as *Comparative Political Studies*, *Conflict Management and Peace Science*, *International Interactions*, *International Studies Quarterly*, *Journal of Conflict Resolution*, *Political Analysis*, and *Security Studies*. Finally he is author of the book *Taking Turns: A Theory and Model of Government-Dissident Interactions*.

Dr. Amy Smithson

Amy E. Smithson specializes in in-depth field research on issues related to dual-use chemical and biological technologies, weapons proliferation, threat reduction mechanisms, defense, and homeland security. She has addressed such topics as the reduction of US and Russian weapons capabilities, the overhaul of China's regulations related to the conduct of



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life sciences research, the status of international treaties outlawing these weapons, export controls, unconventional terrorism, and preparedness for biological and chemical disasters. Often fashioning untraditional issue alliances that cross the private and public sectors and international borders, Smithson's work recommends practical steps that blend technical and policy instruments to reduce threats and to enhance civilian and military defense, preparedness, and response capabilities. Before joining the Center for Nonproliferation Studies, she worked at the Center for Strategic and International Studies and the Henry L. Stimson Center, where in January 1993 she founded the Chemical and Biological Weapons Nonproliferation Project. Previously, she worked for Pacific-Sierra Research Corporation and the Center for Naval Analyses. Smithson's work has prompted numerous invitations to testify before Congress, and she has frequently assisted the electronic and print media. She earned a PhD in political science at George Washington University, an MA in international relations at Georgetown University, and BA's in political science and Russian at the University of North Carolina, Chapel Hill.

Dr. Robin Staffin

Dr. Robin Staffin is currently the Director for Basic Science in the Office of Acquisition, Technology, and Logistics at DOD, where he has responsibility for oversight of basic research activities throughout the Department of Defense. Previously, Dr. Staffin served as Associate Director of Science and Director for High Energy Physics at the Department of Energy, and Deputy Assistant Secretary for Research and Development in DOE's Office of Defense Programs. During the period 1998-2001, he was the Senior Policy Advisor to the Secretary of Energy for Science, Technology, and National Security. From 1993-1996, Dr. Staffin was Special Assistant to the Assistant Secretary of Defense for International Security Policy, focusing on nuclear weapons policy, science-based stockpile stewardship, and nonproliferation. A physicist by training, he received his Bachelor of Science from MIT and Ph.D. from Stanford University.

Dr. Mark Woodward

Mark Woodward is a cultural anthropologist specializing in the study of Islam and politics in Southeast Asia. He received his Ph. D. from the University of Illinois in 1985 and is Associate Professor in the Department of Religious Studies at Arizona State University. He is currently a Visiting Professor of Religious Studies at the Center for Religious and Cross-cultural Studies at Gadjah Mada University in Yogyakarta, Indonesia. He has received grants from Fulbright-Hays, the Social Science Research Council, the US Department of State, the Indonesian Ministry of Religion, as well as the Office of Naval Research. He has conducted extensive ethnographic and historical research in Indonesia, Burma, Thailand and Singapore. His recent publications include *Religions of the World* 10th edition (Prentice Hall, 2006, with Lewis Hopfe), *Theology of Terror* (Prentice Hall, 2004), and "Religious



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Conflict and the Globalization of Knowledge: Indonesia 1978-2004", in Religion and Conflict in South and Southeast Asia: Disrupting Violence, Linell Cady and Sheldon Simon, Eds., (London: Routledge, 2006). A new book, Java, Indonesia and Islam will be published by Springer later this year.

Observing the Minerva Initiative as an Emerging Community of Scholarship

Robert Albro
School of International Service
American U
September 16, 2010

Minerva and Community...

- The goal of policy makers (DDR&E, and other levels) and academics in the same conversation – Important!
- Things we don't know, or perhaps don't want to hear, in all directions – Part of building dialogue in community
- Thinking and talking about the relationship between DOD and Academia: A primarily “strategic” relationship? Might be understood differently in the other direction...
- More discussion about meaning of long-term scholarship in the context of OSD-DOD policy, strategic problem-solving, and operations
- What does all of this add up to for the role of academic knowledge production in/with DOD? For non-DOD Academia/research?

Minerva Research and a New Area Studies?

- Stated need for Foreign Area Knowledge
- Different from Cold War-era creation of “Area Studies”?
- China and technological innovation
- Middle East: migration of Turkish women, WMDs and the Ba’athist regime, profiling terrorist groups
- Labor and forced migration to Russia
- South Asia: radicalization and counter- among Muslims
- Africa: climate change and security
- Rethinking “place” beyond “area expertise” as: shifting frontier, new regional spheres of influence, nodes or crossroads for the convergence and transformation of many of the processes discussed today...and more.

Security, Technology, Innovation

- Sources/transfers of innovation: What do we mean by “innovation” and for what? For security?
- The competitions among nation-states a new technology race: Collaborations?
- Security and particular regimes – WMDs and Iraq’s Ba’athist regime: As comparative cases?
- The uses of databases, computational methods for data mining and as data creation technologies, and GIS, for exploring: language use, migrant networks, sentiment, counter-radicalism, climate change
- Socio-cultural [fill in the blank] as “software” understood to complement some assumed “hardware”?

“Globalization” as a Black Box

- Emergent global trends: e.g. new social media and cyberpolitics
- New “regional” realities: e.g. Eurasian migration
- “The West” versus the rest as a viable historical description, contrast?
- Relevance of the “nation-state”: regime type, stability, leadership of, as source of conflict, militaries in particular as regional and global actors
- Identifying critical transboundary problems like changing climate and local-global interactions
- “One “globalization” or different kinds? Cultural, economic, legal, global civil society –integrated?

Globalization: Dynamic nonlinear system?

Well...a term describing macrohistorically contingent, emergent, and transnational ecological, political, economic, institutional, legal, cultural – and other – relations and arrangements, trends, and identities, and movements of people, information, as well as resources...Certainly not the same as talking about the “international system.”

Scale and the “Socio-Cultural” in Problem-solving?

- Cross-cultural variations on such topics as: deception, rhetoric, persuasion
- Culturally specific Institutions: Chinese defense industry
- The “meaning” of migration for migrants
- Grounded attention to the construction of ideological narratives as expressive cultural forms
- Incorporating cultural factors in modeling (in terms of “beliefs” or “sentiments”)
- Controlling for culture comparatively to address similarities
- The particular role of kinship/family/descent/genealogy
- Contexts for the fission/fusion/formation/dissolution of particular “groups”
- What to do with the diversity of local-global articulations?

Some community challenges

- Disciplinary distribution: close to 50 disciplines represented here!
- Partnering with PME institutions: Dialogue with broader Academe?
- Interdisciplinarity as complementarities? policy, methodological, epistemological challenges
- Variable disciplinary frames for “problems”: non-state actor, social movement, social network...
- Constructive engagement across purposes: kinds of ideologies, circulations of words, movements and arrangements of people, technological innovation chains – integrative?
- Accompanying challenges about: kinds and sources of topics, units of analysis, what counts as “data,” conversion and interoperability of data for coding, and the implications of results
- Avoiding various “fundamentalisms”: e.g. *the* “underlying dynamic,” “*It’s* about tribes,” computational models predict, “the relationship between religion *and* conflict is...”

Community dialogues about...?

- Established topics...and beyond? Country, regime, culture-specific dynamics; and descriptions of non-state actors, social movements, religious, cultural, terrorist organizations...
- Compatibilities of kinds of “basic research”? Hypothesis testing, the computational social sciences, game theory, ethnography, social network analysis, web mining and mapping, “pure data,” content analysis, archival analysis, textual analysis, statistical and quantifiable results...What else?
- Is “security” a capacious enough category? International, national, technological, cyber securities, specific security institutions, human security, climate change and security, all as distinct/overlapping

Increased Interdisciplinary “Behavioral Research”

- Understanding, classifying and developing typologies of “authoritarian behavior”
- Moving between individuals and regimes: the “coherence” of talk computationally speaking
- Non-verbal behavior, aggressive behavior, the “behavior” of: states, networks, terrorists
- Predictive models, predicting behavior, and what is knowable
- The payoffs of “behavior” versus “identity,” “meanings,” or other formulations relevant to individuals and groups?

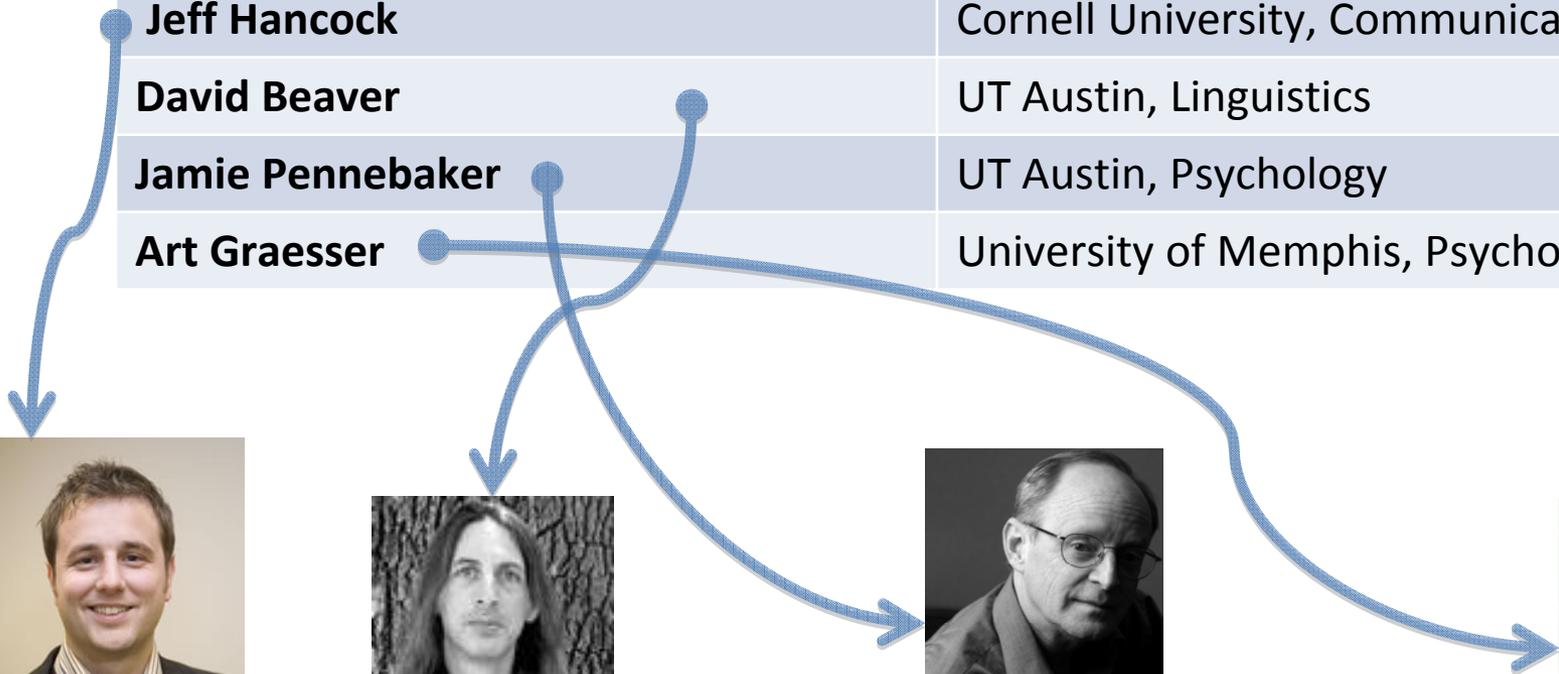
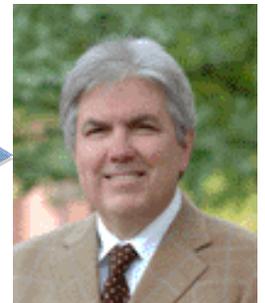
DOD and “Basic Research”

- History of the role of the physical sciences as the definitional space for “science” for social science research
- Basic science treated as the foundation for technology as the reason for DOD “basic research”
- Engineering, application for operations, building capacities, transparency for policymakers, other outcomes
- Periodicities: In the context of a “nation at war” versus longer-term goals/contexts

Modeling Discourse and Social Dynamics in Authoritarian Regimes: An introduction to Social Language Processing

PIs

Jeff Hancock	Cornell University, Communications
David Beaver	UT Austin, Linguistics
Jamie Pennebaker	UT Austin, Psychology
Art Graesser	University of Memphis, Psychology



“What social, cultural and political factors should we analyze to most improve our basic understanding of the way that regimes operate?”

Proposed factor: **the way people talk.**

REFERENCE:

Hancock J., D. Beaver, C. Chung, J. Frazee, J. Pennebaker, A. Graesser, Z. Cai (2010), “Social Language Processing: A Framework for Analyzing the Communication of Terrorists and Authoritarian Regimes”, Behavioral Sciences of Terrorism and Political Aggression 2:2.

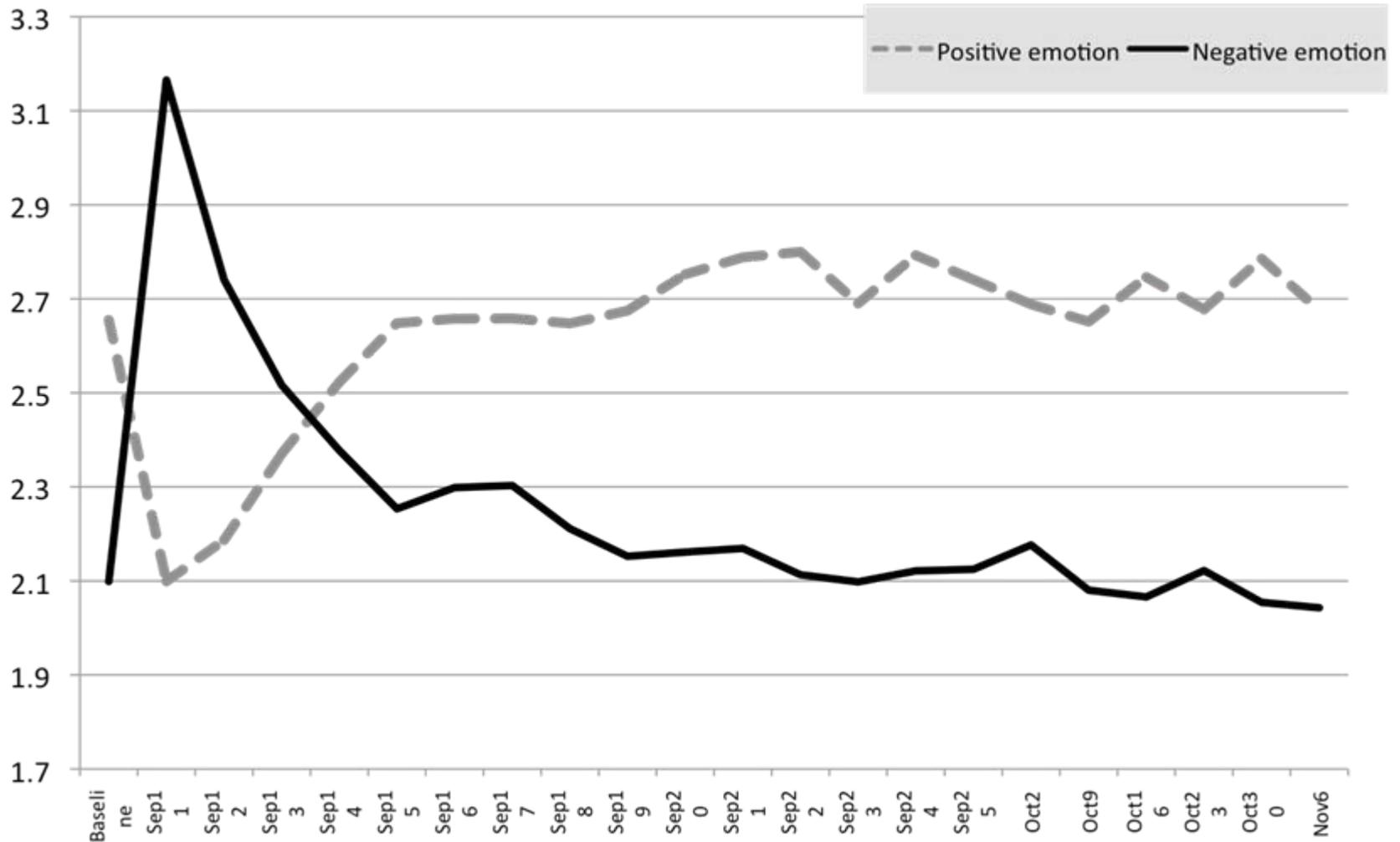
But doesn't everyone use language?

- Yes, language is usually the primary source for social, cultural, historical, and psychological analysis, and for intelligence gathering.
- But standard analysis relies on experts performing close reading to pick out subtle nuances of *what is said*.
- Using evidence from hundreds of prior studies we have conducted, we concentrate instead on computationally accessible aspects of *how people say what they say*.
- **Automatic, large-scale text analysis is low cost and has potentially high payoff.**

Specific tools

- **Linguistic Inquiry Word Count – LIWC**
(Pennebaker, Booth, & Francis, 2007)
- **Coh-Metrix**
(Graesser, McNamara, Louwerse, & Cai, 2004)
- **Latent semantic analysis and topics models**
(Landauer, McNamara, Dennis, & Kintsch, 2007)
- **Machine Classifiers, e.g. Max. Ent.**
(Berger, Della Pietra, & Della Pietra, 1996)

Example 1: Taking the nation's temperature through the language of 1000 bloggers



Example 2: the speeches of Hosni Mubarak and Chairman Mao Zedong



- In Office: 1981-Present (29 years)
- 884 speeches

- In office: 1943-1976 (33 years)
- 365 speeches

Measures from Coh-Matrix

Text

Graesser, McNamara, Louwerse, & Cai (2004)

Title

Genre

Source

Job Code

LSA Space

Save Data

Clear Data

Okay, let's begin. Suppose a runner is running in a straight line at constant speed, and the runner throws a pumpkin straight up. Where will the pumpkin land? Explain

The pump... runner

Well What... say about the pumpkin's vertical velocity in relation to gravity?

They are equal

alright I am sure you can get this. The direction in which a force is being applied to the pumpkin is ?

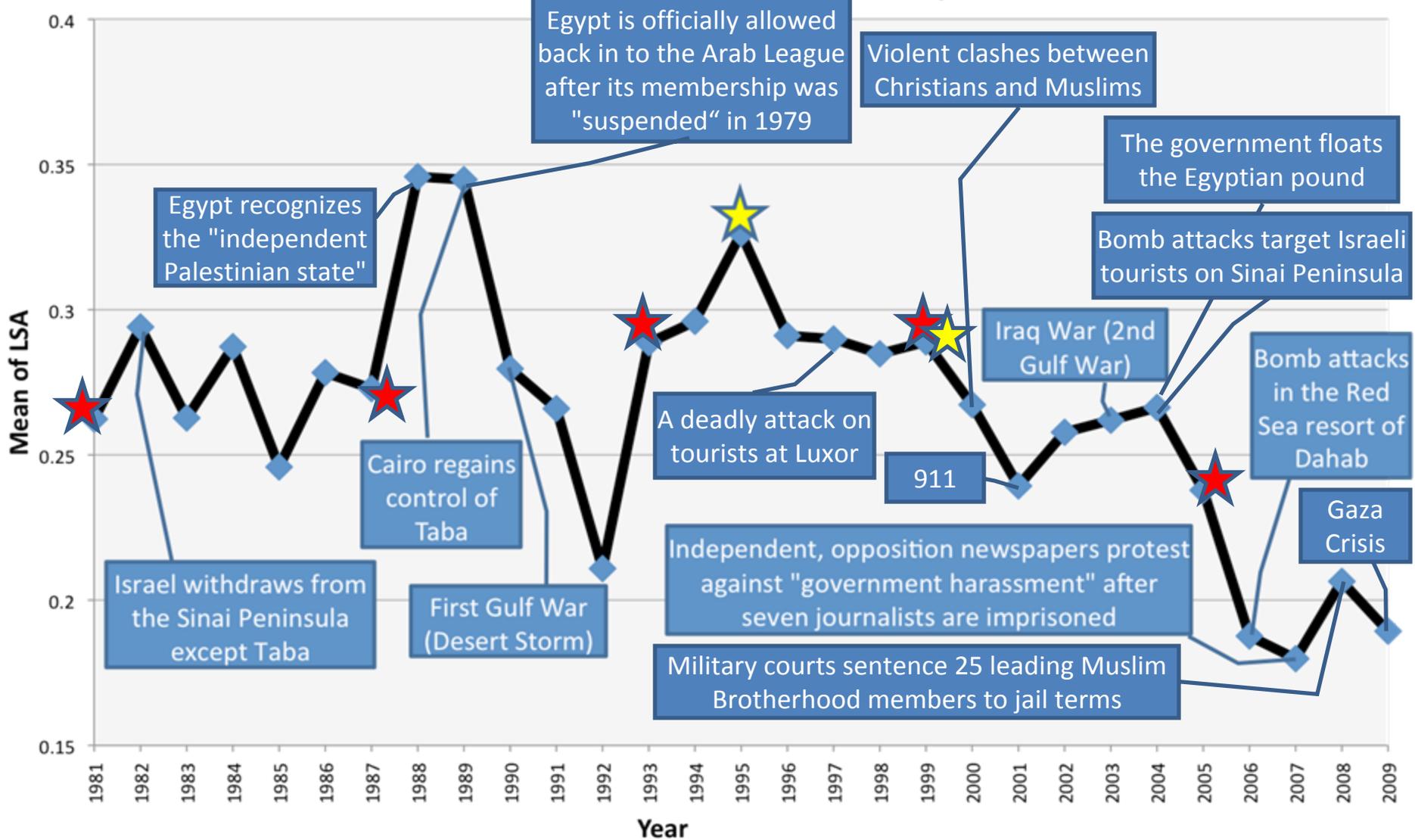
Data Viewer

Submit

Reset

Meas	Text 1	Full description
Title		Title
Genre	Science	Genre
Source	Sample Text	Source
JobCode	Sample Text	JobCode
LSASpace	CollegeLevel	LSASpace
Date	10-29	Date
7	Adjacent anaphor reference	CREFP1u 0.67 Anaphor reference, adjacent, unweighted
8	Anaphor reference	CREFPau Anaphor reference, all distances, unweighted
9	Adjacent argument overlap	CREFAu
10	Argument overlap	CREFAau 0.181 Argument Overlap, all distances, unweighted
11	Adjacent stem overlap	CREFS1u 0.2 Stem Overlap, adjacent, unweighted
12	Stem overlap	CREFSau 0.162 Stem Overlap, all distances, unweighted
13	Content word overlap	CREFC1u 0.038 Proportion of content words that overlap between adjacent

LSA Cohesion Analysis of Mubarak Speeches

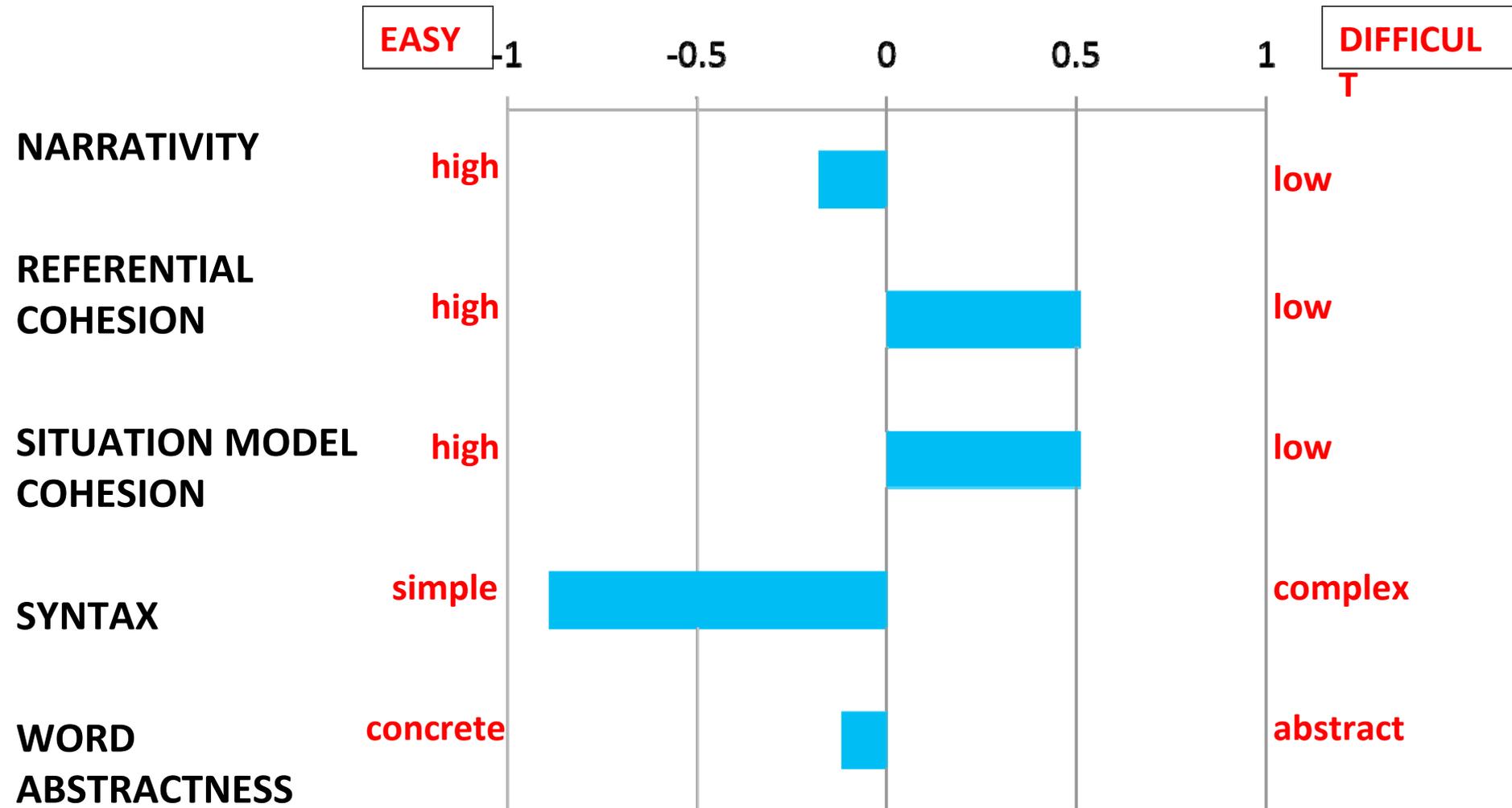


★ Election

★ Assassination Attempt

Mao's Speeches in English: Can Coh-Metrix predict **date** of speech?

Beta Weight in Multiple Regression



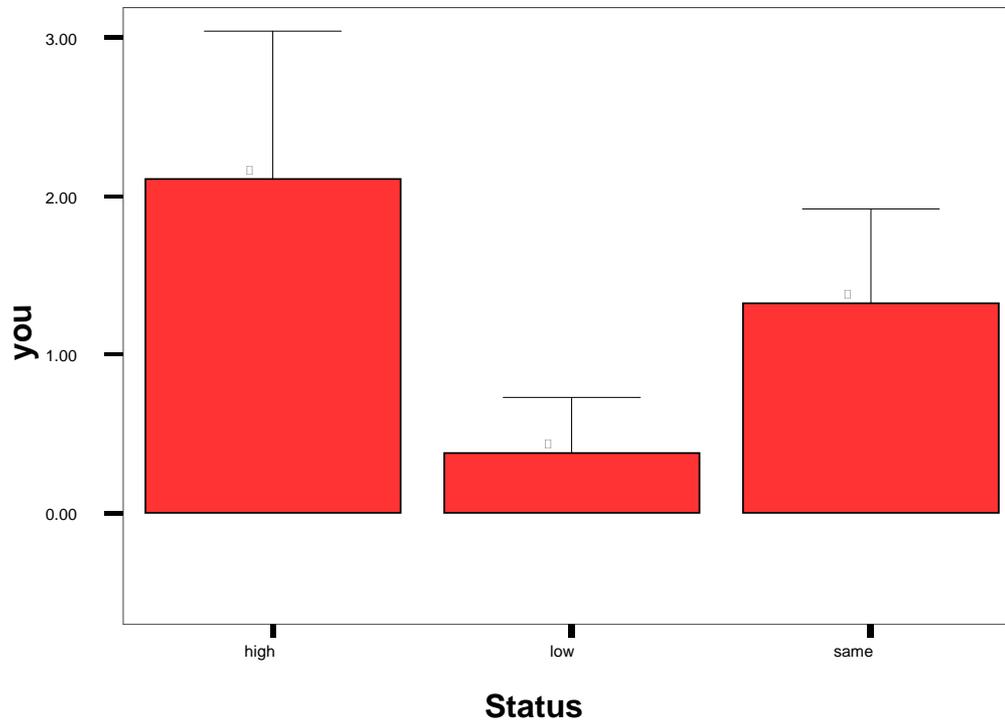
Example 3: Status in Iraqi military communications

- Sample of 60 letters drawn from the Iraqi Perspectives Project (IPP; Woods et al, 2006).
- Twenty letters were selected from the IPP database for each of three conditions:
 1. high status -> low status
 2. low status -> high status
 3. equal status

1st Person pronouns in Iraqi military transmissions



2nd Person pronouns in Iraqi military transmissions



Causal words in Iraqi military transmissions



Interpreting the word count data

- Clearly low-level word frequency varies with status.
- But what does it mean?
- And can we do anything useful with it?

Using Machine Classifiers to build a predictive model of status



Conclusions

- We have shown *Social Language Processing* techniques applied to:
 - individual speeches
 - medium-size collections of communications
 - huge collections of blog data
- In each case, automated analysis revealed patterns mirroring independently identified social and psychological traits.
- Today, every organization or nation leaks massive amounts of text: SLP can convert this information glut into psychological and social data.

Appendix 1: Dating Mubarak speeches

Mubarak Speeches in English: Can Coh-Metrix predict date of speech?

Beta Weight in Multiple Regression



NARRATIVITY

high

low

REFERENTIAL
COHESION

high

low

SITUATION MODEL
COHESION

high

low

SYNTAX

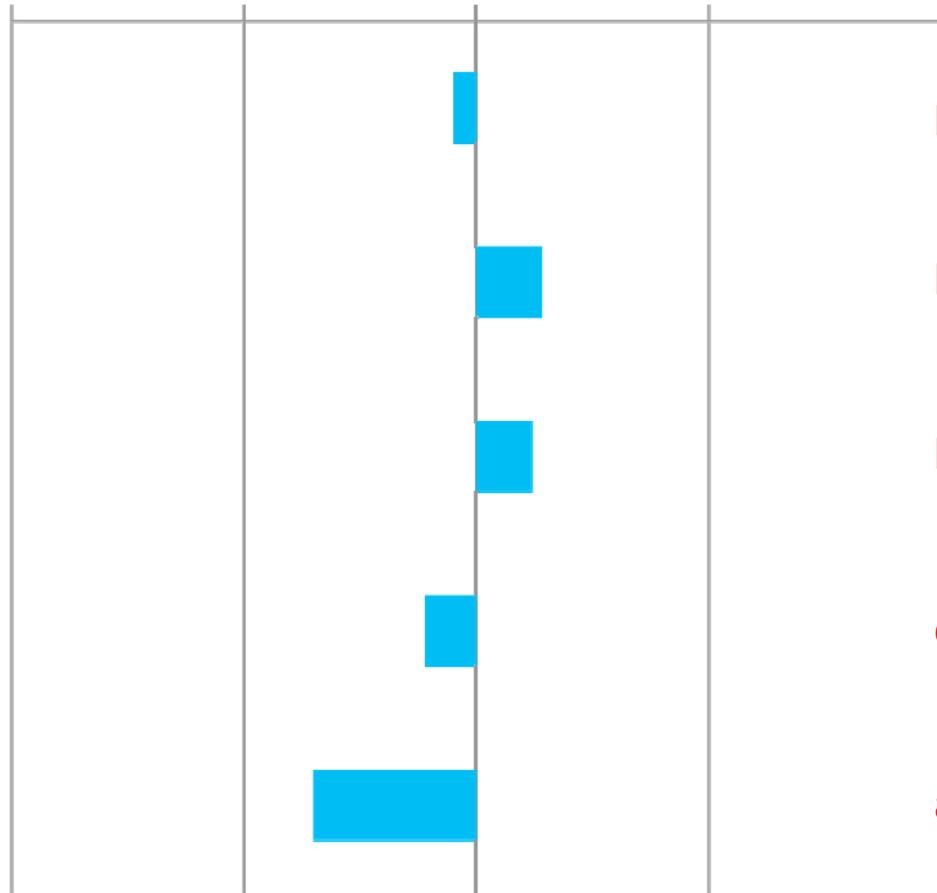
simple

complex

WORD
ABSTRACTNESS

concrete

abstract



Appendix 2:
language as evidence of **deception**



Iraq's combination of weapons of mass destruction and ties to terrorist groups and ballistic missiles would threaten the peace and security of many nations. GEORGE W. BUSH, OCT. 16, 2002

IRAQ THE WAR CARD ORCHESTRATED DECEPTION ON THE PATH TO WAR

Overview

The Top Officials

Key False Statements

The Timeline

Multimedia

Public Opinion

Bibliography

Methodology

Credits

Print

BOOKMARK

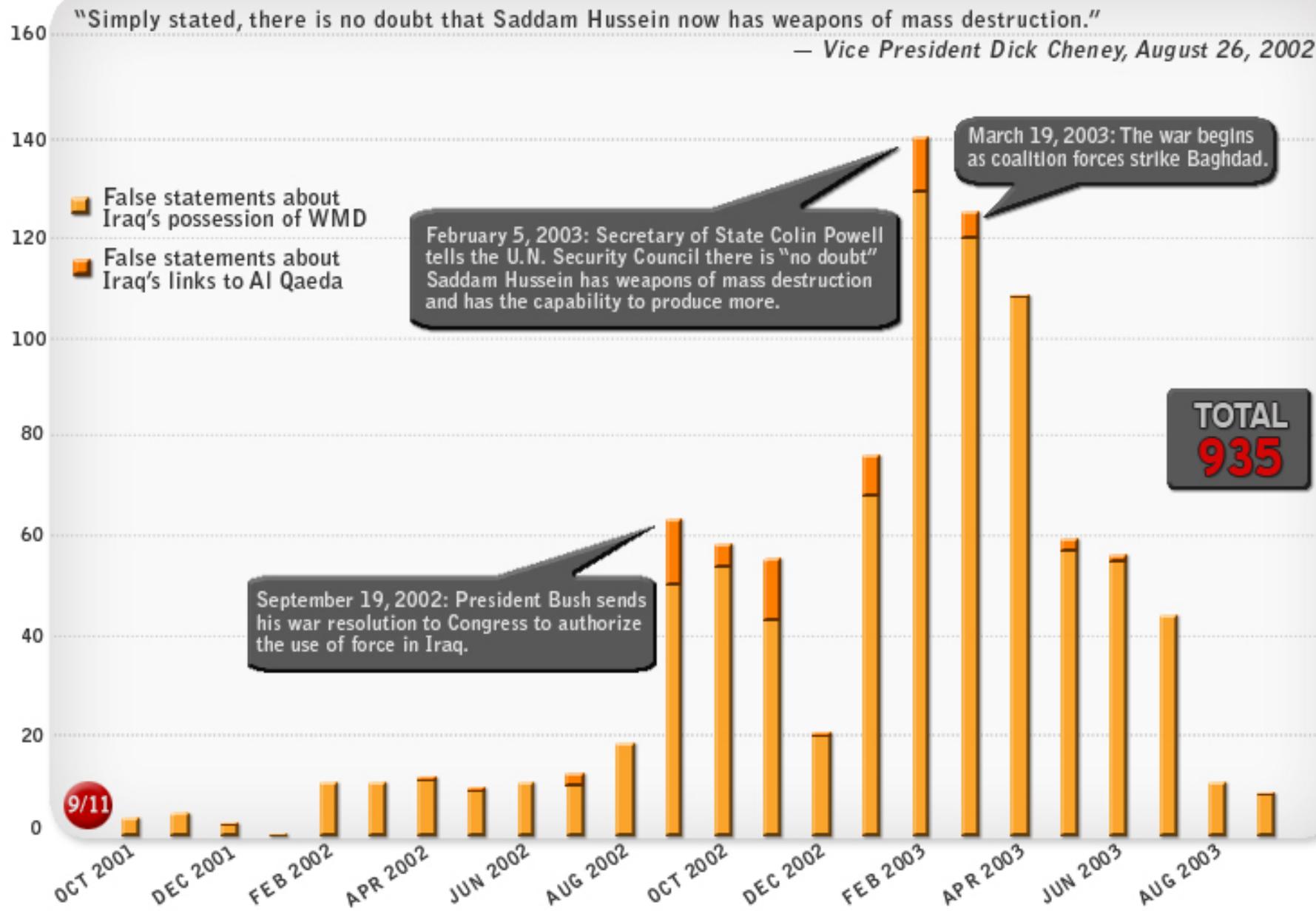
False Pretenses

FOLLOWING 9/11, PRESIDENT BUSH AND SEVEN TOP OFFICIALS OF HIS ADMINISTRATION WAGED A CAREFULLY ORCHESTRATED CAMPAIGN OF MISINFORMATION ABOUT THE THREAT POSED BY SADDAM HUSSEIN'S IRAQ.

By Charles Lewis and Mark Reading-Smith

President George W. Bush and seven of his administration's top officials, including Vice President Dick Cheney, National Security Adviser Condoleezza Rice, and Defense Secretary Donald Rumsfeld, made at least 935 false statements in the two years following September 11, 2001, about the

False Statements by Month



http://www.publicintegrity.org/

mechanistic pr

Me DUST DP BB Lib X f APA e G M W K S S T i

Iraq: The War Card ... Lying & Instant Mes... Gmail - False Statem... Iraq: The War Car...

FEBRUARY 15, 2002

Vice President Dick Cheney, Remarks to the Council on Foreign Relations

Iraq is clearly—again, as the president pointed out in his State of the Union speech—very much of concern. And not only do they have a robust set of programs to develop their own weapons of mass destruction, this is a place that has used it. You know, Saddam used chemical agents on the Iraqis during the Iran-Iraq War, and on his own people when he used them against the Kurds in times past. And we know he drove the inspectors out three years ago, and we know he has been actively and aggressively doing everything he can to enhance his capabilities.

He has, in the past, had some dealings with terrorists, clearly. Abu Nidal for a long time operated out of Baghdad. And so if you were to put together a list of states, given our concern of weapons of mass destruction, states that have supported terrorists in the past or have links and ties, clearly that's got to be one we focus on.

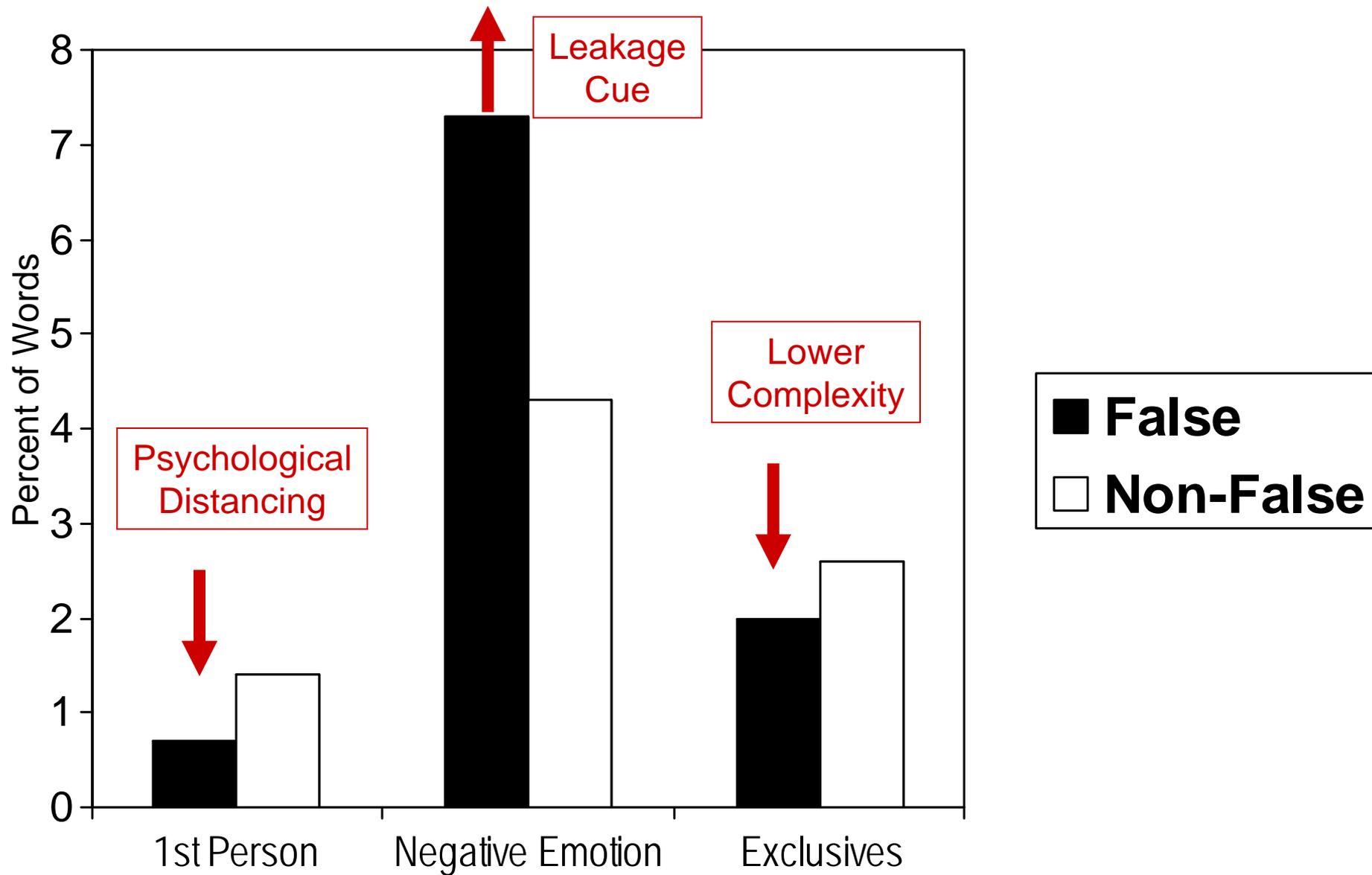
[text omitted]

So, you know, we don't talk about prospective future actions. But I think if aggressive action is required, I would anticipate that there will be the appropriate support for that, both from the American people and the international community.

<http://www.whitehouse.gov/vicepresident/news-speeches/speeches/vp20020215.html>

SOURCE: Office of the White House Press Secretary, remarks by Dick Cheney to the Council on Foreign Relations, February 15, 2002.

Done



“Mapping Genealogies of Terrorist Organizations”

Martha Crenshaw

Center for International Security and Cooperation
Stanford University

National Science Foundation Award, NSCC/SA,
2009-2012

Project Goals

- Define **patterns** in the organizational evolution of terrorism
- Identify their **determinants**
- Explain their **consequences**

Method

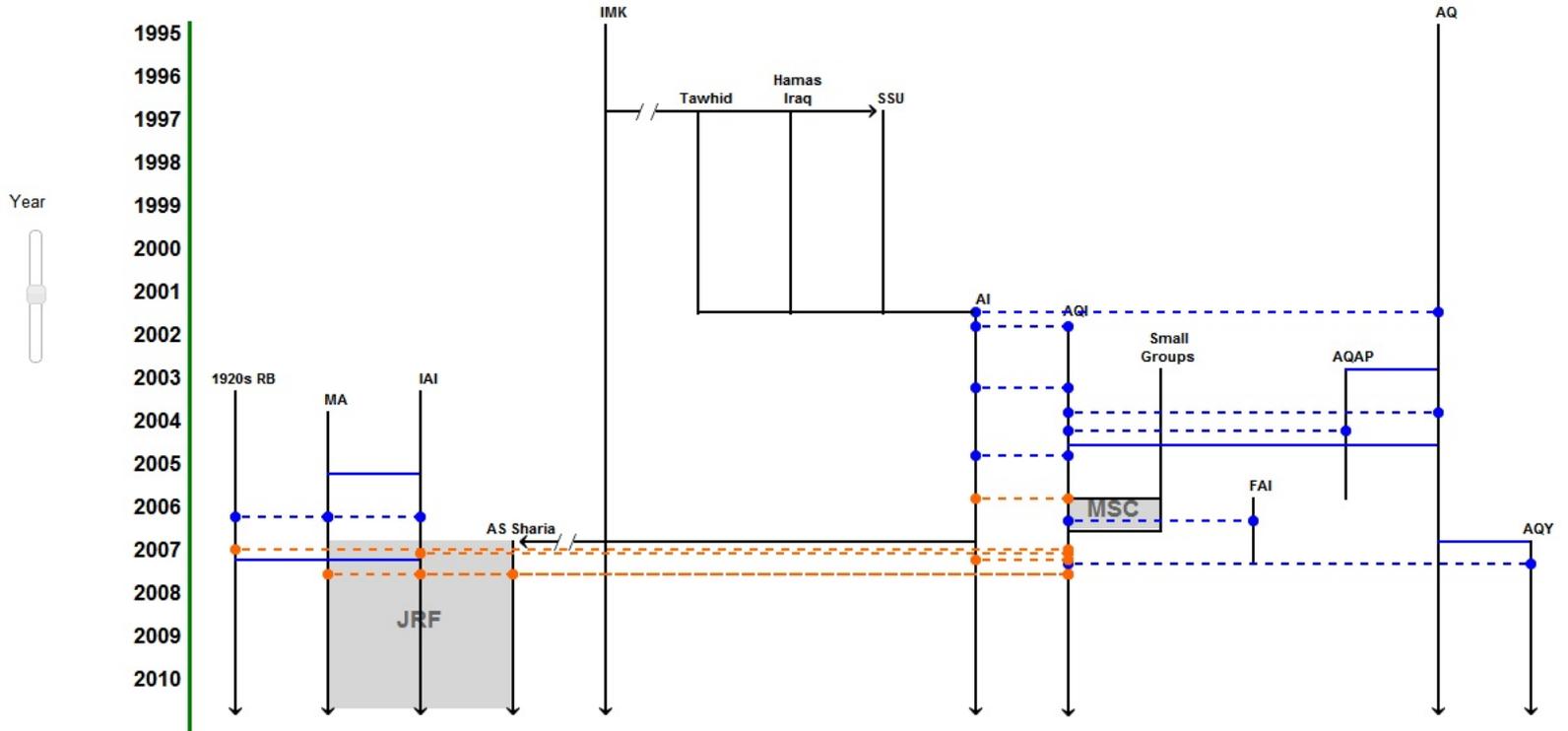
- Web-based maps trace and display changes in group relationships over time
- Linked to database of group profiles
- Developed via open source web software and standard technologies (HTML 4.01, Javascript, CSS 2, AJAX, PHP, and MySQL)

Maps completed and in draft

- Iraq
- Pakistan
- Palestinian-Israeli conflict
- Colombia
- Turkey
- Total 32 group profiles

Settings Legend Close

Geographic Zoom: Iraq External



Map Legend



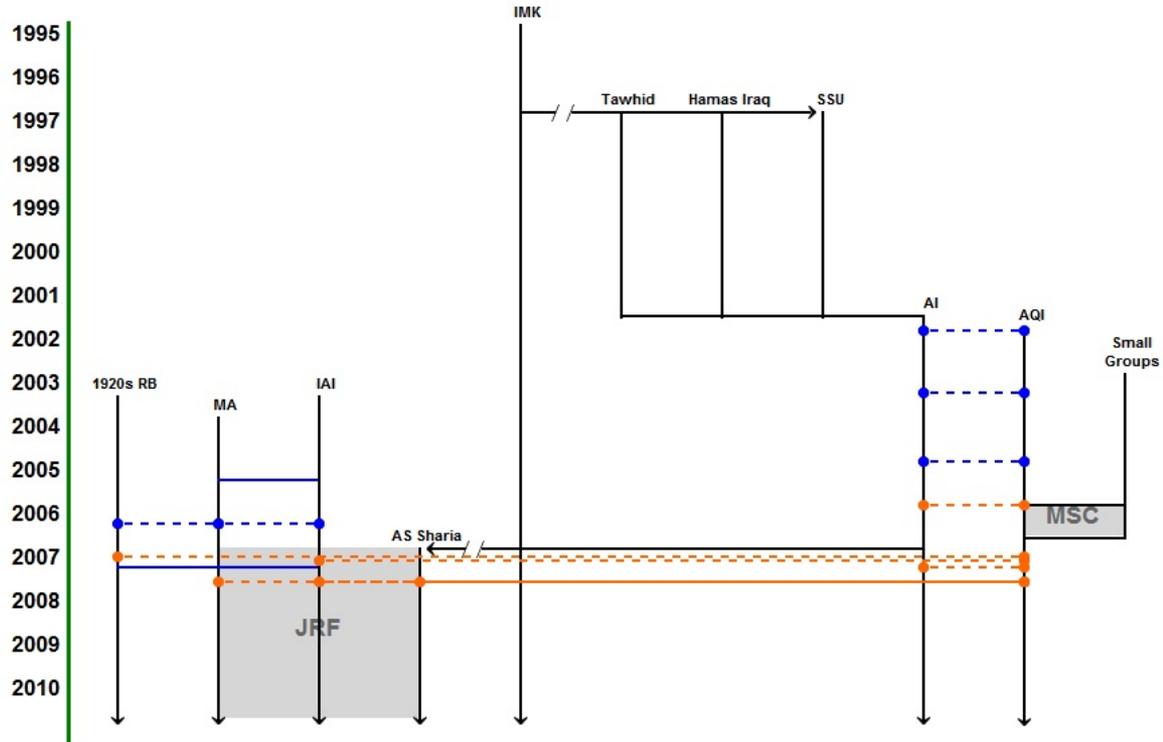
-  Affiliates
-  Allies
-  Merge
-  Rivals
-  Split
-  Umbrella Organization
-  Major Attack
-  Leadership change

For more on how we classify links, see the definitions page.

Settings Legend Close

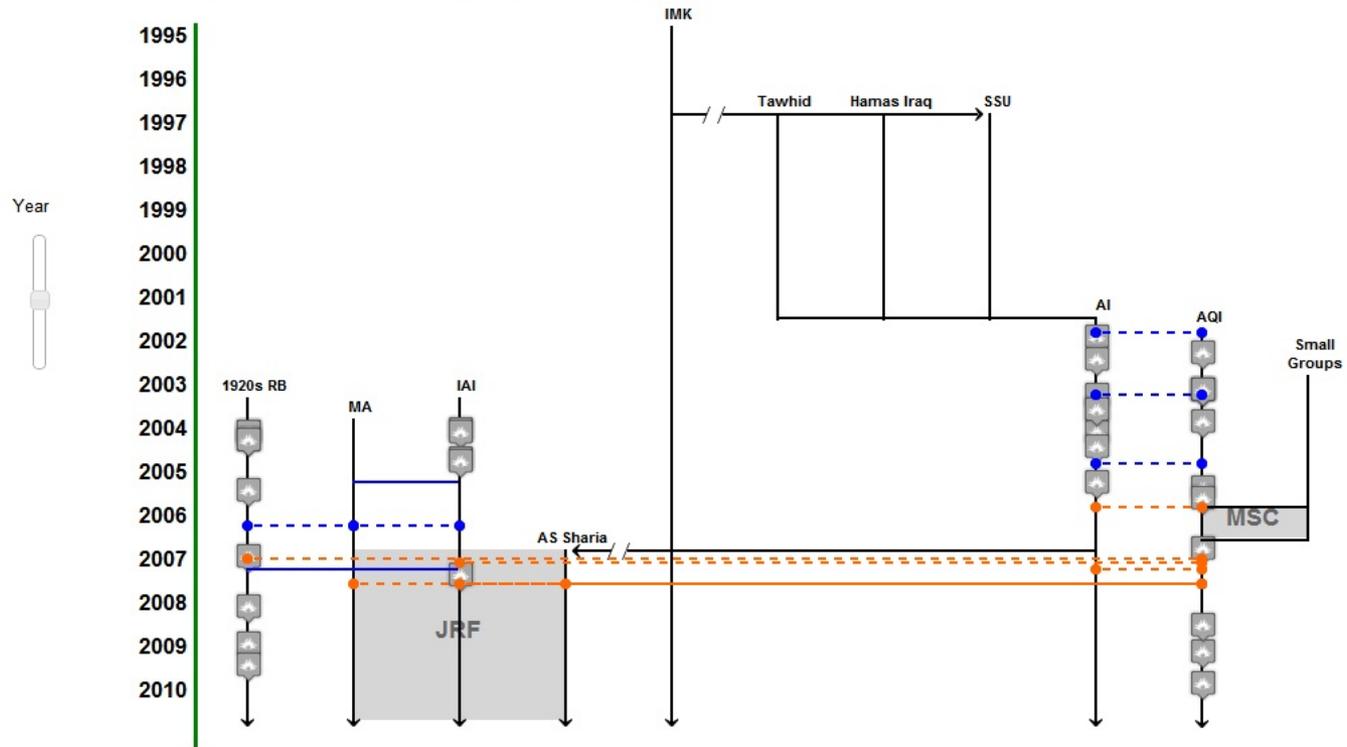
Geographic Zoom: Iraq Domestic

Year



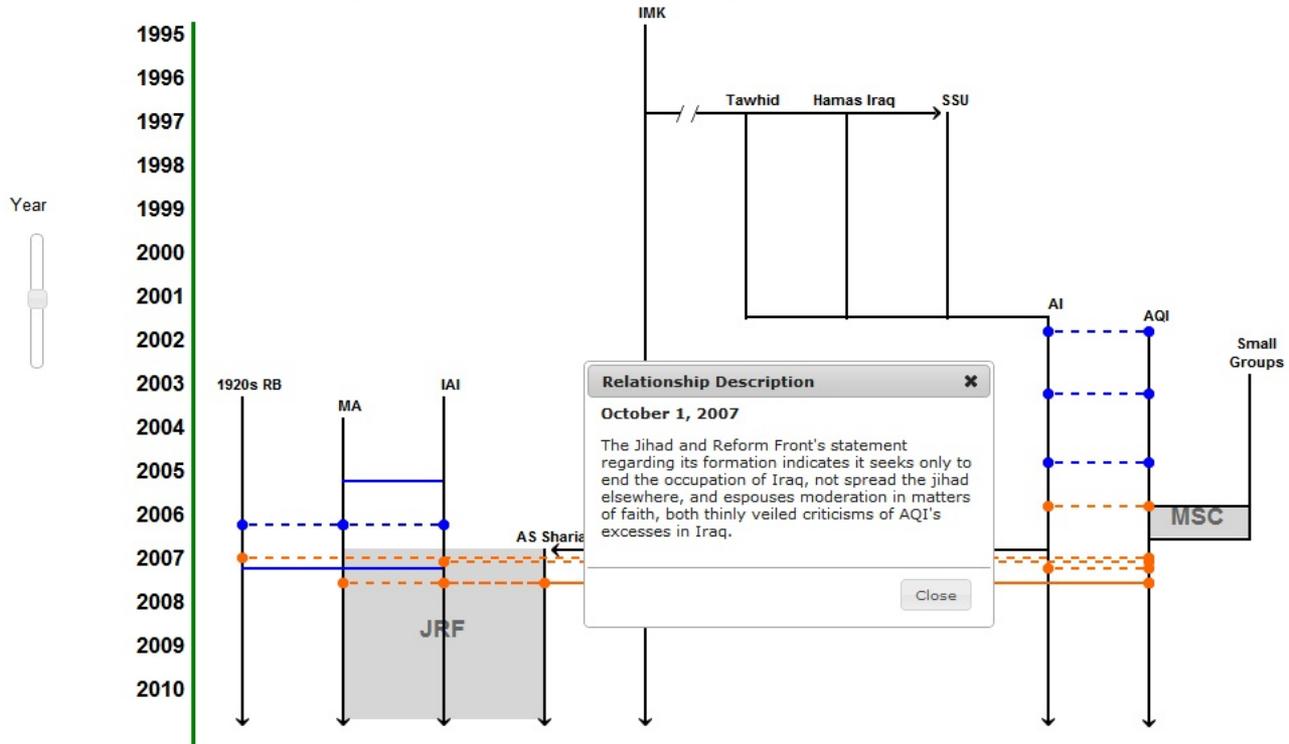
Settings Legend Close

Geographic Zoom: Iraq Domestic



Settings Legend Close

Geographic Zoom: Iraq Domestic





Quick Links ...

[Home](#)

[Maps](#)

[Profiles](#)

[About](#)

[Technology](#)

[Administration](#)

al-Qa'ida in Iraq

al-Qa'ida Organization in the Land of the Two Rivers, al-Qa'ida Organization in Mesopotamia, al-Zarqawi Network, Monotheism and Holy Struggle, Organization of Jihad's Base in the Country of the Two Rivers, Tawhid wa'l Jihad

Date Formed
2002

Date Disbanded
Group is active.

First Known Attack
October 28, 2002: Tawhid wa'l Jihad elements assassinated Laurence Foley in Jordan.[1] (No casualty data).

Last Known Attack
May 2010: Blamed for attacks in response to the death of two key leaders.[2] (No casualty data).

Last Updated
June 27, 2010

Narrative Summary

Usama bin Ladin asked Abu Mus'ab al-Zarqawi to join al-Qa'ida in 2000, but Zarqawi refused.[3] Instead, Zarqawi formed Tawhid wa'l Jihad, a militant group based in Jordan. He provided material and financial support for the assassination of an American diplomat, Laurence Foley, in Jordan on October 28, 2002.[4] It was during the same year that Zarqawi entered northern Iraq, and in October of 2004 he formally joined al-Qa'ida to create Tanzim Qa'idat al-Jihad fi Bilad al-Rafidayn (al-Qa'ida in Iraq).[5]

From the beginning of the Iraqi insurgency, Western analysts debated the proportion of fighters from outside the country. In 2007, the Combating Terrorism Center (CTC) at West Point uncovered records of almost 700 foreigners who entered Iraq during 2006 and 2007 to fight for AQI, revealing that the group had a significant foreign component.[6] At the same time, Zarqawi's harsh tactics, such as beheading captives and posting videos on the internet, were alienating AQI from Iraqis. Ayman al-Zawahiri, an al-Qa'ida leader, sent Zarqawi a letter urging him to foster better relations with Iraqi leaders.[7]

SEARCH

CONTENTS

- [Date Formed](#)
- [Date Disbanded](#)
- [First Known Attack](#)
- [Last Known Attack](#)
- [Last Updated](#)
- [Narrative Summary](#)
- [Leadership](#)
- [Ideology and Goals](#)
- [Name Changes](#)
- [Size](#)
- [Resources](#)
- [External Influence](#)
- [Geographical Locations](#)
- [Targets and Tactics](#)
- [Political Activities](#)
- [Major Attacks](#)
- [Relationships with Other Groups](#)
- [Community Relationships](#)
- [Other Key Characteristics or Events](#)
- [References](#)

Condensed Profile Template

Name and Name Changes

Dates Formed and Disbanded

First and Last Known Attacks

Narrative Summary

Leadership

Ideology and Goals

Size

Resources

Transnational Influences

Geographical Locations of Bases and Operations

Targets and Tactics including Political Activities and Major Attacks

Relationships with Other Groups and Community (Popular Support)

Questions

- Effect of loss of leader?
- Outbidding in extremism?
- Reconciliation or escalation associated with consolidation or fragmentation?
- When do groups end? When are new groups formed?
- Does innovation/learning spread within or across families of groups?
- What causes rivalries, alliances, mergers?

Emotional Expressions Predict Aggression in Ideologically- Motivated Groups

David Matsumoto, Ph.D.

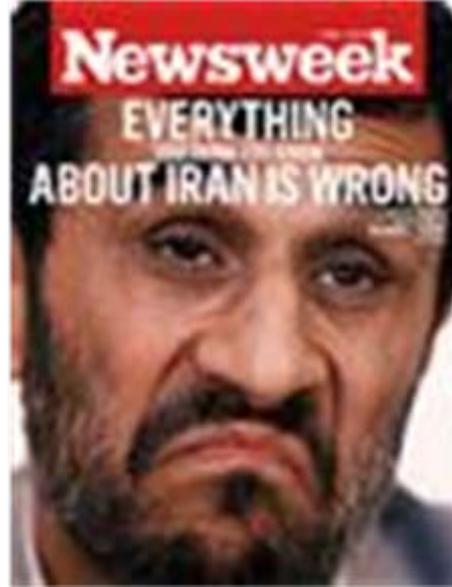
San Francisco State University



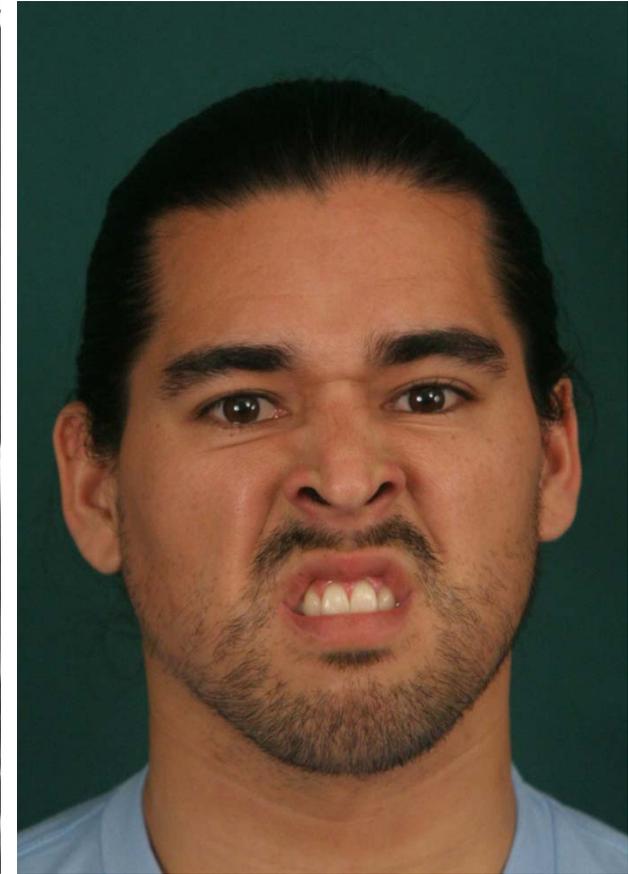
Senior Staff

- Dr. Mark G. Frank
 - Professor of Communication, University at Buffalo, State University of New York
- Dr. Hyi Sung Hwang
 - Research Scientist, Humintell, LLC

What do these Individuals have in Common?



The Expression of Disgust



The Question

- Is there something special about anger, contempt, and disgust that fuels aggression and violence?
- Theoretical perspective about emotion that informs this work
 - Emotions as discrete entities
 - The functions of anger, contempt, and disgust
 - Emotion based theory of hatred

Our Approach

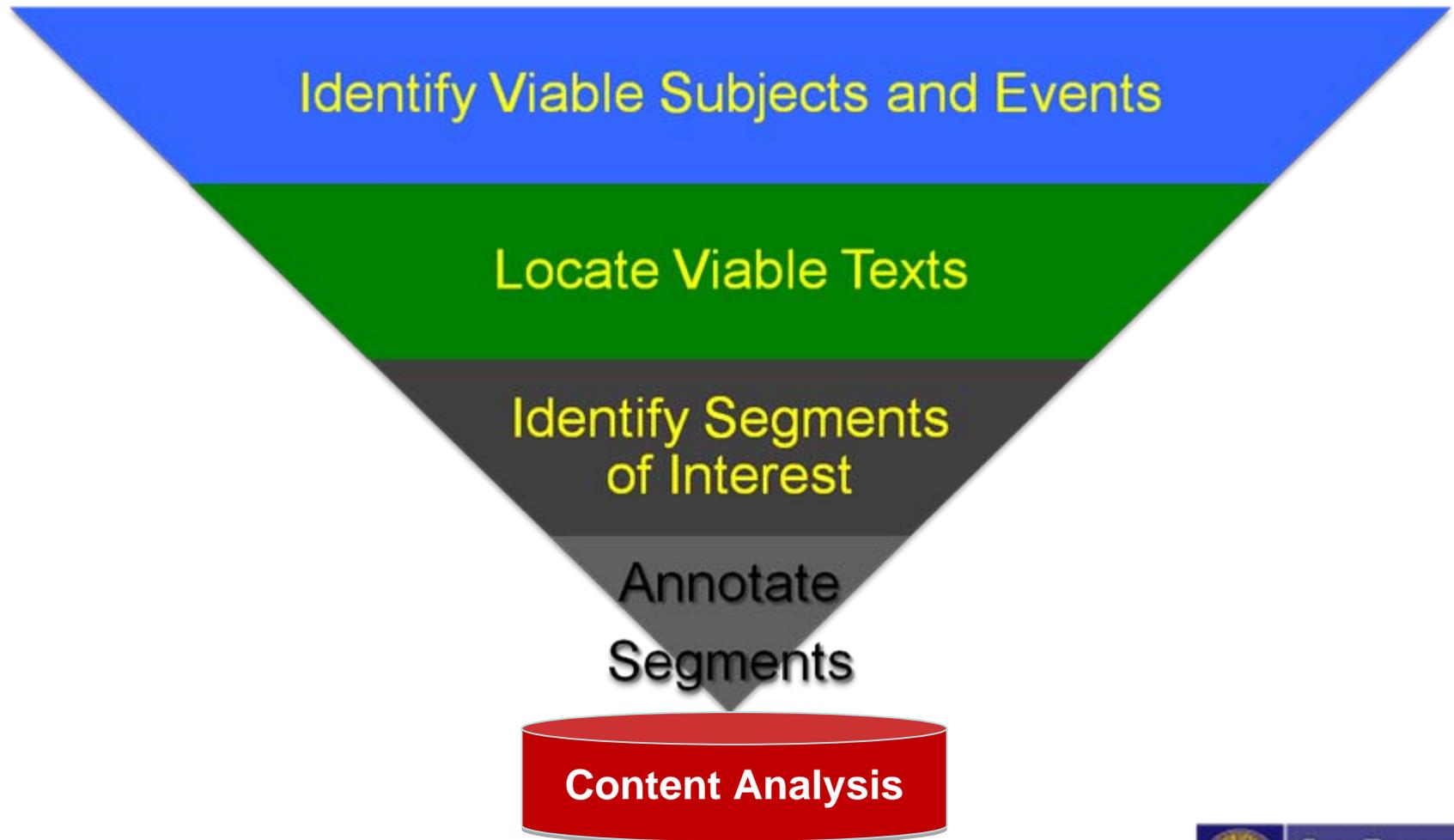
- We propose that the manner in which these emotions are transformed over time, often via stories, helps to inculcate cultures of hatred and violence.
 - *Phase 1 – Outrage based on Anger*
 - *Phase 2 – Moral Superiority based on Contempt*
 - *Phase 3 – Elimination based on Disgust*

Project Goals

- Conduct seven studies examining the relationship between specific emotions expressed by leaders of ideologically motivated groups toward outgroups they despise and subsequent acts of aggression by those groups
- Study 1: Emotion-based Content Analysis of Justifications of War from the Written Record in Modern and Premodern History

METHODOLOGY

Record Acquisition Process Overview



Summary

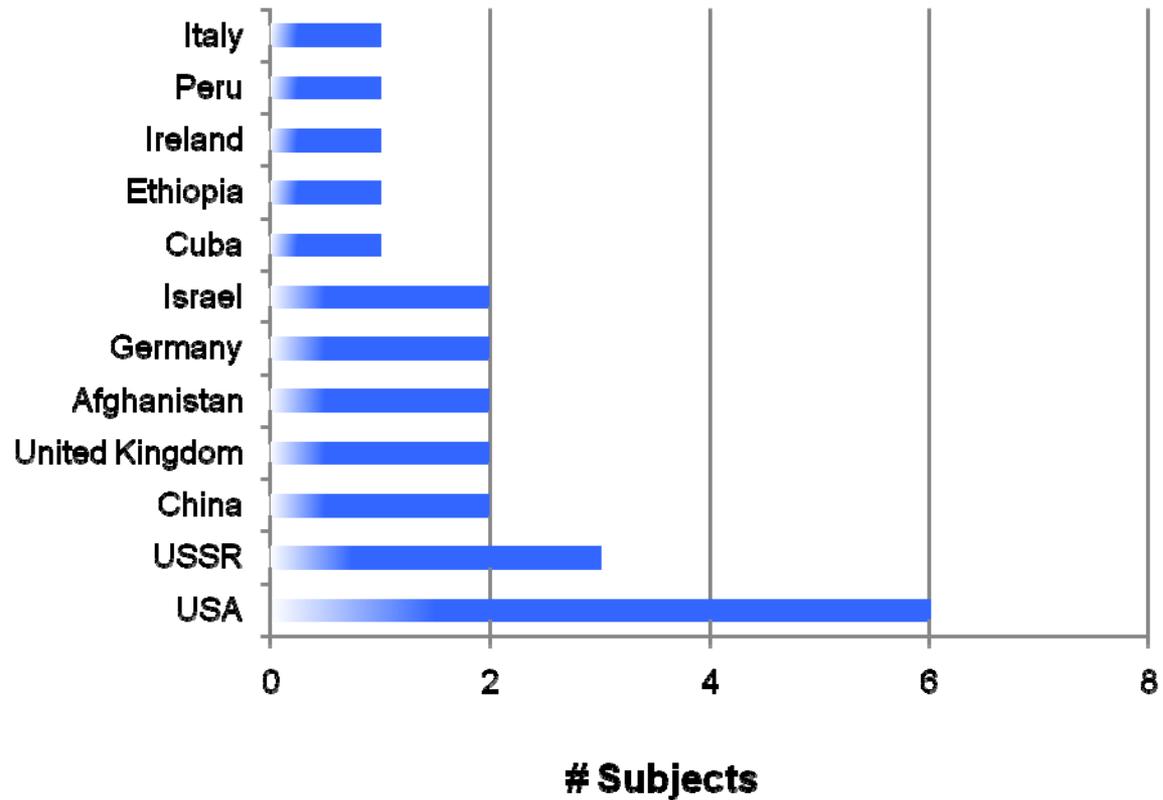
- Finding Sources
 - Cultural and historical consultants
 - General internet search using terms "genocide" and "FBI terrorism" and "non-violent resistance"
 - General websites with source materials
- Isolating text associated with the outgroup
- Final pool
 - 20 AoAs, 5 AoRs
 - 7,800 sentences
 - 191,763 words
- Validating sources

Subjects by Decade

1830	1910s	1920s	1930s	1940s	1960s	1970s	1980s	1990s	2000s																																								
Indian Removal Act - Jackson_A	1830	Eng_Enters_WWI - Churchill_W	1914	Easter_Rising_Rebellion - Connolly_J	1916	Russian_Oct_Revol - Lenin_V	1917	Mussolini_Marches_on_Rome - Mussolini_B	1922	Salt Satyagraha - Ghandi_M	1930	1932_Civil_Disobed_Cong_res - Ghandi_M	1932	USSR_Stalin_The_Great_Purge - Stalin_J	1937	Kristallnacht - Hitler_A	1938	Nazis Invade Poland - Hitler_A	1939	England_v_Germany_WII - Churchill_W	1939	Hirosh_Nag_Bomb - Roosevelt_F	1945	U-2_Incident - Khrushchev_N	1960	Cuban Missile Crisis - Castro_F	1962	1966_PRC_Cultural_Revolution - Mao_Z	1966	Poor_People's_Campaign - King_M	1968	Ppns_Resisting_Marcos - Aquino_B	1972	Revolt_V_Peruvian_State - Guzman_A	1980	Operation Desert Storm - Bush. Sr. G	1990	Bombing_of_embassies_Kenya_and_Tanzania - bin Laden O	1998	Taliban_Insurgency_Afg - bin Laden_O	2003	Invasion_of_Iraq - Bush_G	2003	Fall_of_Mogadishu - Zenawi_M	2006	Protests_2008_Olympics_China - Lama_D	2008	Assassination_of_Dr_George_R_Tiller - Newman_T	2009



Subjects by Country



CONTENT ANALYSIS CODING SCHEME

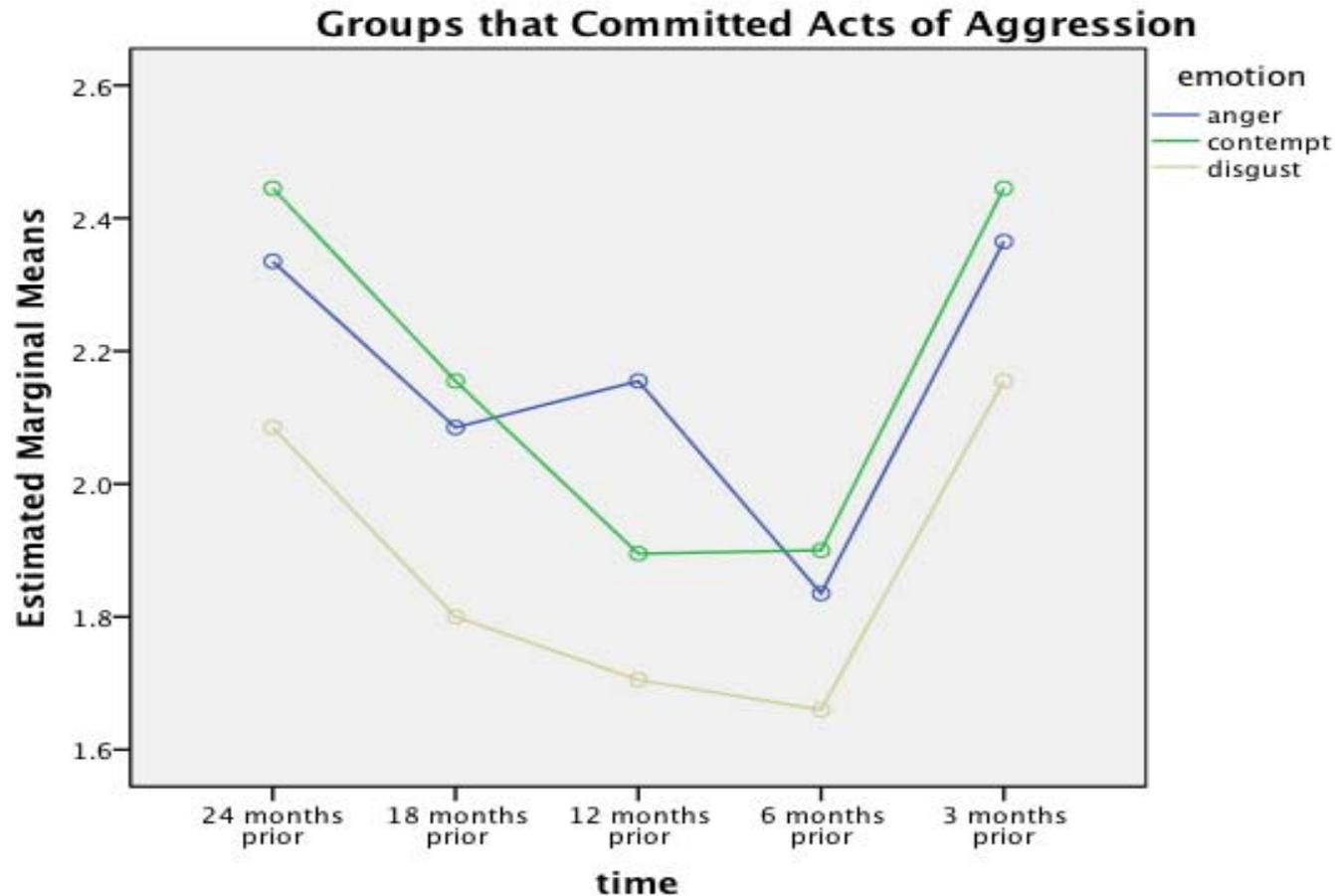
Top-Down Coding Scheme

- 10 coders rated each sentence in the identified speeches for the expression of seven emotions (from the speaker's perspective) on 11-point scales
- Agreement scores for each annotator computed
- Outliers removed (correlation with all annotators $\leq .40$).
 - Mean reliability among remaining coders $\geq .60$.
- Final emotion annotations computed by averaging across all reliable coders for each sentence

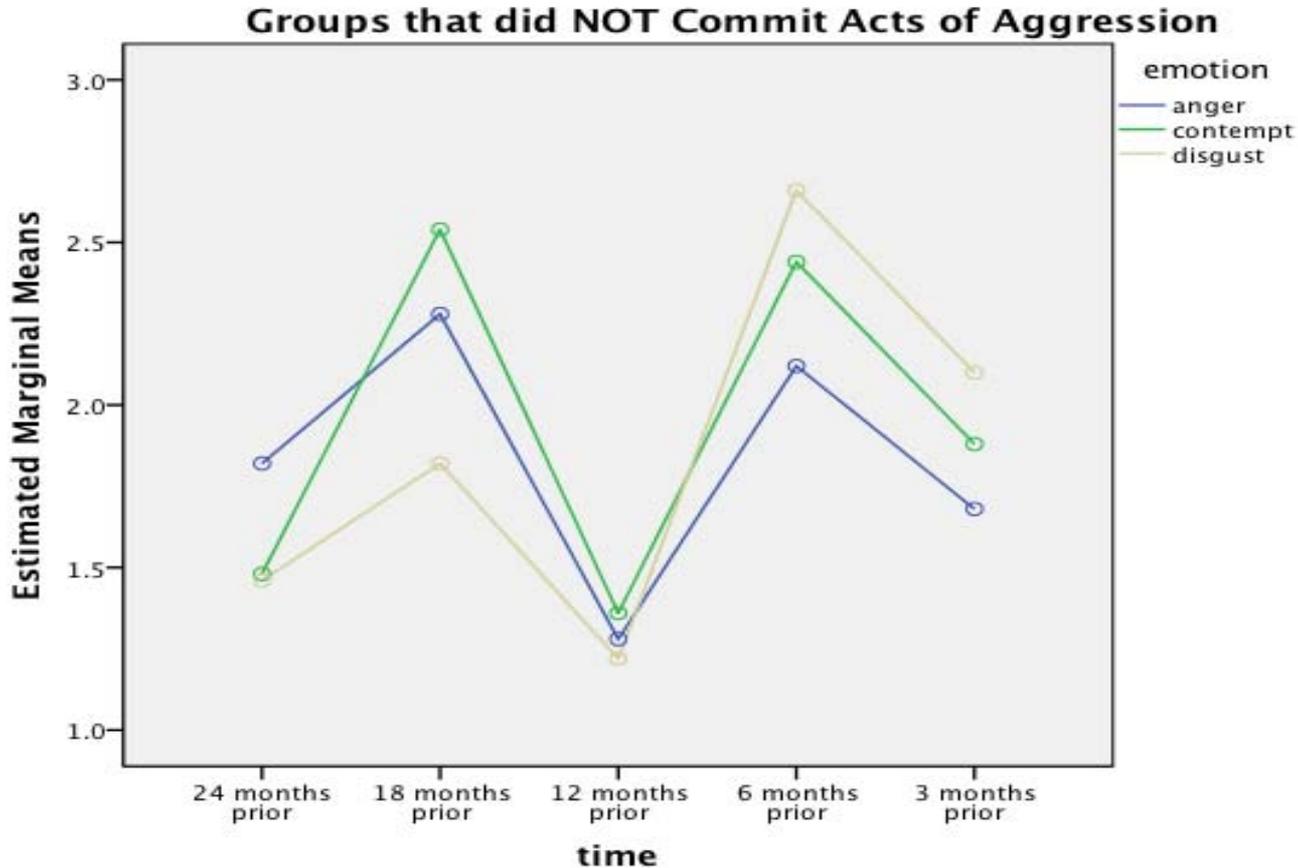
Results

- Computed mean of all emotion categories for each speech across all sentences within that speech
- Submitted the mean emotion ratings for anger, contempt, and disgust to a three-way ANOVA using time period (5), emotion (3), and group (2) as IVs
 - Produced a marginally significant three-way interaction, $F(8, 184) = 1.84, p = .07, \eta_p^2 = .074$.

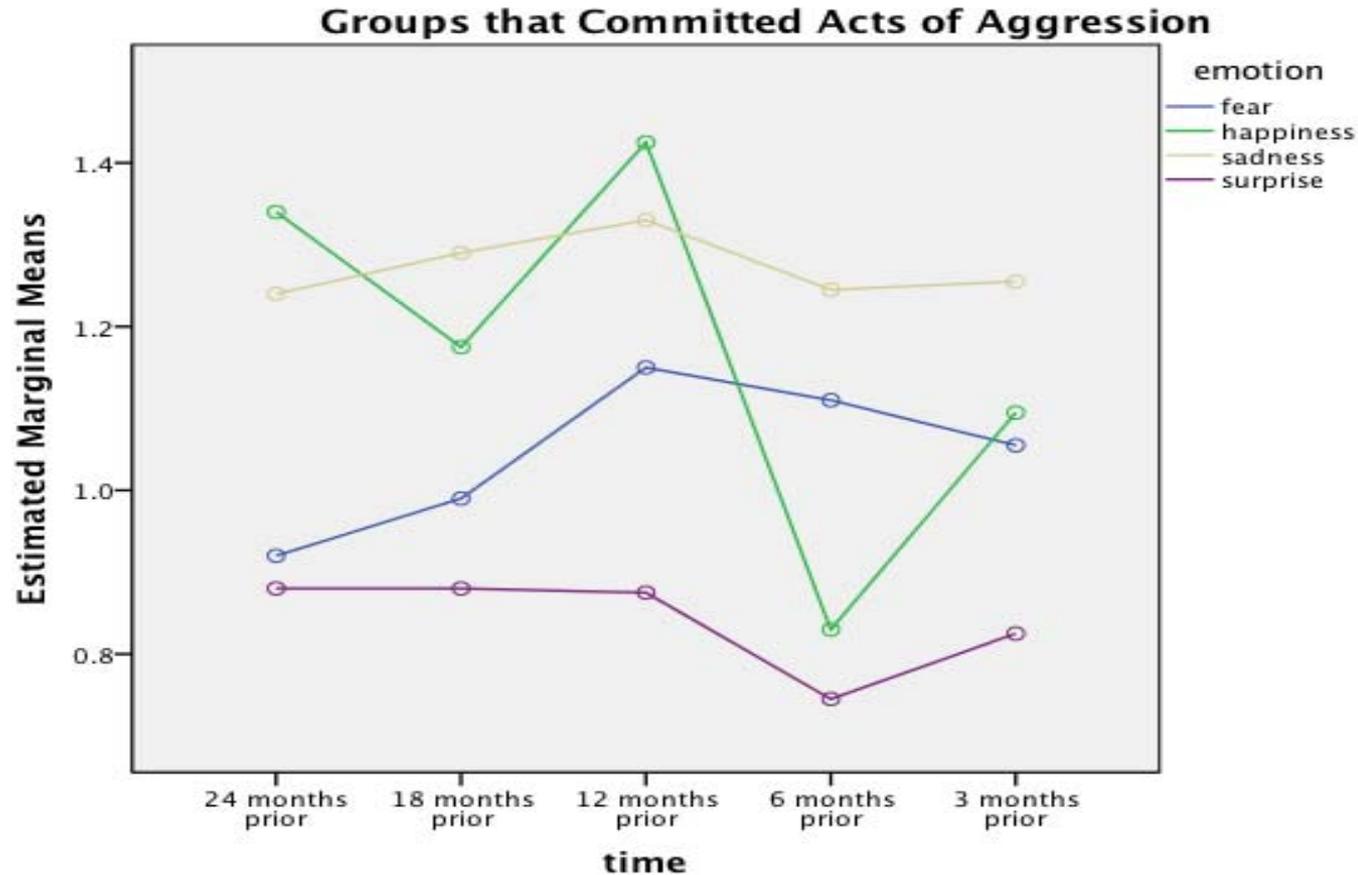
Changes in Expressed Emotion Across Time



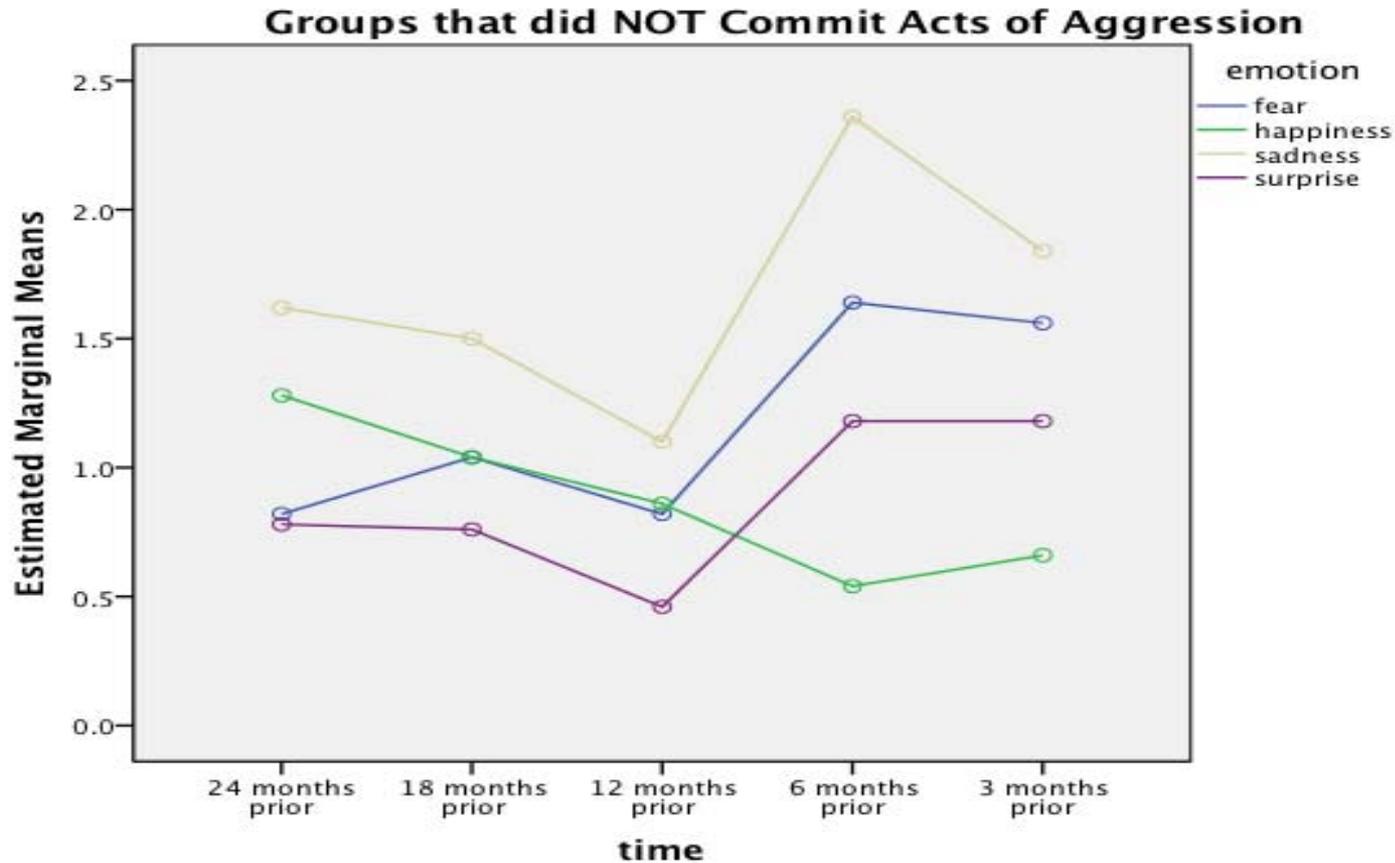
Changes in Expressed Emotion Across Time



Changes in Expressed Emotion Across Time



Changes in Expressed Emotion Across Time



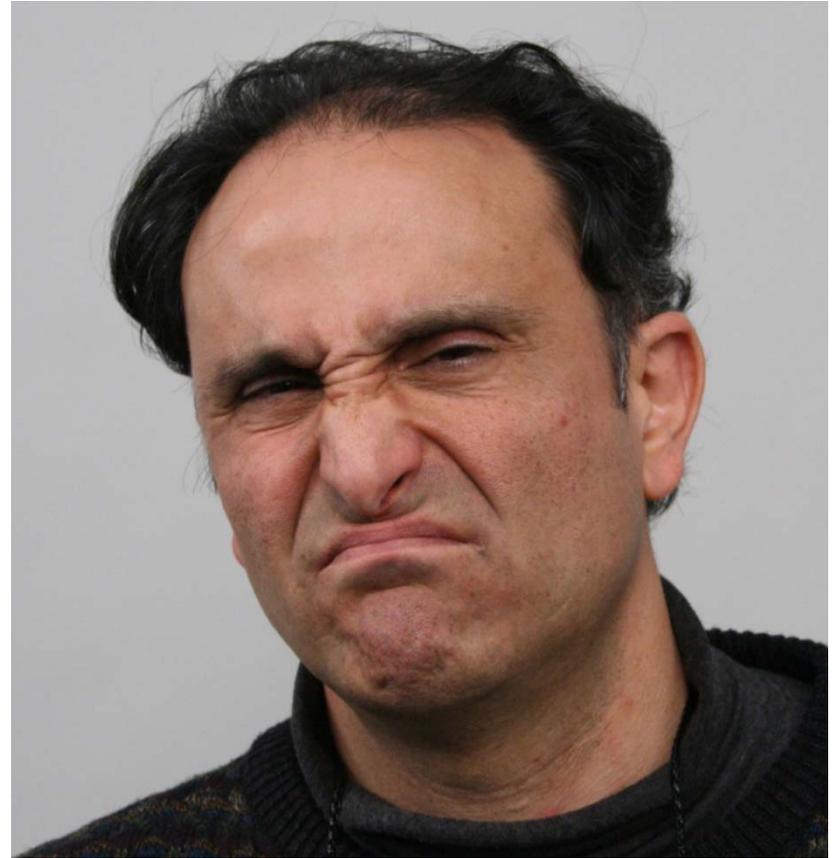
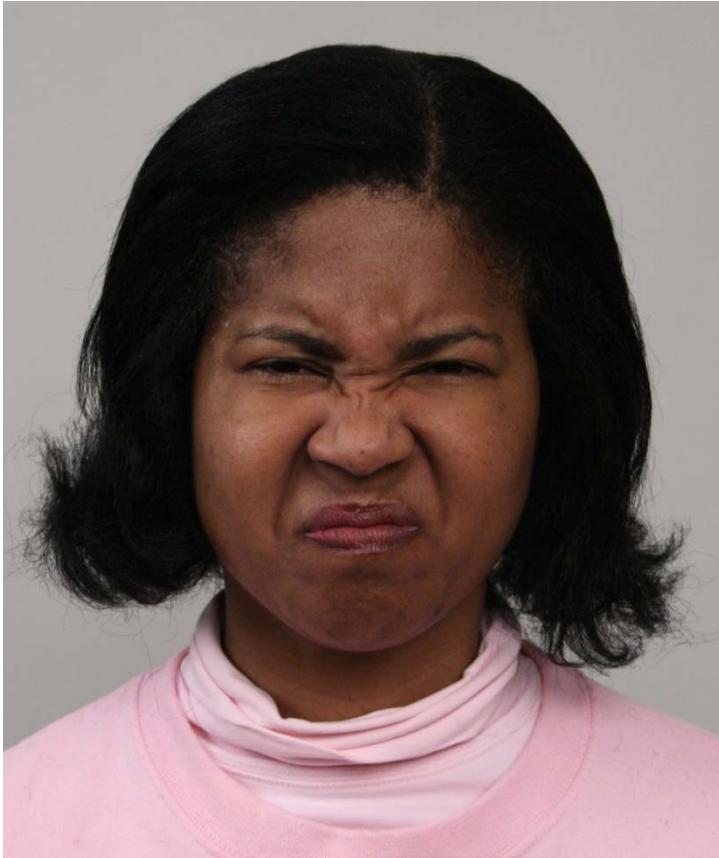
Summary

- AoAs increased in anger, contempt, and disgust across time towards an act of aggression, or had elevated levels throughout.
- This was not true for AoRs.
- Findings reliable across different coding methodologies, and in very disparate samples across a very wide range of time and culture

Conclusion

- These findings suggest that analyzing emotions expressed by leaders may be not only indicative of group intentions, but also diagnostic of the effects of our actions on others

Thank you for your kind attention!





Cycles of Repression and Dissent in the Context of Migration, Economic Dependencies, and Social Networking

PIs: Katherine Meyer, J. Craig Jenkins,
Ola Ahlqvist, and Hassan Aly

Graduate Research Assistants: Matthew
Costello, Hyeseon Jeong, Anne Price, and
Matthew Stearmer

Session on Impact of Social & Cultural Change on
Transnational & Regional Dynamics.
September 2010

Dissent and Repression in the Middle East

- In authoritarian states (Egypt) and high polarized conflicts (Israel/Palestine), state repression provoked civil protest. In democratizing contexts (Turkey), no impact.
- The reciprocal effects of violence were considerably greater and longer lasting in authoritarian regimes. Democracy, in this sense, tamed violent conflict.
- In authoritarian states, protest potential was low and centered in informal friendship networks while, in democracies, it was considerably greater and associated with civic engagement and personal resources

- Migration as a transnational dynamic
- Rentier Economies and Social Networks in brief

INTERNATIONAL MIGRATION

- **Extensive database of Kurdish conflict since the mid-twentieth century developed through archival process methodology (Van Horn 2007) – 2000 incidents**
- **Conflict specific to Kurdish activities in multiple societies (primarily Iraq, Iran, Syria and Turkey) including the geographic location of each incident of conflict as latitude and longitude**
- **Information on cyberspace activity using webometrics to investigate use of hyperlinks to maintain social networks linking Kurds in the Middle East to diaspora**

INTERNATIONAL MIGRATION FINDINGS

- Kurdish cyberspace is highly fragmented despite the fact that almost every Kurdish website claims to work for Kurdish unity.
- This in turn suggests that factionalism among political groups in the Middle East influences Kurdish migrant communities even in Europe and North America.

ECONOMIC DEPENDENCIES

OIL & NATURAL GAS & MINERAL RENTS, OFFICIAL AID, WORKER REMITTANCES, FOREIGN DIRECT INVESTMENT, INTL TOURISM

- Oil & natural gas rents per capita rose from 1988- 2008 and remained high, esp. in the Arab Gulf states.
- Most states received little per capita in official aid and assistance. (Exceptions : Iraq in 2000s; Tunisia in early 1990s.)
- Worker remittances per capita were greatest in Lebanon, with a spike in the 2000s. Yemen, Morocco, and Tunisia were high.
- Israel and Bahrain received the most Foreign Direct Investment per capita, spiking after 2000. In N.A., Libya and Tunisia grew.
- International tourism receipts per capita increased for nearly all.

SOCIAL NETWORKS: WOMEN'S ISSUES - TURKEY

- **Wave 1: 1920-1970:** Political networks further the interests of the state, mainly political or educational issues. Located in Ankara and Istanbul . Spread to Western and Northern Turkey; Narrow in focus.
- **Wave 2: 1970-1990:** Began due to international organization outreach or expatriate expansion. Established in central Turkey or the Western and Northern periphery (Istanbul and Izmir as key nodes). Goals similar to goal in Wave 1.
- **Wave 3: 1990-present:** Many NGOs established in Eastern and Southeastern Turkey; biggest has 36 branches. More individual groups that network together; not older groups expanding. Diverse activities; interact to promote events and contribute to international reports. Address violence against women.

The Minerva Initiative



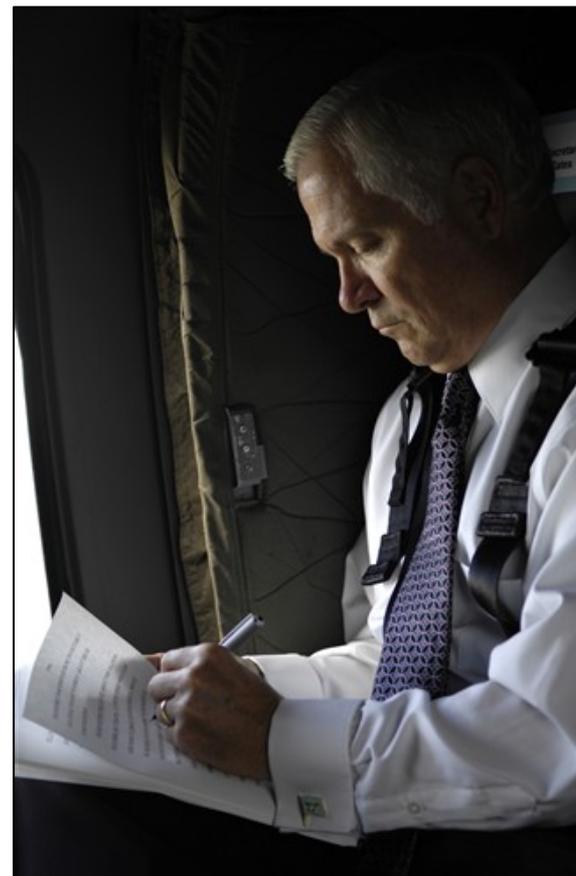
Key Note Remarks
16 September 2010
This Briefing is **Unclassified**



Evolution of Minerva

- ❑ **DoD Has Had Strong Relationship w/ Academia in Past:** “Throughout the Cold War, universities were vital centers of new research – often funded by the government – and also new ideas and even new fields of study such as game theory and Kremlinology.”
- ❑ **Need for Foreign Area Knowledge:** “Too many mistakes have been made over the years because our government and military did not understand – or even seek to understand – the countries or cultures we were dealing with.”
- ❑ **Must Engage Humanities & Soft Sciences Outside of Government:** “The government and the Department of Defense need to engage additional intellectual disciplines – such as history, anthropology, sociology...”

-- Secretary Gates, April 18, 2008



“One of the keys to this effort...is to find untapped resources outside of government—resources like those our universities can offer.”



Future Challenges



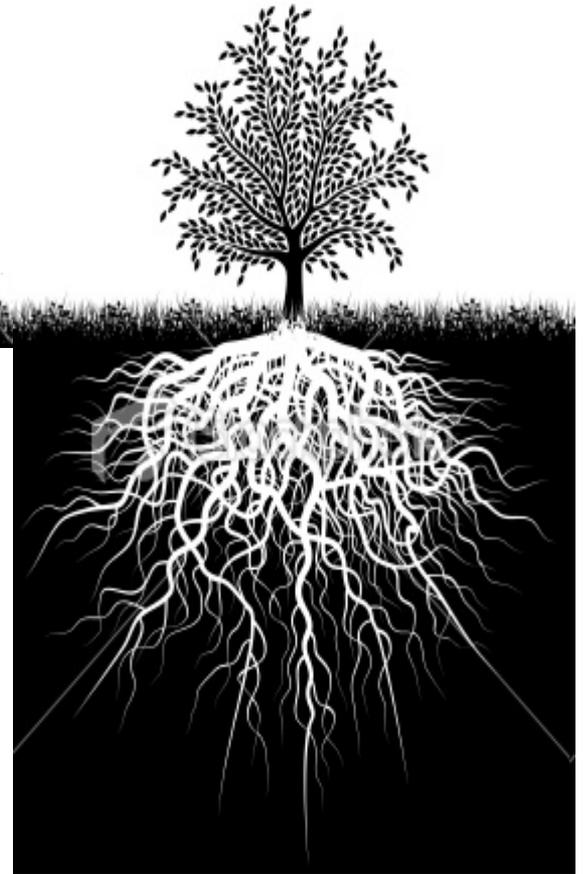
- **2010 Quadrennial Defense Review:**
 - “...through such programs as the Minerva Initiative, [the Department will] develop the intellectual capital necessary to meet the challenges of operating in a changing and complex environment.”
- **Shifting distribution of political, economic and military power**
- **Continued growth and power of non-state actors**
- **Rising demand for resources, rapid urbanization, and climate change**
- **Proliferation of WMD**





Opening the Black Box

- Cultivating new relationships
- Nurturing growing community of strategic scholarship



Thank you for rising to the challenge and for answering the Secretary's call to engaged scholarship.

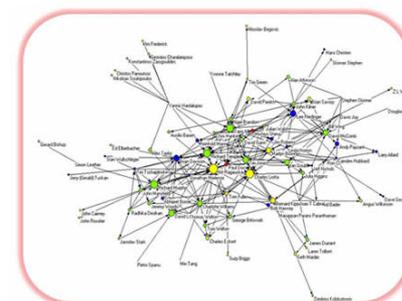


BACKUP SLIDES



DoD Efforts to Build Socio-Cultural Capability

- **Significant revisions to doctrine & guidance:**
 - StabOps Instruction (DoDI 3000.05); StabOps Directive (DoDD 3000.05); StabOps Manual (FM 3-07) ; COIN Manual (FM 3-24); IW JOC; Defense Language Program (e.g., DoDD 5160.41E, DoDI 5160.70, CJCSI 3126.01).
- **Development of operational socio-cultural capabilities:**
 - Af-Pak Hands Program; Expansion of Special Operations Forces and Civil Affairs; Service cultural intelligence programs.
- **Expanding DoD's base of expertise in social sciences:**
 - Human, Social, Cultural Behavioral modeling; IW Modeling and Simulation; Minerva Initiative.



The Minerva Initiative;
Fostering a Community of Strategic
Scholarship
Fort Lesley J. McNair
September 16th, 2010

*Understanding Trans-regional Social Movements:
Strategic Impacts of Religious and Cultural Change*

People Power and Conflict in the Eurasian Migration
System

Dr. Beth Mitchneck, University of Arizona

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Dr. Cynthia Buckley, Social Science Research Council

buckley@ssrc.org



People Power and Conflict in the Eurasian Migration System

▶ Interdisciplinary Research Team

- Cynthia Buckley, Social Science Research Council
- Beth Mitchneck, University of Arizona
- Blair Ruble, Kennan Institute
- Timothy Heleniak, University of Maryland
- Alexander Gasparashvili, Moscow State University

Research Associates:

- Julia Carboni, Stephen Martin, Erin Hofmann, Yuka Minagawa and Elizabeth Malinkin



Worlds in Motion

- ▶ Global migration concerns rising
 - Varying forms – labor, forced, protracted conflicts
- ▶ National inability to govern migration effectively
 - Local challenges to socio-cultural identities
 - Rethinking the limits of assimilation and integration
- ▶ Changing demographic patterns alters and challenges political, economic, cultural and social landscapes



Bringing in the Russian Case

- ▶ What can the theories and methods of international migration studies add to our understanding of migration in the Russian Federation?
- ▶ What can the case of the Russian Federation add to our theories and methodological approaches to migration?



“Our Kind” of Migrants

- ▶ "Regarding migration policy, our priority remains to attract our compatriots from abroad. In this regard we need to encourage skilled migration to our country, encourage educated and law-abiding people to come to Russia. People coming to our country must treat our culture and national traditions with respect." Putin's annual address 2006



Overall Project Goals

- ▶ Evaluate Russia's emergence as a migrant destination state and the Eurasian migration system.
- ▶ Trace the ways in which states and societies within the Eurasian System influence, and are influenced by migration flows.
- ▶ Use methodologies to;
 - Link international, national, & human security with integration and assimilation of international migrants
 - Estimate regional scale flows of legal & illegal migrants

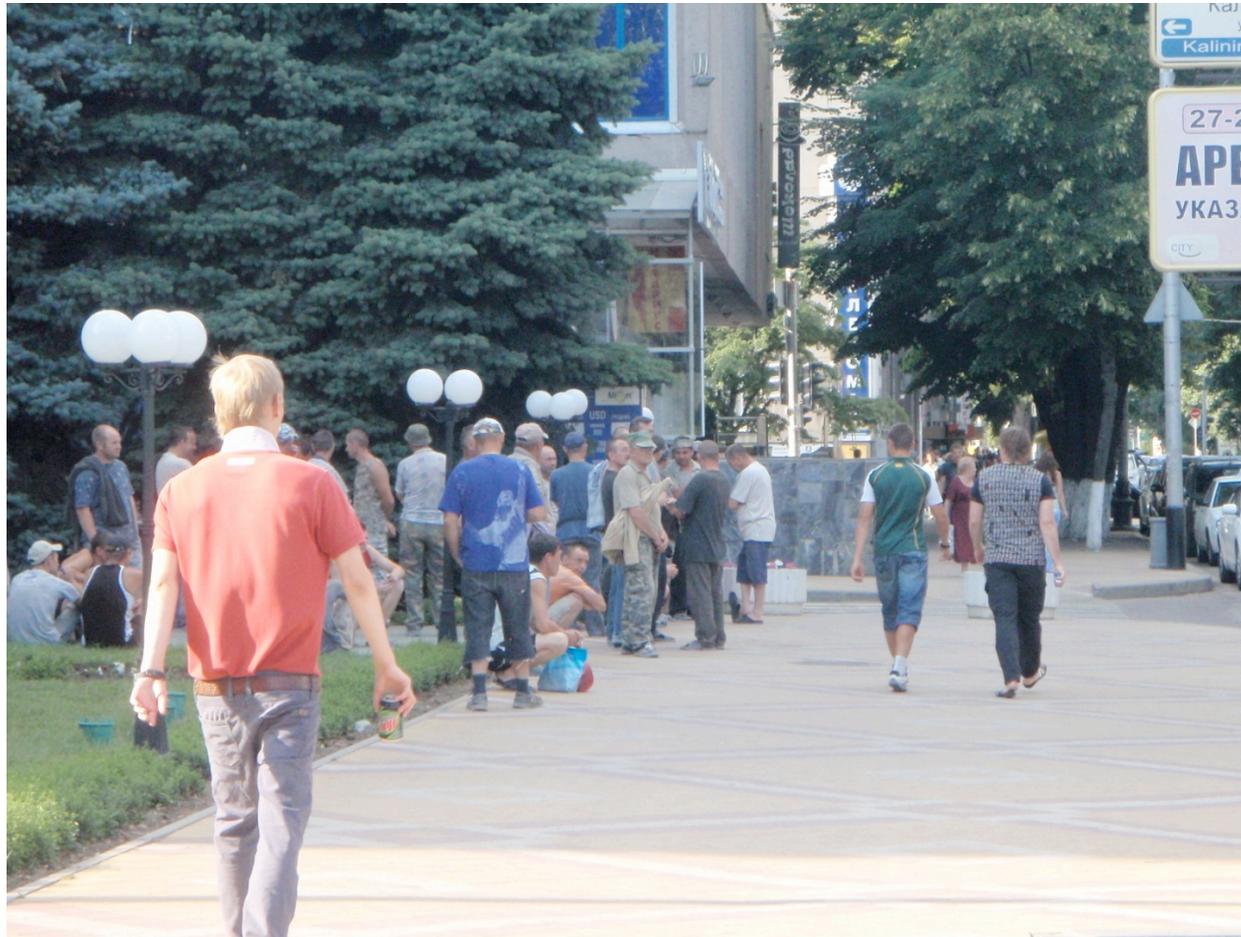


Interdisciplinary Methodologies

- ▶ Regional cases: Krasnodar, Ekaterinburg, Nizhnii Novgorod
 - Varying policy environment, migration histories
- ▶ Surveys, semi-structured interviews, formal social network analysis, GIS
 - Focus on labor, human rights, and human security of migrants
 - GIS: perceived safe spaces/places as distinct from the local population
- ▶ Discuss today the power of social network analysis



Labor Migrants in Krasnodar



Labor Migrant Cycle & Human Security



Social Network Analysis: migrants and social interaction

- ▶ Analysis of integration and assimilation – leads to understanding security
- ▶ Human security and human experience – analysis of social ties and nature of ties
 - Social isolation or social integration
 - Economic isolation or economic integration
 - Does integration mean assimilation?
- ▶ Pilot social network analysis this Fall of labor migrants in Russia



Collective Center Living in Tbilisi, Georgia: outskirts of town



Collective Center Living in Tbilisi, Georgia: city center

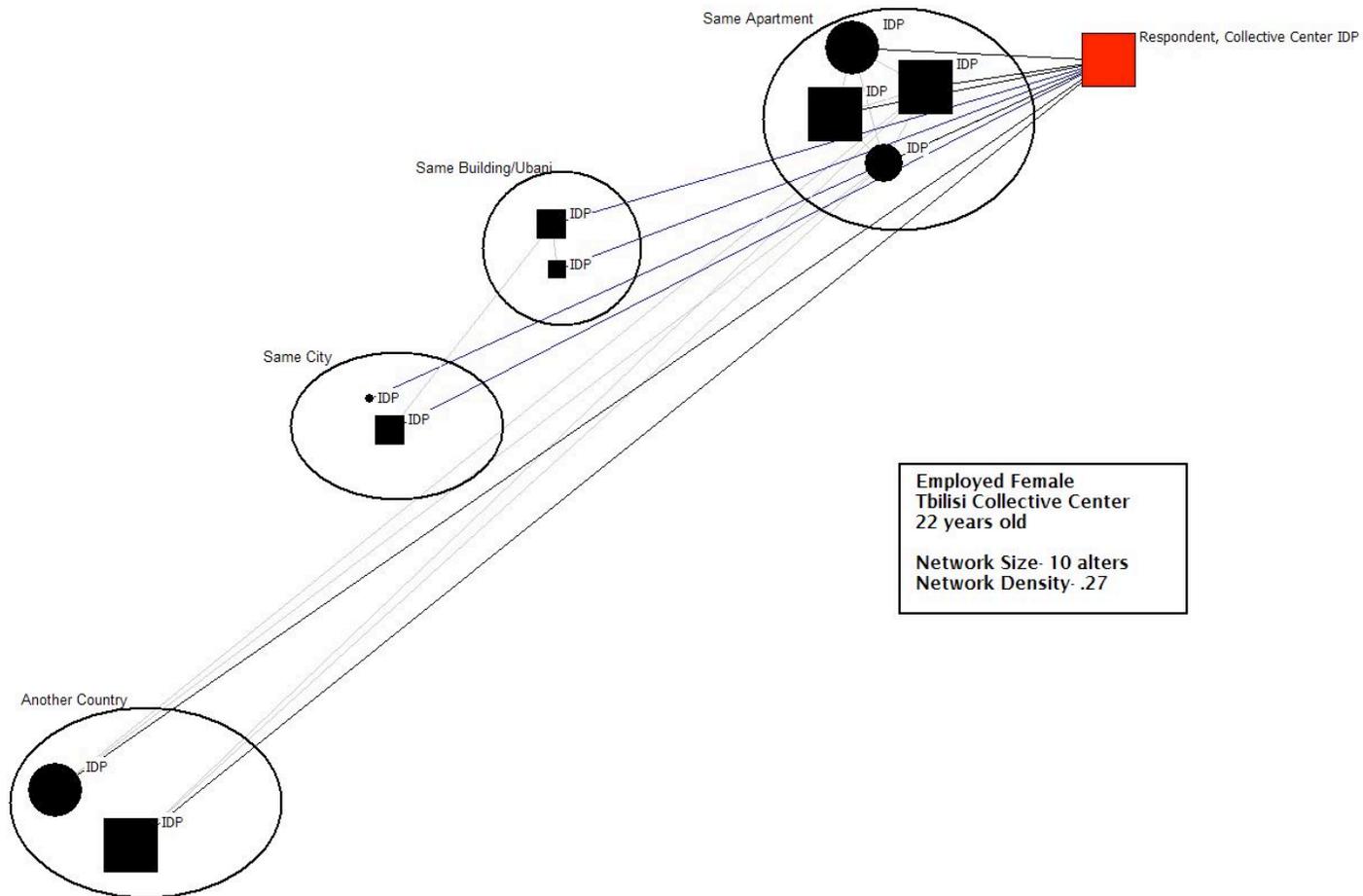


Social Network Analysis and Human Security: Migration Status

- ▶ Comparison of social networks
 - Similar demographic characteristics: education, gender, employment, network size
- ▶ Social network analysis shows more fragility of human experience and less security for the individual with spatial mobility
 - Different forms of social integration & social ties
 - Economic integration does not mean social integration



Social Network Mapping: Displaced Person from Abkhazia in Tbilisi



Final Words: Dynamics and Security Implications of Mobility

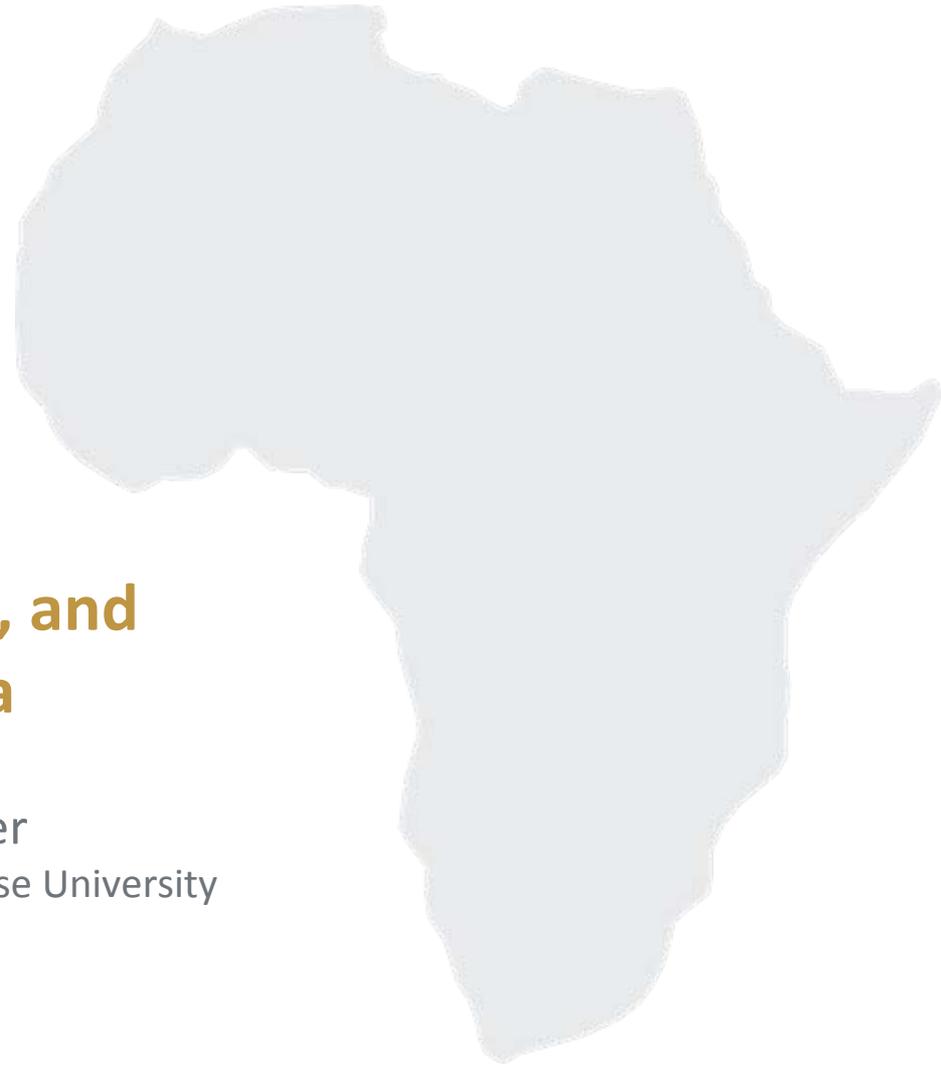
- ▶ Where are one's social ties and what are the implications?
 - Human security implications of lack of local ties or distant social ties
 - Lower access (propensity) to assimilate, partake in local culture and traditions
 - Less access to social and economic safety net
 - Less stable
 - National security
 - Vulnerability on several levels
 - Host is more vulnerable to social impact of discontent
 - Origin vulnerable to transmittal of social movements or insecurity (case of Georgia)



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CLIMATE CHANGE
AND AFRICAN
POLITICAL STABILITY



Climate Change, Stability, and Political Risk in Africa

Ashley Moran, Strauss Center
Minerva Initiative Conference, National Defense University

September 16, 2010

Overview

- Five-year program
- Collaboration between four universities, led by the Strauss Center at the University of Texas at Austin
- Partners at 13 universities and two think tanks in the US, Africa, and Europe
- Multidisciplinary program examining the nexus of climate change and security in Africa



Research areas



Climate change and
conflict vulnerability



Government capacity to
mitigate climate stress



International aid for
climate change adaptation

What we know

The defense community has assessed climate change as a key security issue.

“Projected climate change *poses a serious threat* to America’s national security.” (CNA Military Advisory Board 2007)

“We judge that the most significant impact for the United States will be indirect and result from *climate-driven effects on many other countries* and their potential to seriously affect US national security interests. (National Intelligence Assessment 2008)

“While climate change alone does not cause conflict, it *may act as an accelerant of instability or conflict.*” (QDR 2010)

Africa is one of regions most vulnerable to climate change.

But which parts of Africa are most vulnerable and why? What intervention strategies could mitigate the risk to African political stability and US national security?



What we know

US assistance to build governance capacity does have an impact, and it has the most impact in Africa. (Finkel et al. 2007)

But which democratic assistance programs are most effective under which conditions? Do certain constitutional and governance structures improve governments' response to the kinds of social stresses likely to stem from climate change?

The international community spent \$8.7B on “environmental” aid worldwide in 2006-07. (OECD 2009)

But how much of this was spent on climate change adaptation and what was the impact? Was it targeted to areas of most need?



Our approach

- Design holistic model to assess climate and conflict vulnerability
- Build datasets to fill information vacuum
- Test causal links
- Assess institutions and intervention impact
- Produce resources for policy and research communities
 - Maps, data tools, aggregated and disaggregated data



Climate change vulnerability project

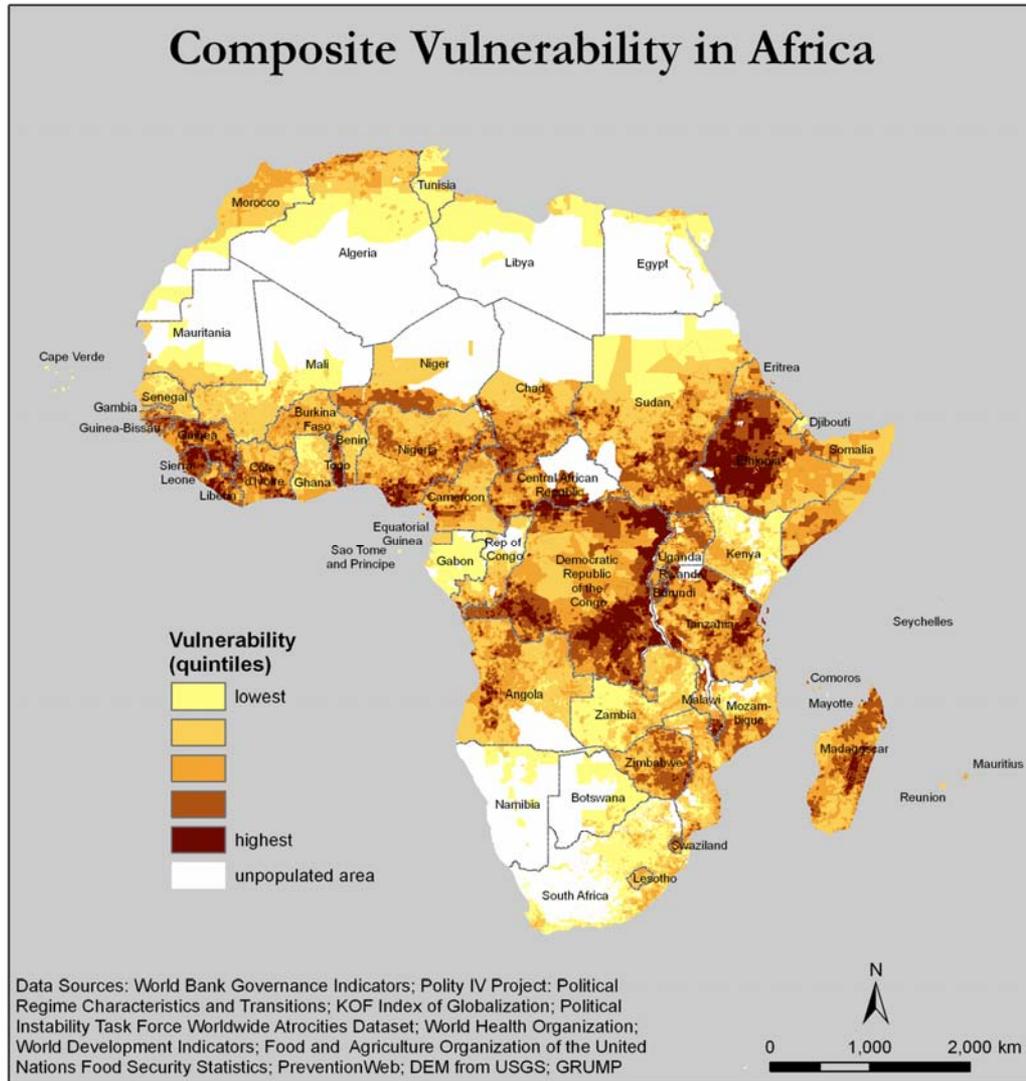
- Led by Dr. Joshua Busby, University of Texas at Austin
- Aims to identify which areas are most vulnerable at the most detailed scale possible
- Combines existing data on physical, socio-economic and political insecurities to develop a holistic model of vulnerability
- Uses Geographic Information Systems (GIS) to locate the confluence of these various types of vulnerability



Holistic model of vulnerability

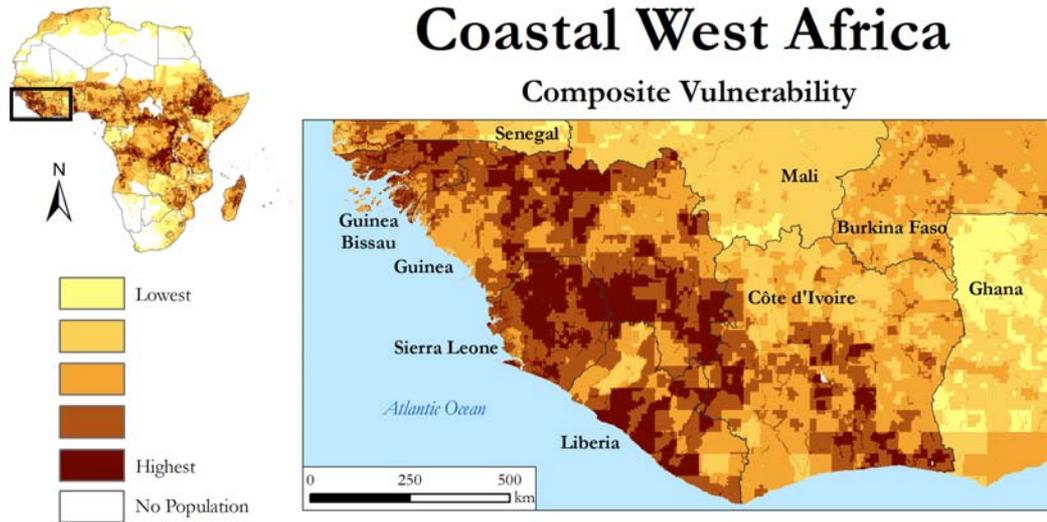
- Physical exposure
 - Drought, Flood, Wildfire, Cyclone surge, Cyclone wind, Low-elevation coastal zones
- Household and community vulnerability
 - Literacy rate, School enrollment, Maternal mortality, Life expectancy, Dietary energy consumption, Drinking water access, Healthcare expenditures, Spending on nurses
- Governance and political violence
 - Government effectiveness, Voice and accountability, Global integration, Volatility in regime, Years since last major change, Political violence
- Population density



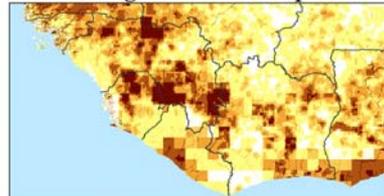


Produced by: Joshua W. Busby, Todd G. Smith, Kaiba L. White, Shawn M. Strange





Climatological Disaster Exposure



Household and Community Level Vulnerability



Governance Level and Political Violence Vulnerability



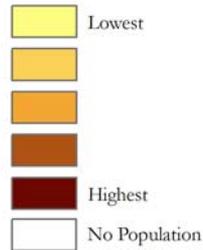
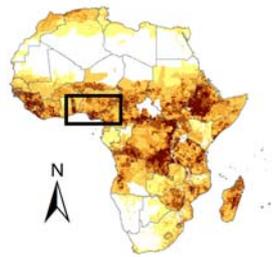
Population Density



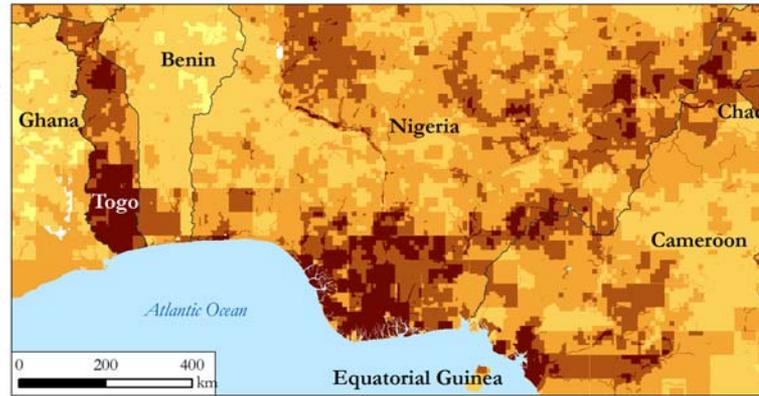
Data Sources: World Bank Governance Indicators; Polity IV Project: Political Regime Characteristics and Transitions; KOF Index of Globalization; Political Instability Task Force Worldwide Atrocities Dataset; World Health Organization; World Development Indicators; Food and Agriculture Organization of the United Nations Food Security Statistics; PreventionWeb; DEM from USGS; GRUMP

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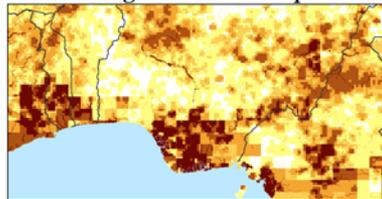




Nigeria Composite Vulnerability



Climatological Disaster Exposure



Household and Community Level Vulnerability



Governance Level and Political Violence Vulnerability



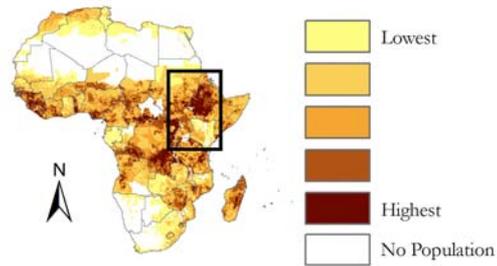
Population Density



Data Sources: World Bank Governance Indicators; Polity IV Project: Political Regime Characteristics and Transitions; KOF Index of Globalization; Political Instability Task Force Worldwide Atrocities Dataset; World Health Organization; World Development Indicators; Food and Agriculture Organization of the United Nations Food Security Statistics; PreventionWeb; DEM from USGS; GRUMP

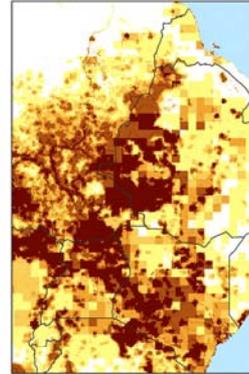
Produced by: Joshua W. Busby, Todd G. Smith, Kaiba L. White, Shawn M. Strange



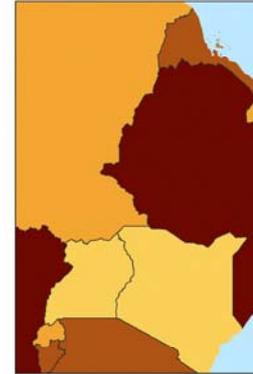


Western Ethiopia

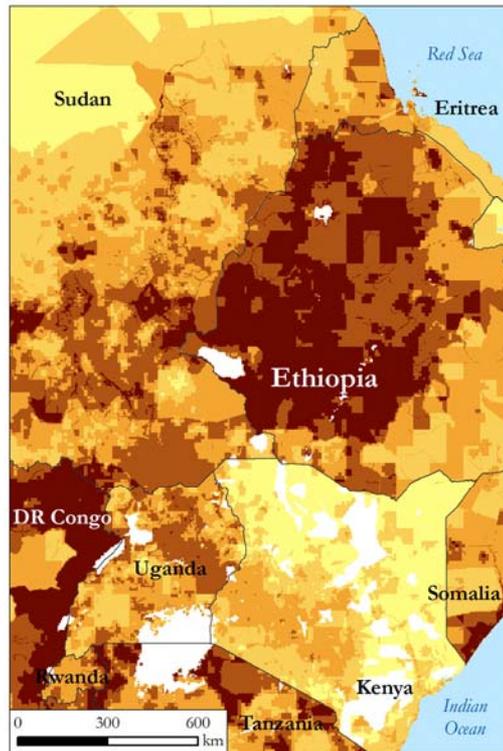
Climatological Disaster Exposure



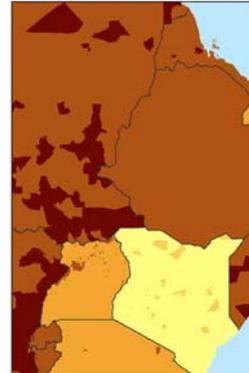
Household and Community Level Vulnerability



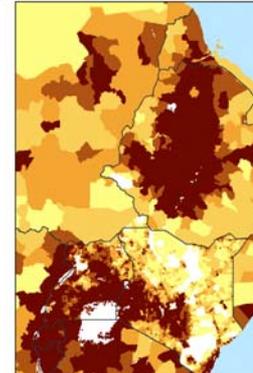
Composite Vulnerability



Governance Level and Political Violence Vulnerability



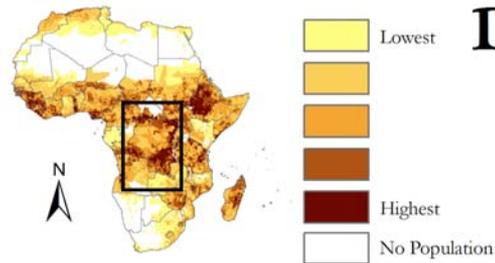
Population Density



Data Sources: World Bank Governance Indicators; Polity IV Project: Political Regime Characteristics and Transitions; KOF Index of Globalization; Political Instability Task Force Worldwide Atrocities Dataset; World Health Organization; World Development Indicators; Food and Agriculture Organization of the United Nations Food Security Statistics; PreventionWeb; DEM from USGS; GRUMP

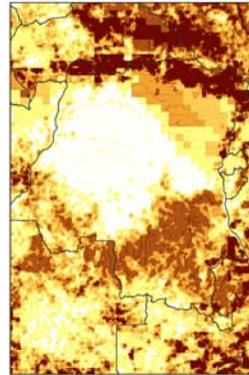
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Democratic Republic of Congo

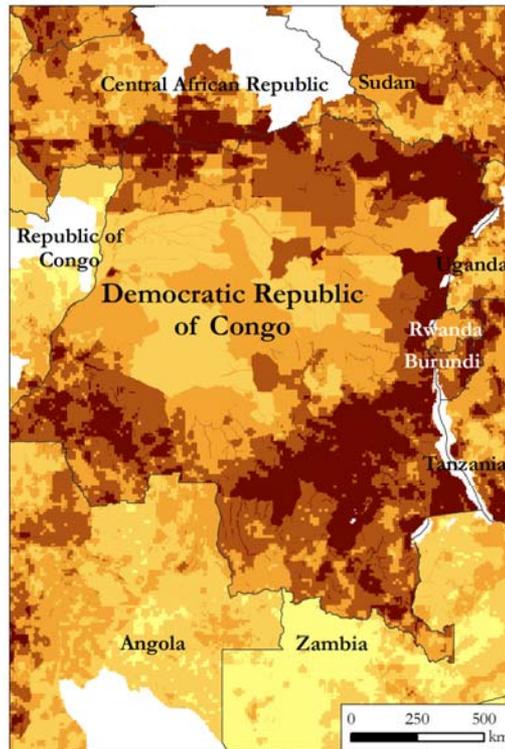
Climatological Disaster Exposure



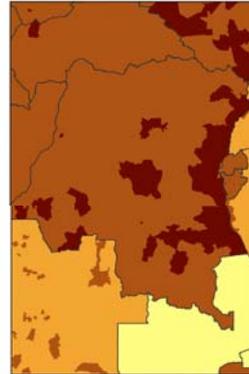
Household and Community Level Vulnerability



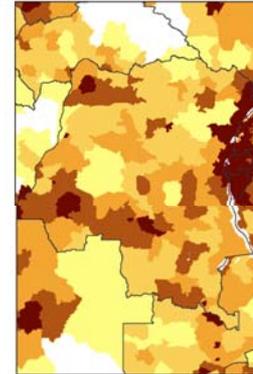
Composite Vulnerability



Governance Level and Political Violence Vulnerability



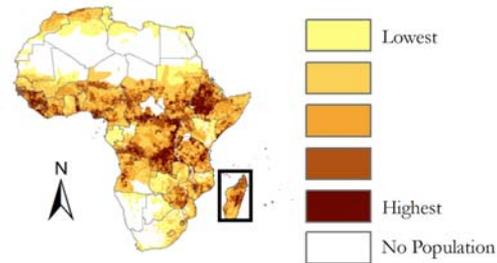
Population Density



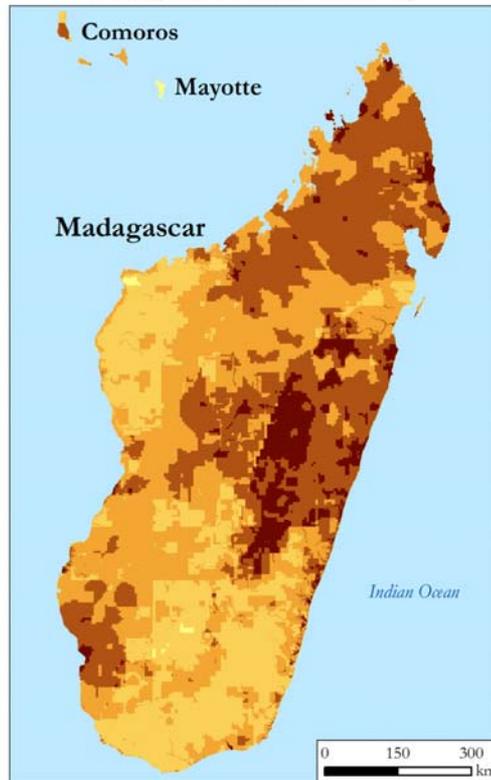
Data Sources: World Bank Governance Indicators; Polity IV Project: Political Regime Characteristics and Transitions; KOF Index of Globalization; Political Instability Task Force Worldwide Atrocities Dataset; World Health Organization; World Development Indicators; Food and Agriculture Organization of the United Nations Food Security Statistics; PreventionWeb; DEM from USGS; GRUMP

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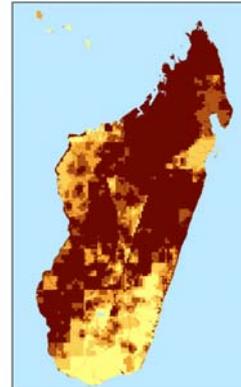


Composite Vulnerability



Madagascar

Climatological Disaster Exposure



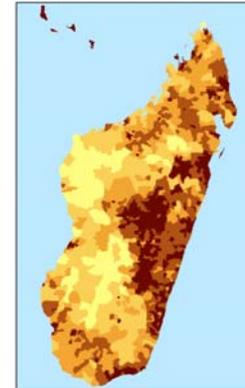
Household and Community Level Vulnerability



Governance Level and Political Violence Vulnerability



Population Density



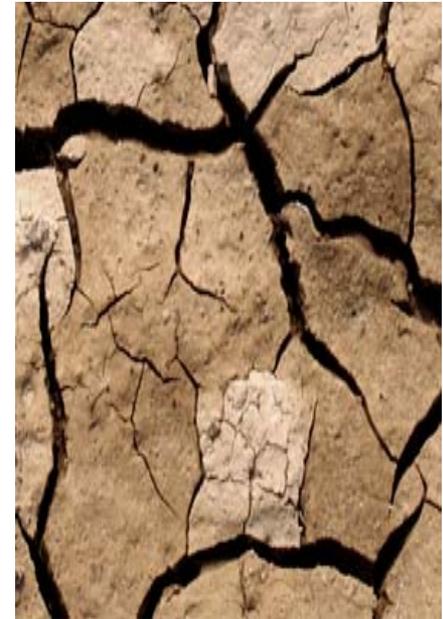
Data Sources: World Bank Governance Indicators; Polity IV Project: Political Regime Characteristics and Transitions; KOF Index of Globalization; Political Instability Task Force Worldwide Atrocities Dataset; World Health Organization; World Development Indicators; Food and Agriculture Organization of the United Nations Food Security Statistics; PreventionWeb; DEM from USGS; GRUMP

Produced by: Joshua W. Busby, Todd G. Smith, Kaiba L. White, Shawn M. Strange



New conflict datasets

- Social Conflict in Africa Database (SCAD), led by Dr. Idean Salehyan and Dr. Cullen Hendrix, University of North Texas
- Armed Conflict Location and Event Data (ACLED), led by Dr. Clionadh Raleigh, Trinity College Dublin
- Aim to augment ability of policymakers and researchers to analyze conflict patterns and possible intervention strategies



Constitutional design & conflict management case studies

- Led by Dr. Alan Kuperman, University of Texas at Austin
- First comparative case studies on constitutional design and conflict management in Africa
- Aim to assess how African constitutions may mitigate or exacerbate the risks of violence after shocks
- Burundi, Ghana, Kenya, Nigeria, Senegal, Sudan, Zimbabwe



Governance case studies

- Led by Ashley Moran, Robert Strauss Center
- Paired countries with similar conditions and dissimilar democratic outcomes
- Focus on sectors and sequencing in DG promotion
- Key similar conditions:
 - Economic development, natural resources, political conditions, state failure indicators, linguistic and ethnic fragmentation, conflict, prior DG assistance, global integration...
- Possible environments for paired cases:
 - Post-conflict, political instability, high level of ethnic division, advanced economies, US military presence



Aid for climate change adaptation

- Led by Dr. Catherine Weaver, University of Texas at Austin; Dr. Michael Tierney, College of William and Mary; J. Timmons Roberts, Brown University
- Collaboration with AidData to inventory adaptation aid from 46(+) donors in Africa
- Aims to assess if adaptation aid is targeted and implemented effectively
- Aims to facilitate collaboration in both disaster and ongoing aid



Next CCAPS research

- Online tools mapping climate change vulnerability and conflict data
- Climate projection model
- Integrating climate, conflict, governance and aid data
- Publications: ccaps@strausscenter.org
- Research: ccaps.strausscenter.org



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CLIMATE CHANGE
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POLITICAL STABILITY

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CLIMATE CHANGE
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POLITICAL STABILITY

Rainfall, Environmental Shocks, and Social Conflict in Africa

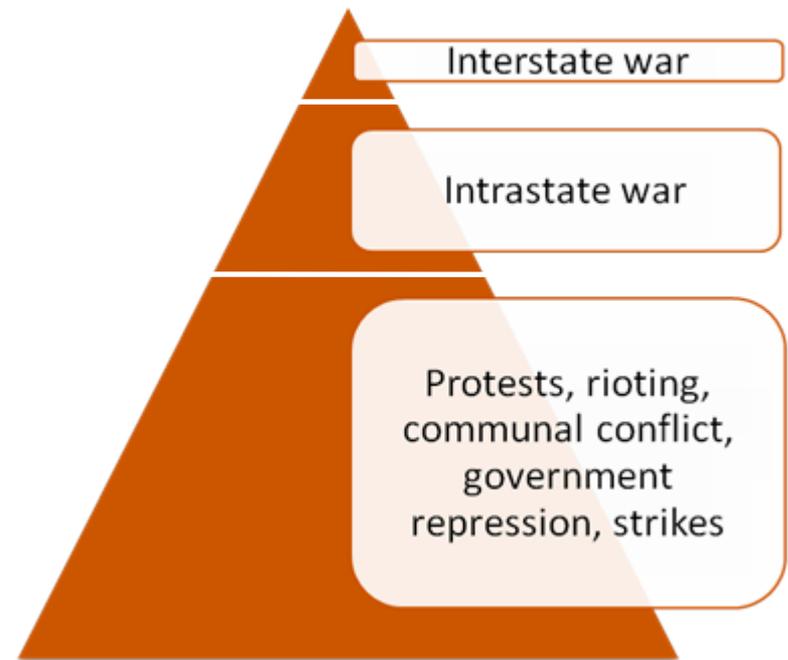
Cullen Hendrix and Idean Salehyan
University of North Texas
Minerva Initiative Conference
National Defense University, Sept. 16, 2010

Is there a link?



Climate change and conflict

- Scholars, policymakers are concerned that climate change, environmental degradation will lead to conflict.
- Weak and ambiguous findings with respect to interstate, intrastate war
- Other forms of social conflict may be more likely
 - Interstate wars are rare
 - Insurgency entails significant start-up costs
 - The state may not be an appropriate target



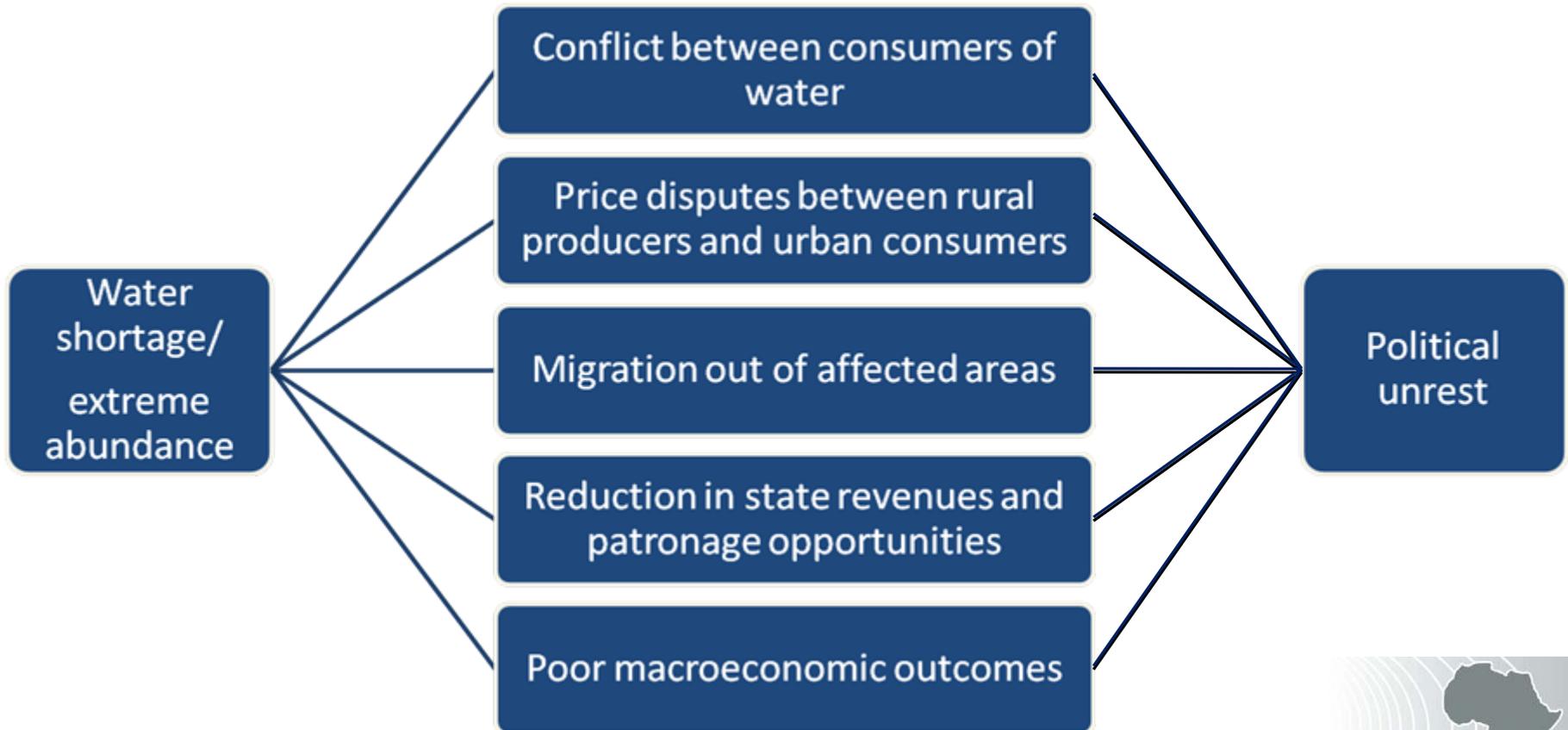
Can be as disruptive as civil conflict

- Kenya
 - 2007: marred elections lead to widespread ethnic rioting, 800-1,500 deaths, political compromise
- Nigeria
 - 2001-2008: Muslim-Christian religious violence kills >1,200 in Jos
- Zambia
 - Protests in the early 1990s spur multiparty elections
- Death totals are higher than many civil conflicts



Peter Andrew/Reuters

Theory and causal mechanisms



New data

- Social Conflict in Africa Database (SCAD)
- Covers 47 African countries, 1990-2009
- Over 6,000 events
 - Protests, riots, strikes, government repression, anti-government attacks, communal violence, intra-government violence
 - Augments existing data sources on inter- & intrastate war
- Available online later this year



Data generation

- Searches of AP and AFP (1990-2009)
 - Demonstrations, riots, strikes, repression, anti-government violence, extra- government and intra-government violence
- Contains information on:
 - Start and end dates
 - Escalation
 - Actors and targets
 - Repression
 - Number of participants
 - Number of deaths
 - Location
 - Issue(s)



Social conflict indicators for 47 African countries, 1990-2009

Variable	Obs.	Mean	σ	Min.	Max.
Civil Conflict Onset	843	0.05	0.22	0	1
Total Events	901	6.91	11.55	0	95
Nonviolent Events	901	3.65	5.53	0	42
Violent Events	901	3.26	7.06	0	67
Government-Targeted Events	901	3.58	5.53	0	40
Nongovernment-Targeted Events	901	3.32	7.43	0	74



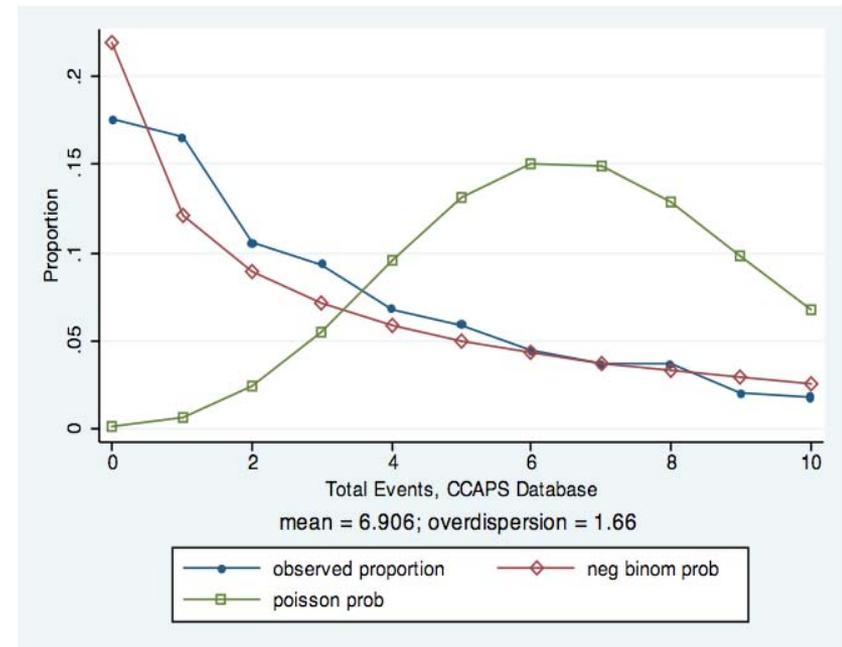
Measures of water scarcity/abundance

- Measure of rainfall shocks
 - Deviations from long-term panel means (1979-2008), standardized by the standard deviation of panel mean
 - Mean = 0, $\sigma = 1$

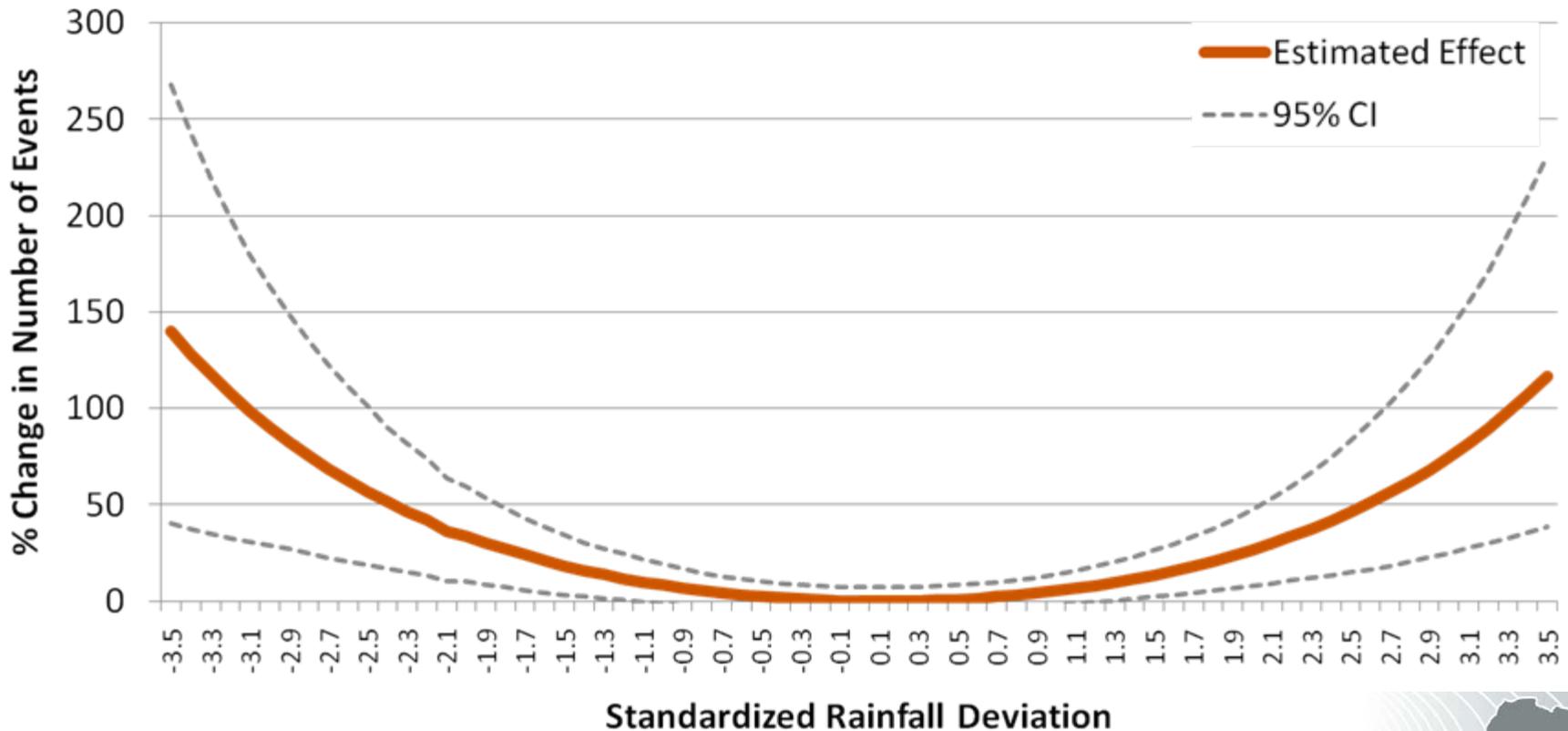


Estimation

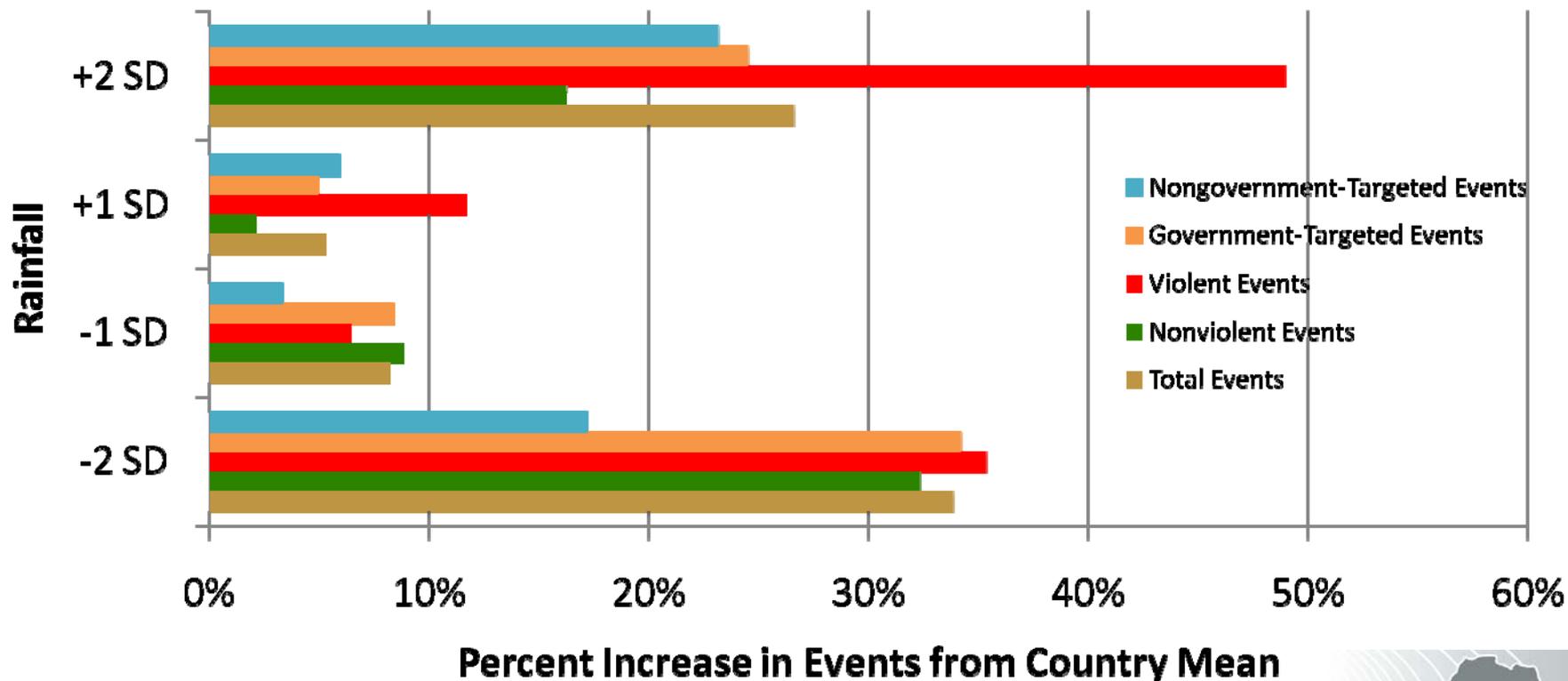
- Negative binomial with fixed effects, period dummies, time trend
- Independent Variables
 - Standardized Rainfall Deviations (linear and squared, present and lagged)
- Control Variables
 - Lagged DV, Polity2, Polity2², GDP *per capita* and GDP Growth, Population, Population Growth, Conflict



Rainfall and social conflict events, 1990-2007

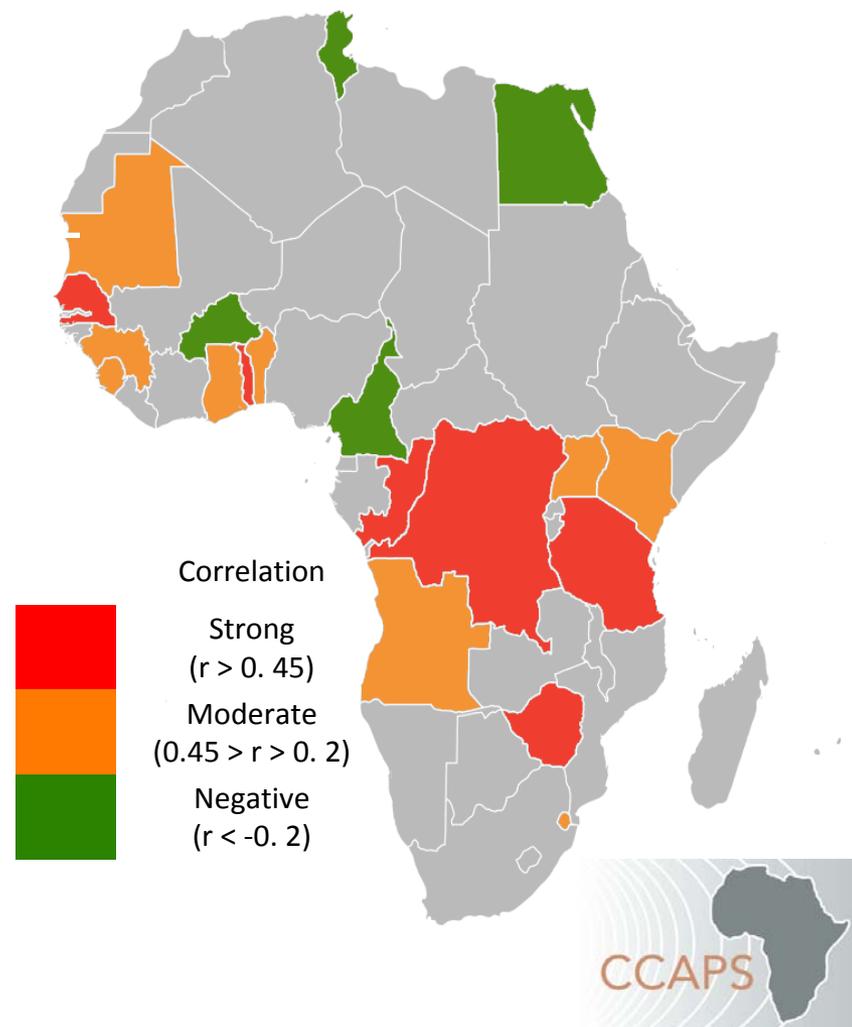


Rainfall and social conflict events, by type, 1990-2007



Conclusions

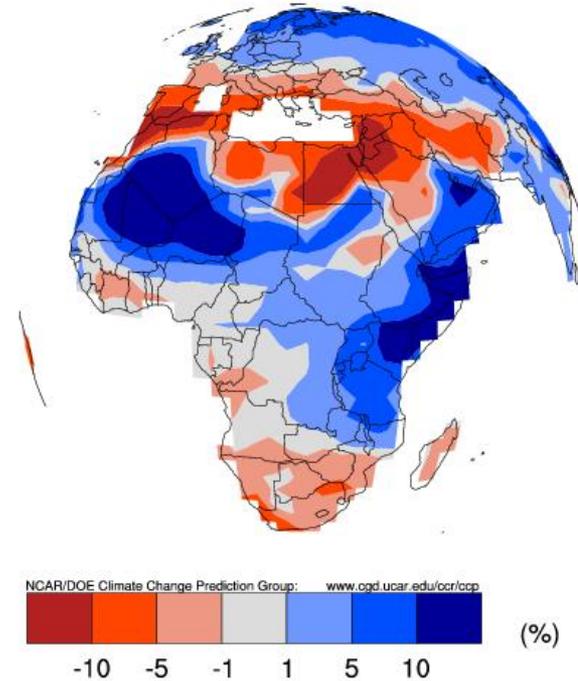
- Strong, curvilinear effect of rainfall on social conflict events
 - Violent & nongovernment-targeted conflict more responsive to rainfall abundance
 - Nonviolent & government-targeted conflict more abundant rainfall scarcity
- Future work
 - Mediating effect of political institutions
 - Explaining particular cases and strength of within-country correlations



Conclusions

- Must combine models with future projections of climate change

IPCC A1B Precipitation 2030-1990



Supplemental slides



Disaggregate?

- Growing body of work which disaggregates conflict
- Do local disasters foster local conflicts?
- However effects may be geographically distant
 - Rural drought affects urban food prices
 - Migration
 - Effects on public employees
- No reason to expect conflict to be confined to areas with water shortages



Table 3: Civil Conflict Onset, Rainfall Deviations, and Droughts and Floods		
	(1)	(2)
Lagged DV	-2.057**	-1.953**
	(0.828)	(0.784)
Polity2	-0.044	-0.036
	(0.037)	(0.037)
Polity2 ²	-0.016	-0.016
	(0.012)	(0.013)
(log) Population	0.061	0.115
	(0.130)	(0.133)
Population growth, %	0.223***	0.207**
	(0.085)	(0.086)
(log) Real GDP per capita	-0.261	-0.274
	(0.335)	(0.357)
Real GDP growth, %	-0.036	-0.026
	(0.023)	(0.021)
Rainfall deviation	0.377***	
	(0.143)	
Rainfall deviation ²	0.003	
	(0.091)	
Rainfall deviation, lagged	0.017	
	(0.203)	
Rainfall deviation ² , lagged	-0.101	
	(0.191)	
Drought events		-0.324
		(0.651)
Drought events, lagged		0.152
		(0.624)
Flood events		-0.010
		(0.272)
Flood events, lagged		-0.411*
		(0.224)
Constant	-0.425	-0.665
	(2.157)	(2.424)
Controls for Temporal Dependence	Yes	Yes
Observations	765	765
Countries	46	46
Robust standard errors in parentheses		
* significant at 10%; ** significant at 5%; *** significant at 1%		



	(1)	(2)	(3)	(4)	(5)
	Total Events	Nonviolent Events	Violent Events	Government-Targeted Events	Non-Government-Targeted Events
Lagged DV	0.025*** (0.003)	0.039*** (0.007)	0.047*** (0.007)	0.041*** (0.007)	0.041*** (0.006)
Rainfall deviation	-0.006 (0.030)	-0.026 (0.033)	0.031 (0.041)	-0.013 (0.034)	0.023 (0.038)
Rainfall deviation ²	0.052*** (0.019)	0.042** (0.021)	0.065** (0.026)	0.052** (0.022)	0.031 (0.024)
Rainfall deviation, lagged	-0.039 (0.030)	-0.042 (0.033)	-0.023 (0.041)	-0.078** (0.034)	0.051 (0.038)
Rainfall deviation ² , lagged	0.018 (0.020)	0.004 (0.022)	0.041 (0.026)	0.004 (0.023)	0.024 (0.025)
Constant	142.231 (167.628)	89.079 (186.792)	159.348 (234.260)	72.114 (192.315)	254.842 (215.598)
Time Trend	Yes	Yes	Yes	Yes	Yes
Period Dummies	Yes	Yes	Yes	Yes	Yes
Observations	826	826	826	826	826
Countries	46	46	46	46	46
Standard errors in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					



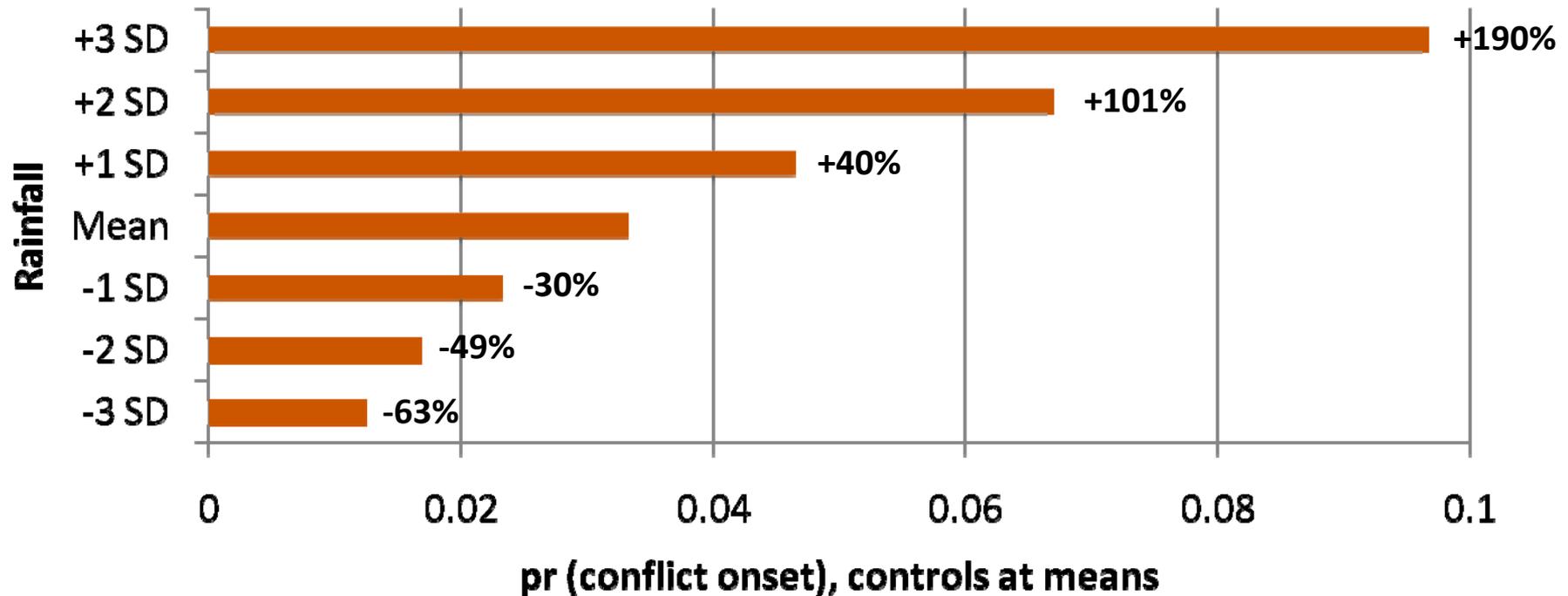
	(1)	(2)	(3)	(4)	(5)
	Total Events	Nonviolent Events	Violent Events	Government-Targeted Events	Non-Government-Targeted Events
Lagged DV	0.024***	0.036***	0.043***	0.037***	0.035***
	(0.004)	(0.007)	(0.007)	(0.007)	(0.006)
Polity2	-0.012	-0.016	0.003	-0.020	0.019
	(0.011)	(0.012)	(0.015)	(0.012)	(0.015)
Polity2 ²	-0.004*	-0.001	-0.009***	-0.003	-0.008***
	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)
(log) Population	-0.982	-0.985	-0.894	-0.992	0.017
	(0.756)	(0.869)	(1.063)	(0.904)	(0.980)
Population growth, %	-0.035	-0.032	-0.035	-0.004	-0.066**
	(0.027)	(0.033)	(0.035)	(0.037)	(0.031)
(log) Real GDP per capita	0.077	0.178	-0.014	0.018	0.119
	(0.182)	(0.206)	(0.241)	(0.212)	(0.213)
Real GDP growth, %	-0.008**	-0.005	-0.014**	-0.006	-0.010**
	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)
Rainfall deviation	-0.012	-0.031	0.023	-0.017	0.013
	(0.030)	(0.034)	(0.041)	(0.035)	(0.038)
Rainfall deviation ²	0.065***	0.052**	0.085***	0.063***	0.046*
	(0.019)	(0.021)	(0.026)	(0.022)	(0.024)
Rainfall deviation, lagged	-0.014	-0.025	0.011	-0.051	0.072*
	(0.033)	(0.037)	(0.044)	(0.038)	(0.041)
Rainfall deviation ² , lagged	0.026	0.012	0.051*	0.007	0.036
	(0.023)	(0.026)	(0.030)	(0.027)	(0.027)
Civil conflict incidence	0.074	0.202*	-0.078	0.085	0.023
	(0.105)	(0.119)	(0.142)	(0.123)	(0.129)
Constant	442.514	596.101	195.274	553.667	446.428
	(335.497)	(379.723)	(460.460)	(395.786)	(412.119)
Time Trend	Yes	Yes	Yes	Yes	Yes
Period Dummies	Yes	Yes	Yes	Yes	Yes
Observations	766	766	766	766	766
Countries	46	46	46	46	46
Standard errors in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					



	(1)	(2)	(3)	(4)	(5)
	Total Events	Nonviolent Events	Violent Events	Government-Targeted Events	Non-Government-Targeted Events
Lagged DV	0.023*** (0.004)	0.034*** (0.007)	0.043*** (0.007)	0.035*** (0.007)	0.036*** (0.006)
Polity2	-0.011 (0.011)	-0.016 (0.013)	0.003 (0.016)	-0.022* (0.013)	0.024 (0.016)
Polity2 ²	-0.004* (0.002)	-0.001 (0.002)	-0.009*** (0.003)	-0.003 (0.002)	-0.007*** (0.003)
(log) Population	-0.726 (0.765)	-0.766 (0.876)	-0.492 (1.072)	-0.739 (0.916)	0.115 (0.982)
Population growth, %	-0.038 (0.027)	-0.035 (0.033)	-0.037 (0.035)	-0.008 (0.037)	-0.072** (0.031)
(log) Real GDP per capita	0.091 (0.184)	0.181 (0.208)	0.005 (0.244)	0.006 (0.215)	0.143 (0.216)
Real GDP growth, %	-0.007** (0.004)	-0.005 (0.004)	-0.013** (0.005)	-0.005 (0.005)	-0.009* (0.005)
Drought events	-0.003 (0.088)	-0.024 (0.099)	-0.033 (0.123)	-0.035 (0.103)	0.066 (0.112)
Drought events, lagged	0.013 (0.087)	-0.000 (0.098)	0.020 (0.122)	-0.031 (0.102)	0.087 (0.110)
Flood events	0.023 (0.038)	0.019 (0.041)	0.062 (0.052)	0.020 (0.044)	0.014 (0.044)
Flood events, lagged	-0.011 (0.038)	0.020 (0.042)	-0.029 (0.051)	0.032 (0.043)	-0.062 (0.045)
Civil conflict incidence	0.089 (0.105)	0.204* (0.118)	-0.065 (0.144)	0.118 (0.123)	0.030 (0.131)
Constant	337.415 (332.348)	587.124 (374.825)	5.990 (451.370)	659.032* (392.950)	45.078 (404.094)
Time Trend	0.023***	0.034***	0.043***	0.035***	0.036***
Period Dummies	(0.004)	(0.007)	(0.007)	(0.007)	(0.006)
Observations	-0.011	-0.016	0.003	-0.022*	0.024
Countries	(0.011)	(0.013)	(0.016)	(0.013)	(0.016)
Standard errors in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					



Rainfall and civil conflict onset, 1990-2007



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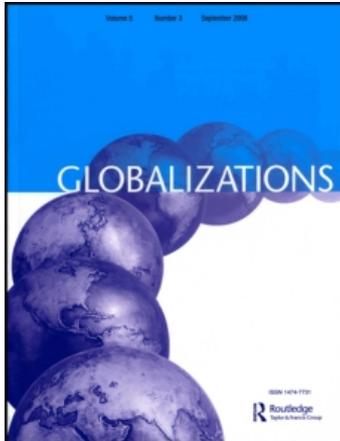
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A Savage Sorting of Winners and Losers: Contemporary Versions of Primitive Accumulation

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A Savage Sorting of Winners and Losers: Contemporary Versions of Primitive Accumulation

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ABSTRACT *Here I explore the possibility that capitalism is today undergoing the systemic equivalent to Marx's notion of primitive accumulation, only now as a deepening of advanced capitalism predicated on the destruction of more traditional forms of capitalism. I focus on two diverse instances which share a common systemic logic: expulsing people from more traditional capitalist encasements. One instance is that of countries devastated by an imposed debt and debt-servicing regime which took priority over all other state expenditures; at its most extreme, the ensuing devastation of traditional economies and traditional states has made the land more valuable to the global market than the people on it. The other instance, which I see as a systemic equivalent to the first, is the potential for global replication of the financial innovation that destroyed 15 million plus households in the US in two years, with many more to come; household destruction at this scale devastates whole areas of cities, and leaves vacant land. How this rapidly growing expanse of vacant land will be reincorporated into global capital circuits is not yet clear. I examine these two cases through a specific lens: the transformative processes that expand the base of current advanced capitalism, with particular attention to the assemblages of specific processes, institutions, and logics that enabled this systemic transformation.*

En este artículo exploro la posibilidad de que el capitalismo está pasando actualmente por el equivalente sistémico a la noción de Marx sobre la acumulación primitiva, sólo que ahora como un aumento al capitalismo avanzado predicado en la destrucción de más formas tradicionales de capitalismo. Me enfoco en dos casos diversos que comparten una lógica sistémica común: la expulsión de personas de un encajonamiento capitalista más tradicionalista. Una muestra es la de los países devastados por una deuda impuesta y un régimen de servicio de deuda que tomó prioridad sobre todos los demás gastos del estado; y en su máximo extremo, la consecuente devastación de las economías y de los estados tradicionales hizo que la tierra tuviera mayor valor en el mercado global, que la gente que vive en la misma. Otro problema, que yo veo como un equivalente sistémico al primero, es el potencial de una réplica de la innovación financiera

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que destruyó a más de 15 millones de hogares en E.E.U.U. en dos años y que seguirá afectando en el futuro; la destrucción de hogares a esta escala devasta áreas completas de ciudades y deja terrenos sin construir. No está claro qué tanto tomará la reincorporación de esta rápida expansión de terrenos sin construir, a los circuitos capitales globales. Examinó estos dos casos a través de una lente específica: los procesos transformadores que expanden la base del capitalismo avanzado actual, con una atención particular al ensamble específico de procesos, instituciones y lógica que habilita esta transformación sistémica.

在这里，我探讨这样一种可能性，即当今资本主义正在经历一个与马克思的原始积累观念具有系统相同性的过程，只有现在才是发达资本主义的深化，而这是基于传统形式资本主义的毁灭。我重点关注共有一个系统逻辑的两个不同实例：让人们摆脱更多传统资本主义的束缚。一个例子是关于那些因外界强加的、优先于所有其他国家支出的债务和债务服务体制而被彻底破坏的国家；最极端的情况是，随后传统经济和传统国家的破坏，使得其土地对于全球市场比生活于其上的人们更有价值。另一个例子在我看来在系统逻辑上与第一个例子相同，即两年内已破坏1500多万户美国家庭，并且还有更多的家庭将会受到影响的金融创新在全球复制的可能性；这种规模的家庭破坏重创了这些城市所在的地区，导致空地的出现。这些正在迅速增多的大片空地如何重新整合进全球资本市场现在还不明朗。我将通过一个独特的视角来考察这两个例子：扩大当前发达资本主义基础的转变过程，特别关注促成这种系统转变的特定过程、体制和逻辑。

Keywords: post-Keynesian economics, land grabs, debt as disciplining regime, sub-prime mortgages

The geographic expansion and systemic deepening of capitalist relations of production over the last 20 years have led to one of the most brutal sortings of winners and losers. Here I explore the possibility that capitalism is today undergoing the systemic equivalent to Marx's notion of primitive accumulation (PA), only now as a deepening of advanced capitalism predicated on the destruction of more traditional forms of capitalism (Amin, 2010; Harvey, 2003). Marx saw a specific type of shift whereby pre-capitalist modes of production were incorporated into capitalist relations, a process marked by violence, destruction, and appropriation. Here I posit another specific type of shift: the destruction of traditional capitalisms in order to extract what can be extracted for the further deepening of advanced capitalism. I use this term to capture a phase dominated by a financial logic, a condition that recurs and historically signals a decaying phase (Arrighi, 1994). Built into this proposition is the fact of diverse phases of capitalist development and hence the possibility that in today's global phase the extension of capitalist relations has its own distinct mechanisms and that these need to be distinguished from older imperial phases.

This paper is part of a larger project where I develop the thesis that the post-Keynesian period has now taken on a clear systemic shape. Briefly put, where the Keynesian period brought with it an active expansion of the population systemically valued as workers and consumers, this latest phase of advanced capitalism does not. In the last two decades there has been a sharp growth in the numbers of people that have been 'expulsed', numbers far larger than the newly 'incorporated' middle classes of countries such as India and China. I use the term 'expulsed' to describe a diversity of conditions: the growing numbers of the abjectly poor, of the displaced who are warehoused in formal and informal refugee camps, of the minoritized and persecuted warehoused in prisons, of workers whose bodies are destroyed on the job and rendered useless at far too young an age. My argument is that this massive expulsion, with strong elements of what Harvey has

called accumulation by dispossession, is actually signaling a deeper systemic transformation that has been documented in bits and pieces but remains insufficiently theorized. Elsewhere (Sassen, 2008a, ch. 1, 8, 9) I develop a theory of change which has as one core dynamic, the fact that condition x or capability y can shift organizing logics and thereby actually change valence even if it may look the same: thus, for instance, this massive expulsion of people is not simply more of the same. I argue that the organizing logic of this post-Keynesian period is now making legible its shape: at the center of this logic is not the 'valuing' of people as workers and consumers, but the expulsion of people and the destruction of traditional capitalisms to feed the needs of high finance and the needs for natural resources. For instance, the buying of vast stretches of land in sub-Saharan Africa and parts of Latin America to use for offshore agriculture, extraction of underground water, and access to metals and minerals is an easier operation for the currently dominant investors and governments if they only have to deal with weakened and/or corrupt governments and local elites.

Here I examine only some aspects of this larger configuration: two mechanisms that have contributed to the expanded expulsion of people and the destabilizing of a large number of global South countries. The two instances I have selected are to some extent counterintuitive as possible cases of a contemporary version of PA. They are easily seen as logics of extraction, but I will argue that above all they prepared the ground for the systemic deepening of advanced capitalism. One of these instances is the structural adjustment project implemented by global regulatory institutions, notably the IMF, the World Bank and WTO, beginning in the 1980s and escalating in the 1990s. My argument here is that beyond the much noted extraction of billions of dollars from global South countries in the form of debt servicing, the key is the work of systemic conditioning that took place; debt servicing was the instrument for this disciplining. The second instance is the sub-prime mortgage crisis that began in the early 2000s and exploded in 2007. Most of the attention has gone, and rightly so, to the massive losses for the individuals and families who were sold these mortgages, losses which will continue through 2011. In this case my argument is, again, that beyond the logics of extraction in the form of mortgage payments and mortgage agents' fees, also here we can detect a more foundational dynamic in the form of the systemic deepening of advanced/decaying capitalism and, further, that the instrument is one that can easily expand into the global market represented by ca. 2 billion modest middle class households in the world.

Primitive Accumulation Today: Expanding the Operational Space of Advanced Capitalism

The Marxist category 'primitive accumulation' points not only to a logic of extraction that can expropriate and impoverish, but also, and more importantly, to a mode of incorporating non-capitalist economies into capitalist relations of production. In this regard PA is part of the historic expansion of capitalist relations. This would suggest *prima facie* that the category is not applicable today since most of the world has basically been incorporated into capitalist relations of production (see Amin, 2010).¹

For Marx, PA hinged on earlier modes of production becoming factors in the making of capitalist relations of production. Marx's definition of PA in terms of the theory of capitalism has at its center the notion of a historical process that separates people from the means that allow them to live and produce.² Amin (2000) mentions the idea that primitive accumulation is not something confined to the early stage or prehistory of capitalism. Harvey (2003, pp. 137–182) writes that Marx's use of 'primitive' or 'original' accumulation is misleading

since the history of capitalism contains repeated instances of this kind of accumulation. He recasts the term as accumulation by dispossession (ABD), and develops its multiple instances, including as safety valve against over-accumulation crises, since it allows lowering the prices of consumer commodities (thereby raising the propensity for general consumption), which in turn is made possible by the considerable reduction in the price of production inputs. Harvey makes a crucial contribution to the understanding of the current era by emphasizing the ongoing appropriation of non-capitalist economies and their incorporation into capitalist relations of production.

Access to cheaper inputs is, therefore, just as important as access to widening markets in keeping profitable opportunities open. The implication is that non-capitalist territories should be forced open not only to trade (which could be helpful) but also to permit capital to invest in profitable ventures using cheaper labour power, raw materials, low-cost land, and the like. The general thrust of any capitalist logic of power is not that territories should be held back from capitalist development, but that they should be continuously opened up. (Harvey, 2003, p. 139)

Harvey (2003, p. 145) opens up the concept to a wide range of processes.

These include the commodification and privatization of land and the forceful expulsion of peasant populations; the conversion of various forms of property rights (common, collective, state, etc.) into exclusive private property rights; suppression of rights to the commons; commodification of labour power and the suppression of alternative (indigenous) forms of production and consumption; colonial, neocolonial, and imperial processes of appropriation of assets (including natural resources); monetization of exchange and taxation, particularly of land; the slave trade [which continues particularly in the sex industry]; and usury, the national debt and ultimately the credit system as radical means of primitive accumulation. The state, with its monopoly of violence and definitions of legality, plays a crucial role in both backing and promoting these processes.

Central to my analysis is that inside capitalism itself we can characterize the relation of advanced to traditional capitalism as one marked by PA.³ At its most extreme this can mean that immiseration and exclusion of growing numbers of people who cease being of value as workers and consumers. But it also means that traditional petty bourgeoisies and traditional national bourgeoisies cease being of value. This is part of the current systemic deepening of capitalist relations. One brutal way of putting it is to say that the natural resources of much of Africa and good parts of Latin America count more than the people on those lands count as consumers and as workers. I see this as part of this systemic deepening of advanced capitalist relations of production. We have left behind the Keynesian period which thrived on the accelerated expansion of prosperous working and middle classes. Maximizing consumption by households was a critical dynamic in that period; and it is today in the so-called emergent economies of the world. Keynesianism was marked by a valuing of people as workers and consumers—both of which mattered for the deepening of capitalism. In my reading we have entered a new phase which is marked by a double helix dynamic. On the one hand, there is an increasingly degraded use of people—as sex workers, as workers that are used and disposed of, as providers of body organs. On the other, there is a rapidly growing surplus of people—in the form of distinctive populations: the displaced by proliferating civil wars in sub-Saharan Africa, prisoners in the US and a growing number of other global North countries, displaced people of all sorts assembled in refugee camps managed by the international humanitarian system (at best) financed by the taxpayers of the world. Territory is systemically repositioned in growing parts of the global South as representing not nation states but ‘needed’ resources. Elsewhere (Sassen, 2008b) I extend this argument also to a range of territorial sites also in the global

North, particularly the US (e.g. neighborhoods devastated by home foreclosures, central Detroit devastated by the disassembling of manufacturing production, etc).⁴

I emphasize a pragmatic interpretation: the making of these capitalist relations of production, whether those of early or of advanced capitalism. In this paper, and in the larger projects on which these cases are based, I focus on two cases that are easily described as logics of extraction. Extraction is indeed a major feature, and I describe this. But I think it is critical to go beyond logics of extraction to recover the systemic transformation—how more traditional capitalist economies are being destroyed to expand the operational space of advanced capitalism.⁵ In brief, the two cases I describe are, beyond extraction, system-changing practices, and projects.⁶

When Logics of Extraction Expand the Terrain for Advanced Capitalism

The extraction of value from the global South and, in particular, the implementation of restructuring programs at the hands of the IMF and the World Bank, have had the effect of ‘reconditioning’ the terrain represented by these countries for an expansion of advanced capitalism, including its explicitly criminal forms. The aspect of primitive accumulation in the contemporary world that concerns me here is above all systemic deepening more so than extraction.

More concretely, many of the poor countries subjected to this regime now have larger shares of their populations in desperate poverty and are less likely to enter the capitalist circuit via consumption than they did even 20 years ago. Many of the sub-Saharan countries had functioning health and education systems and economies, and less destitution than today. Systemically governments have been weakened and corrupted; even resource-rich countries have had expanded shares of their people become destitute, with Nigeria the most noted case. The dominant dynamic at work for these populations is, to a good extent, the opposite of the Keynesian period’s valuing of people as workers and as consumers. This expelling has given expanded space to criminal networks, greater access to land and underground water resources to foreign buyers, whether firms or governments. Systemically, the role of rich donor countries has also shifted: overall they give less in foreign aid for development than 30 years ago. As a result, the remittances sent by low-income immigrants are larger than foreign aid. Philanthropies now enter the realm once almost exclusive to governments.

These systemic shifts contribute to explaining a complex difference that can be captured in a set of simple numbers. Generally, the IMF asks Highly Indebted Poor Countries (HIPC) to pay 20% to 25% of their export earnings toward debt service. In contrast, in 1953, the Allies cancelled 80% of Germany’s war debt and only insisted on 3% to 5% of export earnings for debt service. And they asked only 8% from Central European countries in the 1990s. In comparison, the debt service burdens on today’s poor countries are extreme, as I discuss below. It does suggest that the aim for Europe was its re-incorporation into the capitalist world economy at the time for Germany, and into today’s advanced capitalism for Central Europe. The aim for the global South countries in the 1980s and 1990s was more akin to a disciplining regime, starting with forced acceptance of restructuring programs and of loans from the international system. After 20 years of this regime, it became clear that it did not deliver on the basic components for healthy development. The discipline of debt service payments was given strong priority over infrastructure, hospitals, schools, and other people-oriented development goals. The primacy of this extractive logic became a mechanism for systemic transformation that went well beyond debt service payment—the devastation of large sectors of traditional

economies, often the destruction of a good part of the national bourgeoisie and petty bourgeoisie, the sharp impoverishment of the population and, in many cases, of the state.

Debt and debt servicing problems have long been a systemic feature of the developing world. But it is the particular features of IMF negotiated debt rather than the fact of debt per se that concerns me here. The second feature that concerns me here is how this gradual destruction of traditional economies prepared the ground, literally, for some of the new needs of advanced capitalism, among which are the acquisitions of vast stretches of land—for agriculture, for underground water tables, and for mining. Precisely at a time of extreme financialization and systemic crisis, the growing demand for those material resources has ascended in importance and visibility. The third aspect that concerns me here is the new survival economies of the impoverished middle classes and of the poor. While each one of these three components is familiar and has happened before, my argument is that they are now part of a new organizing logic which changes their valence and their interaction; there is much contingency here, but also the shaping of such a new organizing logic.⁷

Debt as a Disciplining Regime

Even before the economic crises of the mid-1990s that hit a vast number of countries as they implemented neoliberal policies, the debt of poor countries in the South had grown from US\$507 billion in 1980 to US\$1.4 trillion in 1992.⁸ Debt service payments alone had increased to \$1.6 trillion, more than the actual debt. From 1982 to 1998, indebted countries paid four times their original debts, and at the same time, their debt stocks went up by four times. These countries had to use a significant share of their total revenues to service these debts. For instance, Africa's payments reached \$5 billion in 1998, which means that for every \$1 in aid, African countries paid \$1.40 in debt service in 1998. Debt to Gross National Product (GNP) ratios were especially high in Africa, where they stood at 123% in the late 1990s, compared with 42% in Latin America and 28% in Asia. By 2003, debt service as a share of exports only (not overall government revenue) ranged from extremely high levels for Zambia (29.6%) and Mauritania (27.7%) to significantly lowered levels compared with the 1990s for Uganda (down from 19.8% in 1995 to 7.1% in 2003) and Mozambique (down from 34.5% in 1995 to 6.9% in 2003). As of 2006, the poorest 49 countries (i.e. 'low income countries' with less than \$935 per capita annual income) had debts of \$375 billion. If to these 49 poor countries we add the 'developing countries', we have a total of 144 countries with a debt of over \$2.9 trillion and \$573 billion paid to service debts in 2006 (Jubilee Debt Campaign UK, 2009a).

The IMF, World Bank and other such programs establish the criteria and process these debts, thereby functioning as a global disciplining regime. The HIPC initiative was set up in 1996 by the World Bank and IMF to 'assist' countries with debts equivalent to more than one and a half times their annual export earnings and part of an IMF and World Bank program.⁹ In order to be eligible countries have to have been compliant to the IMF for at least three years. The HIPC process begins with a 'decision point' document. This sets out eligibility requirements, among which is the development of a Poverty Reduction Strategy Paper (PRSP), that replaces the earlier Structural Adjustment Programs (SAPs). PRSPs describe 'the macroeconomic, structural, and social policies and programs' that a country is required to pursue in order to be eligible for debt relief (IMF, 2009a). As of 1 July 2009 26 countries had completed HIPC,¹⁰ and 9 had 'passed the decision point' (IMF, 2009b). Finally, the Multilateral Debt Relief Initiative (MDRI) went into full force in July 2006.¹¹ It was intended to address many

of the critiques of the HIPC initiative.¹² MDRI promised cancellation of debts to the World Bank (incurred before 2003), IMF (incurred before 2004), and African Development Fund (incurred before 2004) for the countries that completed the HIPC initiative. According to one estimate, the major cancellation schemes (including HIPC and MDRI initiatives, and the Paris Club) have written off \$88 billion so far (Jubilee Debt Campaign UK, 2009b).

The debt burden that built up in the 1980s, and especially the 1990s, has had substantial repercussions on state spending composition. Zambia, Ghana and Uganda, three countries that global regulators (notably the World Bank and the IMF) saw as cooperative, responsible and successful at implementing SAPs illustrate some of the issues even when held in high esteem by global regulators. A few examples of expenditure levels paint a troubling picture about how they achieved this high esteem. At the height of these programs in the early to mid-1990s, Zambia's government paid \$1.3 billion in debt but only \$37 million for primary education; Ghana's social expenses, at \$75 million, represented 20% of its debt service; and Uganda paid \$9 per capita on its debt and only \$1 for health care. In 1994 alone, these three countries remitted \$2.7 billion to bankers in the North. When the new programs became an option, these three countries benefited from HIPC and MDRI programs and conceded to the attendant PRSP requirements. Thus, while in 1997 Zambia spent 18.3% of income on exports of goods and services on debt service, by 2007 this was reduced to 1.3% (IAEG, 2009). For Ghana these figures are 27.1% and 3.1% respectively. For Uganda they are 19.7% and 1.2% (IAEG, 2009).

Generally, IMF debt management policies from the 1980s onwards can be shown to have worsened the situation for the unemployed and poor (UNDP, 2005, 2008). Much research on poor countries documents the link between hyper-indebted governments and cuts in social programs. These cuts tend to affect women and children in particular through cuts in education and health care, both investments necessary to ensuring a better future (for overviews of the data, see UNDP, 2005, 2008; World Bank, 2005, 2006). There is by now a large literature in many different languages on this subject, including a vast number of limited circulation items produced by various activist and support organizations. An older literature on women and debt also documents the disproportionate burden that these programs put on women during the first generation of SAPs in the 1980s in several developing countries in response to growing government debt (Beneria & Feldman, 1992; Bose & Acosta-Belen, 1995; Bradshaw et al., 1993; Tinker, 1990). Unemployment of women themselves but also, more generally, of the men in their households has added to the pressure on women to find ways to ensure household survival (Buechler, 2007; Lucas, 2005; Rahman, 1999; Safa, 1995). Subsistence food production, informal work, emigration, and prostitution have all become survival options for women and, by extension, often for their households. For instance, when there is a shortage of basic healthcare women usually take on the extra burden of caring for the sick. When school fees are introduced or spending is cut sons' education is prioritized over daughters'. Water privatization can reduce access to water and increase the water-gathering burden placed on women. When families grow cash crops for export women's work produces money, which men usually control, rather than food (Jubilee Debt Campaign UK, 2007).

One question concerns the option of not becoming part of the IMF debt servicing disciplining regime and foregoing the help it is meant to provide. The so-called adjustment programs of the 1980s and 1990s destroyed many traditional economies, leaving many countries only with major debts. At that point, becoming part of the debt cancellation program launched in 2006 has probably been preferable. The evidence suggests that once a country has been pushed into debt, cancellation can, in principle, help a country allocate more government revenue for general social and development questions. This has been the case with Ghana, Uganda and a few others

which have seen the growth of middle classes—along with continuing abject poverty. On the other hand, Angola which was not accepted for debt cancellation, spent 6.8% of GDP on debt service payments and only 1.5% of GDP on health in 2005; it continues to spend about \$2.2 billion each year on external debt payments (Jubilee Debt Campaign UK, 2008).

But the Angola case also points to another combination of elements. Its elites have become wealthy on the vast mining resources, mostly for export, and this arrangement can now continue to do so without much interference. The vast poverty continues and so does the mining for export. One cannot help but ask, who are the other beneficiaries of this situation?

There is a larger history in the making. In my reading it includes as one key element a repositioning of much of Africa and good parts of Latin America and Central Asia in a new massively restructured global economy. Weakened governments and the destruction of traditional economies have launched a new phase of survival economies. Here I focus briefly on two of these aspects (for a more detailed analysis see Sassen, 2008a). One is that this restructuring has repositioned 'territory' in vast regions of the world as a site for resources rather than as a nation's space. The other is the emergence of an expanded range of survival economies; some of these are old but now operate at a global scale.

The Repositioning of Territory in the Global Division of Functions

The extent of land acquisitions in the global South by multinational corporations (MNCs) and governments of rich countries over the last few years marks a new phase. It is not the first time in modern times: this is a recurrent dynamic which tends to be part of imperial realignments. China's acquiring of mines in Africa is linked to its rise as a global power. Britain, France, the US, and others all did this in their early imperial phases, and in many cases have owned vast stretches of land in foreign countries for hundreds of years. But each phase has its particularities. One key feature of the current period is that unlike past empires, today's world consists largely of nation states recognized as sovereign, no matter how feeble this sovereign power is in many cases. Rather than imperial grab, the mechanism is foreign direct investment (among others).

The International Food Policy Research Institute (IFPRI; von Braun and Meinzen-Dick, 2009) finds that between 15 and 20 million hectares of farmland in poor countries have been subject to transactions or talks involving foreigners since 2006.¹³ That is the equivalent of a fifth of all the farmland of the European Union. Putting a conservative figure on the land's value, IFPRI calculates that these deals are worth US\$20–30 billion. This is 10 times the emergency package for agriculture recently announced by the World Bank and 15 times more than the US government's new fund for food security. While there is no comprehensive data, there are a number of studies (although the IFPRI data are probably the most detailed). The contractual formats under which this land is acquired include direct acquisitions and leasing. A few examples signal the range of buyers and of locations. Africa is a major destination for land acquisitions. South Korea has signed deals for 690,000 hectares and the United Arab Emirates (UAE) for 400,000 hectares, both in Sudan. Saudi investors are spending \$100 million to raise wheat, barley and rice on land leased to them by Ethiopia's government; they received tax exemptions and export the crop back to Saudi Arabia.¹⁴ China secured the right to grow palm oil for biofuels on 2.8 million hectares in Congo, which would be the world's largest palm-oil plantation. It is negotiating to grow biofuels on 2 million hectares in Zambia. Perhaps less known than the African case is the fact that privatized land in the territories of the former Soviet Union, especially in Russia and Ukraine, is also becoming the object of much foreign acquisition. In

2008 alone, these acquisitions included the following: a Swedish company, Alpcot Agro, bought 128,000 hectares in Russia; South Korea's Hyundai Heavy Industries paid \$6.5 million for a majority stake in Khorol Zerno, a company that owns 10,000 hectares in eastern Siberia; Morgan Stanley bought 40,000 hectares in Ukraine; Gulf investors are planning to acquire Pava, the first Russian grain processor to be floated on the financial markets to sell 40% of its landowning division, giving them access to 500,000 hectares. Also less noticed than the African case is that Pakistan is offering half a million hectares of land to Gulf investors with the promise of a security force of 100,000 to protect the land.

These developments are part of a larger combination of trends. First, there is the immediate fact of how the global demand for food, partly fed by the half million strong new middle classes of Asia, has meant that there are profits to be had in food and land.¹⁵ We now have a global market for land and food controlled by large firms and some governments, and it has been a growth sector throughout the financial crisis. Under these conditions pricing is a controlled affair. Secondly, there is the ongoing demand for metals and minerals of all sorts and a whole new demand for metals and minerals hitherto not much exploited as their demand comes from the more recent developments in the electronics sector. Africa, much less densely populated and built up than other parts of the world, has become a key destination for investments in mining. Thirdly, there is the growing demand for water and the exhaustion of underground water tables in several areas of the world. Fourth, and least noted perhaps, is the sharp decline in foreign direct investment (FDI) in manufacturing in Africa, also signaling the repositioning of territory. In South Africa and Nigeria, Africa's top two FDI recipients accounting for 37% of FDI stock in Africa in 2006, have had a sharp rise in FDI in the primary sector and a sharp fall in the manufacturing sector.¹⁶ This is also the case in Nigeria, where foreign investment in oil has long been a major factor: the share of the primary sector in inward FDI stock stood at 75% in 2005, up from 43% in 1990. Other African countries have seen similar shifts (see Table 2 later in article). Even in Madagascar, one of the few, mostly small, countries where manufacturing FDI inflows increased in the 1990s, this increase was well below that of the primary sector.¹⁷

Counter-geographies of Survival

The second case I want to discuss briefly is the survival economies of the poor and newly impoverished. Heavy government debt and high unemployment in global South countries have brought with them the need for survival alternatives not only for ordinary people, but also for governments and enterprises. And a shrinking regular economy in a growing number of these countries has led to a wider use of illegal profit-making by enterprises and organizations. The IMF and World Bank programs of the last 30 years, with their massive contribution to heavy debt burdens, have played an important role in the formation of counter-geographies of survival, of profit-making, and of government revenue enhancement. Furthermore, economic globalization has provided an institutional infrastructure for cross-border flows and global markets, thereby facilitating the operation of these counter-geographies on a global scale. Once there is an institutional infrastructure for globalization, processes that have operated for the most part at the national or regional level can scale up to the global level even when this is not necessary for their operation. This contrasts with processes that are by their very nature global, such as the network of financial centers underlying the formation of a global capital market. Finally, this pattern also points to a different trajectory from that of the old industrial countries. Instead of going the way of unions and political fights to move from the predatory state to the regulatory

state, in the global South it is the axis of criminality and extreme sacrifice on the part of poor and impoverished households.

It is in this context that alternative survival circuits emerge. The context can be specified as a systemic condition comprising a set of particular interactions including high unemployment, poverty, widespread bankruptcies and shrinking state resource allocation for people-oriented development. We see the formation of profit-making and government revenue-making possibilities built on the backs of migrants, and women migrants in particular. As such, examining the question of immigrant remittances offers valuable insights into the broader subject of the formation of alternative political economies and how these unsettle older notions of an international division of labor.

Immigrants enter the macro level of development strategies through the remittances they send back home.¹⁸ These represent a major source of foreign exchange reserves for the government in a good number of countries. Although the flows of remittances may be minor compared with the massive daily capital flows in global financial markets, they can matter enormously to developing or struggling economies. The World Bank estimates that remittances worldwide reached \$318 billion in 2007, up from \$230 billion in 2005, and \$70 billion in 1998; of this total amount, \$240 billion went to developing countries up from \$168 billion in 2005, and up 73% over 2001 (*Migrant Remittances*, 2008, p. 2).¹⁹

The Inter-American Development Bank also found that for Latin America and the Caribbean as a whole, these remittance flows exceeded the combined flows of all foreign direct investment and net official development assistance in 2003.²⁰

To understand the significance of these figures, they should be related to the GDP and foreign currency reserves in the specific countries involved, rather than compared to the global flow of capital. For instance, remittances were the third largest source of foreign exchange over the past several years for the Philippines, a key provider of migrants in general, and of women for the entertainment industry and for nursing, in particular. In Bangladesh, another country with significant numbers of its workers in the Middle East, Japan, and several European countries, remittances represent about a third of foreign exchange. In Mexico, remittances have long been the second source of foreign currency, just below oil and ahead of tourism, and are larger than foreign direct investment (World Bank, 2006), though early 2008 saw a decline in total inflows due to the US economic crisis (*Migrant Remittances*, 2008, p. 1).²¹

The next three tables provide summary information about remittances. Table 1 shows the weight of remittances in the GDP of several countries—49% of GDP in Tajikistan, 37 % in Tonga (31.1%), and so on. Table 2 shows the other side of this coin, the main remittance senders, with the US long at the top and the Russian Federation's extraordinary rise as a key sender, going from \$3.2 billion in 2003 to \$27 billion by 2008. Table 3 shows the largest recipients of remittances, with China and India leading, two countries marked by an increasingly bi-modal emigration—highly paid professionals and low-wage workers. More generally, it shows clearly that if we rank countries by total value of remittances, the picture changes sharply. The top remittance recipient countries include rich countries such as France, Spain, Germany and the United Kingdom, pointing to the fact of a transnational professional class (Sassen, 2007, ch. 6).

In short, the growing immiseration of governments and economies in the global South launches a new phase of global migration and people trafficking, strategies which function both as survival mechanisms and profit-making activities. To some extent, these are older processes which used to be national or regional and today operate on global scales. The same infrastructure that facilitates cross-border flows of capital, information and trade is

Table 1. Top recipients of migrant remittances as % of GDP, 2006–2009

Workers' remittances, compensation of employees, and migrant transfers, debit (US\$ million)	2006	2007	2008	2009e	Remittances as a share of GDP, 2008 (%)
Tajikistan	1,019	1,691	2,544	1,815	49.6%
Tonga	72	100	100	96	37.7%
Moldova	1,182	1,498	1,897	1,491	31.4%
Kyrgyz Republic	481	715	1,232	1,011	27.9%
Lesotho	361	443	443	496	27.3%
Samoa	108	120	135	131	25.8%
Lebanon	5,202	5,769	7,180	7,000	25.1%
Guyana	218	283	278	266	24.0%
Nepal	1,453	1,734	2,727	3,010	21.6%
Honduras	2,391	2,625	2,824	2,525	20.1%
Jordan	2,883	3,434	3,794	3,650	19.0%
Haiti	1,063	1,222	1,300	1,220	18.7%
El Salvador	3,485	3,711	3,804	3,460	17.2%
Bosnia and Herzegovina	2,157	2,700	2,735	2,627	14.8%
Jamaica	1,946	2,144	2,180	1,921	14.5%
Nicaragua	698	740	818	784	12.4%
Albania	1,359	1,468	1,495	1,495	12.2%
Guatemala	3,700	4,236	4,451	4,065	11.4%
Bangladesh	5,428	6,562	8,995	10,431	11.4%
Philippines	15,251	16,302	18,643	19,411	11.2%

Source: Ratha et al. (2009, p. 3).

also making possible a range of cross-border flows not intended by the framers and designers of the current corporate globalization of economies. Growing numbers of traffickers and smugglers are making money off the backs of men, women and children, and many governments are increasingly dependent on their remittances. A key aspect here is that, through their work and remittances, migrants enhance the government revenue of deeply indebted countries. The need for traffickers to help in the migration effort also offers new profit-making possibilities to 'entrepreneurs' who have seen other opportunities vanish as global firms and markets enter their countries, as well as aiding criminals able to operate their illegal trade globally. These survival circuits are often complex, involving multiple locations and types of actors, and constituting increasingly global chains of traders, traffickers, victims, and workers.

The other side of these dynamics is the proliferation of sites that concentrate a growing demand for particular types of labor supplies (for a full elaboration see Sassen, 2008c). Strategic among these are global cities, with their sharp demand for top-level transnational professionals and for low-wage workers, often women from the global South. These are places that concentrate some of the key functions and resources for the management and coordination of global economic processes. The growth of these activities has, in turn, produced a sharp growth in the demand for highly paid professionals, both through the sphere of production (the financial sector, specialized corporate services, and so on) and the sphere of social reproduction (both of the high-income professionals and the low-wage workforce

Table 2. Top senders of migrant remittances, 2003–2008

Workers' remittances, compensation of employees, and migrant transfers, debit (US\$ million)	2003	2004	2005	2006	2007	2008
United States	36,545	39,347	40,635	43,922	45,643	47,182
Russian Federation	3,233	5,188	7,008	11,467	17,763	26,145
Switzerland	11,411	12,921	13,324	14,377	16,273	18,954
Saudi Arabia	14,783	13,555	13,996	15,611	16,068	16,068
Germany	11,190	12,069	12,499	12,454	13,689	14,976
Spain	5,140	6,977	8,136	11,326	15,183	14,656
Italy	4,368	5,512	7,620	8,437	11,287	12,718
Luxembourg	5,077	6,000	6,627	7,561	9,280	10,922
Netherlands	4,238	5,032	5,928	6,831	7,830	8,431
Malaysia	3,464	5,064	5,679	5,560	6,385	6,385
China	1,645	2,067	2,603	3,025	4,372	5,737
Oman	1,672	1,826	2,257	2,788	3,670	5,181
United Kingdom	2,624	2,957	3,877	4,560	5,048	5,048
Norway	1,430	1,749	2,174	2,620	3,642	4,776
Japan	1,773	1,411	1,281	3,476	4,037	4,743
France	4,388	4,262	4,182	4,217	4,380	4,541
Czech Republic	1,102	1,431	1,677	2,030	2,625	3,826
Kuwait	2,144	2,403	2,648	3,183	3,824	3,824
Belgium	2,329	2,617	2,754	2,698	3,161	3,689
Kazakhstan	802	1,354	2,000	3,033	4,303	3,559

Source: Ratha et al. (2009, p. 3).

Table 3. Top recipients of migrant remittances, 2007

Top remittance-receiving countries (US\$ billions)	2007
India	27.0
China	25.7
Mexico	25.0
Philippines	17.0
France	12.5
Spain	8.9
Belgium	7.2
Germany	7.0
United Kingdom	7.0
Romania	6.8
Bangladesh	6.4
Pakistan	6.1

Source: World Bank (2008).

that is also part of the new advanced sectors). Thus, global cities are also sites for the incorporation of large numbers of low-paid immigrants into strategic economic sectors. This incorporation happens directly through the demand for mostly low-paid clerical and blue-collar service workers, such as janitors and repair workers. And it happens indirectly through the

consumption practices of high-income professionals both at work and in their households, practices that generate a demand for low-wage workers in expensive restaurants and shops, as well as for maids and nannies at home. In this way, low-wage workers get incorporated into the leading sectors, but they do so under conditions that render them invisible, therewith undermining what had historically functioned as a source of workers' empowerment—being employed in growth sectors.

This mix of circuits for labor supply and demand is deeply imbricated with other dynamics of globalization: the formation of global markets, the intensifying of transnational and trans-local networks in a growing range of spheres, and the geographic redeployment of a growing range of economic and financial operations. The strengthening, and in some of these cases, the formation of new global labor circuits, is embedded in the global economic system and its associated development of various institutional supports for cross-border markets and money flows. These circuits are dynamic and changing in terms of their location. Some of these circuits are part of the shadow economy, but they use some of the institutional infrastructure of the regular economy. Most of these circuits are part of the formal economy and they service leading economic sectors and places worldwide. This mix of labor supply and demand circuits is dynamic and multi-locational.

Of all the highly developed countries, it is the US where these deep structural trends are most legible. National level data for the US show a sharp growth in inequality. For instance, economic growth from 2001 to 2005 was high but very unequally distributed. Most of it went to the upper 10% and, especially, the upper 1% of households. The rest, that is 90% of households, saw a 4.2% decline in their market-based incomes (Mishel, 2007). If we disaggregate that 90%, the size of the loss grows as we descend the income ladder. Since the beginning of the so-called economic recovery in 2001, the income share of the top 1% grew 3.6 percentage points to 21.8% in 2005, gaining \$268 billion of total US household income. In contrast, that of the lower 50% of US households fell by 1.4 percentage points to 16% in 2005, amounting to a loss of \$272 billion in income since 2001. Figure 1 traces a longer term pattern from 1917 which shows clearly the return to extreme inequality after the decades of the Keynesian period.

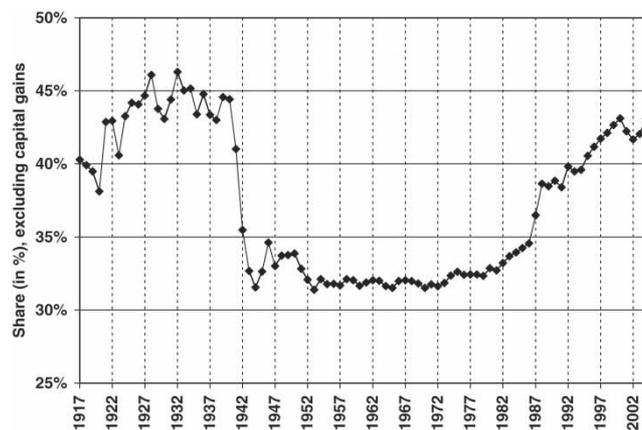


Figure 1. US national income share of the top 10% of earners, 1917–2005.

Note: Income is defined as market income but excludes capital gains.

Source: Mishel (2004).

Sub-prime Mortgages: A New Global Frontier for Finance

The 1980s opened a new financial phase that became yet another disciplining mechanism.²² Here it was not structural adjustment programs but financial adjustment crises. Since the 1980s there have been several financial crises, some famous, such as the 1987 New York stock market crisis and the 1997 Asian crisis. And some obscure, such as the individual country financial crises that happened in over 70 countries in the 1980s and 1990s as they deregulated their financial systems, mostly under pressure from global regulators aiming at facilitating the globalizing of financial markets.

Conventional data show the post-1997 financial crisis period to be a fairly stable one, until the current crisis. One element in this picture is that after a country goes through an ‘adjustment’ crisis, ‘stability’ (and prosperity!) follow. This then produces a representation of considerable financial stability, except for a few major global crises, such as the dot-com crisis. A much mentioned fact regarding the current 2007–2008 crisis intended to show that the system is fine, is that in 2006 and 2007, 124 countries had a GDP growth rate of 4% a year or more, which is much higher than that of previous decades. The suggestion is then that the 2007–2008 crisis is precisely that—an acute momentary event, but that the system is fine.

But behind this stability lies a savage sorting of winners and losers, and the fact that it is easier to track winners than to track the slow sinking into poverty of households, small firms, and government agencies (such as health and education) that are not part of the new glamour sectors (finance and trade). The miseries these adjustment crises brought to the middle sectors in each country and the destruction of often well-functioning economic sectors is largely an invisible history to the global eye. These individual country adjustment crises only intersected with global concerns and interests when there were strong financial links, as was the case with the 1994 Mexico crisis and the 2001 Argentine crisis. Further, when these miseries became visible, as when members of the traditional middle class in Argentina went on food riots in Buenos Aires (and elsewhere) in the mid 1990s—after adjustment!—something unheard of in Argentina, and which took many by surprise.

Besides the very partial character of post-adjustment stability and the new ‘prosperity’ much praised by global regulators and global media, there is the deeper fact that ‘crisis’ is a structural feature of deregulated, interconnected, and electronic financial markets. These same features also fed the sharp growth of finance, partly based on the financializing of non-financial economic sectors, leading to overall extremely high financial deepening. Thus, if crisis is a structural feature of current financial markets, then crisis becomes a feature of non-financial economic sectors through their financializing, a subject I have developed elsewhere (Sassen, 2008b, 2008a, pp. 355–365).²³ The overall outcome is extreme potentials for instability even in strong and healthy (capitalist) economic sectors, particularly in countries with highly developed financial systems and high levels of financialization, such as the US and the UK.

What stands out in this phase that begins in the 1980s is that global and adjustment crises had the effect of securing the conditions for globally linked financial markets and the ascendance of a financial logic organizing larger and larger sectors of the economy in the global North. In this process large components of the non-financial economy in these countries were ruined.²⁴ Against this large background, the current financial crisis is yet another step in this trajectory. One question is whether it spells the exhaustion of this trajectory, or rather the beginning of its decay.

In what follows I argue that the specific way of using the sub-prime mortgage in the 2001–2007 period makes it a dangerous instrument that is likely to be used worldwide over the next decade. It

is a mistake to see this instrument as having to do with providing modest income households with housing. It has rather to do with a structural condition of high finance marked by the combination of a growing demand for asset-backed securities given extremely high levels of speculative investments. This structural condition is at the heart of the actual event that momentarily brought the system to a (partial) standstill—the credit-default swap crisis of September 2008—which in turn suggests an even keener interest in asset-backed securities, and hence in the speculative use of sub-prime mortgages. I see this as one of the new global frontiers for finance, specifically, the 2 billion modest-income households worldwide. The effect could be yet another brutal sorting, with expulsions from more traditional economies, not unlike the consequences of the structural adjustment crises in the global South discussed in the first half of this paper.

I begin with a quick comparison of the major global crises since the current phase began in the 1980s to underline the extent to which financial leveraging has caused the greater acuteness of the current crisis compared with the other 3 major global crises since the 1980s. Figure 2 shows that financial leveraging added another 20% to the underlying banking crisis, thereby bringing the current financial crisis up to an equivalent of 40% of global GDP, compared to earlier crises, which rarely went beyond 20%.

The IMF data also show the extent to which Asia is in a very different position than the US and Europe. Its emergent crisis is economic rather than financial. But given interlinked global markets, a crisis made largely in the US and to a lesser extent in the EU, is arriving in Asia.

Much has been made, especially in the US media, of the sub-prime mortgage crisis as a source of the larger crisis. These modest-income families unable to pay their mortgage were often represented as irresponsible for having taken on these mortgages. But the facts show another pattern. The overall value of the sub-prime mortgage losses was too small to bring this powerful financial system down (see Figure 3). What triggered the crisis was a far more complex financial innovation. The key was the growing demand for asset-backed

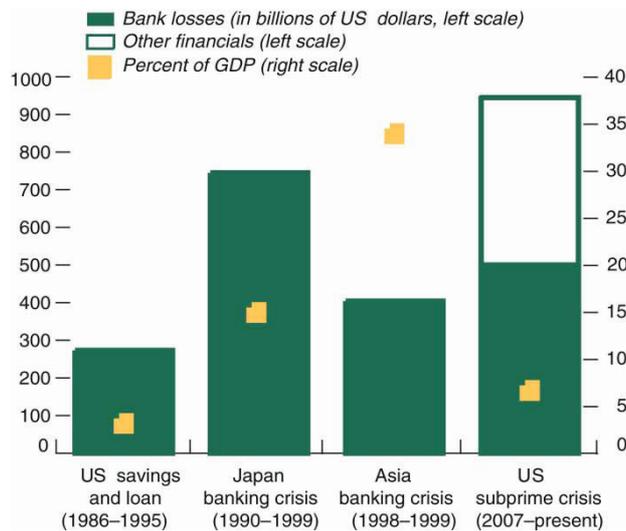


Figure 2. Comparison of financial crises.

Note: US sub-prime costs represent IMF staff estimates of losses on banks and other financial institutions. All costs are in real 2007 US dollars. Asia includes Indonesia, Korea, the Philippines, and Thailand.

Source: IMF (2008, p. 13).

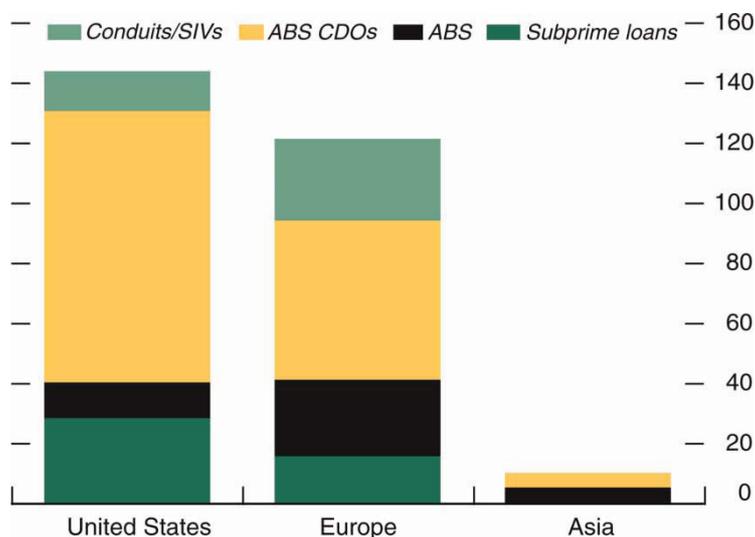


Figure 3. Expected bank losses as of March 2008 (in billions of US dollars).

Note: ABS = asset-backed security; CDO = collateralized debt obligation; SIV = structured investment vehicle.

Source: IMF (2008, p. 13).

securities by investors, in a market where the outstanding value of derivatives was \$630 trillion, or 14 times the value of global GDP. The total value of financial assets (which is a form of debt) in the US stood at almost five times (450%) the value of its GDP in 2006, before the crisis was evident. The UK, Japan, the Netherlands, all had a similar ratio (McKinsey & Company, 2008, p. 11).²⁵ From 2005 to 2006 the total value of the world's financial assets grew by 17% (in nominal terms, 13% at constant exchange rates) reaching \$167 trillion. This is not only an all-time high value; it also reflects a higher growth rate in 2006 than the annual average of 9.1% since 1980. This points to growing financial deepening. The total value of financial assets stood at \$12 trillion in 1980, \$94 trillion in 2000, and \$142 trillion in 2005.²⁶

This is the context within which the demand for asset-backed securities became acute. To address this demand, even sub-prime mortgage debt could be used as an asset. Sellers of these mortgages needed vast quantities of them to make it work for high-finance: 500 such sub-prime mortgages was a minimum. As the demand for asset-backed securities grew, so did the push by sub-prime mortgage sellers to have buyers sign on, regardless of capacity to pay the mortgage. This combination of demand and increasingly low-quality assets meant mixing slices of mortgage with high debt. Out came an enormously complex instrument that was also enormously opaque: nobody could trace what all was there. When the millions of foreclosures came in 2007, investors had a crisis of confidence: it was impossible to tell what was the toxic component in their investments.

Sub-prime mortgages can be valuable instruments to enable modest-income households to buy a house. But what happened in the US over the last few years was an abuse of the concept. The small savings or future earnings of modest-income households were used to develop a financial instrument that could make profits for investors even if those households in the end could not pay the mortgages and thereby lost both their home and whatever

Table 4. Rate of conventional sub-prime lending by race, New York City 2002–2006

	2002	2003	2004	2005	2006
White	4.6%	6.2%	7.2%	11.2%	9.1%
Black	13.4%	20.5%	35.2%	47.1%	40.7%
Hispanic	11.9%	18.1%	27.6%	39.3%	28.6%
Asian	4.2%	6.2%	9.4%	18.3%	13.6%

Source: Furman Center for Real Estate & Urban Policy (2007).

savings and future earnings they had put into it—a catastrophic and life-changing event for millions of these households. This becomes clear in the microcosm that is New York City. Table 4 shows how whites, who have a far higher average income than all the other groups in New York City, were far less likely to have sub-prime mortgages than all other groups. Thus 9.1% of all whites who got mortgages got sub-prime mortgages in 2006 compared with 13.6% of Asians, 28.6% of Hispanics, and 40.7% of blacks. Table 4 also shows that all groups, regardless of incidence, had high growth rates in sub-prime lending from 2002 to 2006. If we consider the most acute period, 2003 to 2005, it more than doubled for whites, it basically tripled for Asians and Hispanics and quadrupled for blacks.

There were, then, two very separate crises: the crisis of the people who had gotten these mortgages and the crisis of confidence in the investor community. The millions of home foreclosures were a signal that something was wrong, but in itself, it could not have brought down the financial system. There is a profound irony in this crisis of confidence: the brilliance of those who make these financial instruments became the undoing of a large number of investors (besides the undoing of the modest-income families who had been sold these mortgages). The toxic link was that for these mortgages to work as assets for investors, vast numbers of mortgages were sold regardless of whether these home-buyers could pay their monthly fee. The faster these mortgages could be sold, the faster they could be bundled into investment instruments and sold off to investors. Overall, sub-prime mortgages more than tripled from 2000 to 2006, and accounted for 20% of all mortgages in the US in 2006. This premium on speed also secured the fees for the sub-prime mortgage sellers and reduced the effects of mortgage default on the profits of the sub-prime sellers. In fact, those sub-prime sellers that did not sell off these mortgages as part of investment instruments went bankrupt eventually, but not before having secured fees.

In brief, the financial sector invented some of its most complicated financial instruments to extract the meager savings of modest households in order to produce an ‘asset’—the mortgage on a house. The complexity of the financial innovation was a series of products that de-linked sub-prime sellers and investors’ profits from the creditworthiness of consumer home mortgage-buyers. Whether the mortgage is paid matters less than securing a certain number of loans that can be bundled up into ‘investment products’. The crisis of home-buyers was not a crisis for financial investors, even though millions of middle and working class families now live in tents in the US. For finance it was a crisis of confidence. But it showed the importance of the systems of trust that make possible the speed and orders of magnitude of this financial system. The crisis of home-owners (valued at a few hundred billion dollars) was the little tail that dented the enormous dog of trust in the financial system. In other words, this type of

financial system has more of the social in it than is suggested by the technical complexity of its instruments and electronic platforms (Sassen, 2008a, pp. 355–365).

The critical component that brought the financial system to a momentary standstill was more of an old-fashioned speculation gone wrong: the \$62 trillion dollar credit-default swap crisis that exploded on the scene in September 2008, a full year after the sub-prime mortgage of August 2007 (see Figure 4). This was more than the combined domestic product of all countries in the world, \$54 trillion. Figure 4 shows the extremely sharp growth over an extremely short period of time, from 2001 to 2007. While much attention has gone to sub-prime mortgages as causes of the financial crisis, the \$60 trillion in swaps in mid-2008 is what really got the financial crisis going. Declining house prices, high foreclosure rates, declining global trade, rising unemployment, all alerted investors that something was not right. This, in turn, led those who had bought credit-default swaps as a sort of ‘insurance’ to want to cash in. But the sellers of these swaps had not expected this downturn or the demand to cash in from those whom they had sold these credit-swaps. They were not ready, and this catapulted much of the financial sector into crisis. Not everybody lost. Among the winners are also those who ‘shorted’ sub-prime mortgage securities: once again, Soros is the emblematic actor in this parallel circuit, making well over \$3 billion on the sub-prime mortgage crisis, just as he did on the British pound’s fallout from the European Exchange Rate Mechanism (ERM).

These credit-default swaps are part of what has come to be referred to as the shadow banking system. According to some analysts this shadow banking system accounted for 70% of banking at the time that the crisis explodes. The shadow banking system is not informal, illegal, or clandestine. Not at all: it is in the open, but it has thrived on the opaqueness of the investment instruments. The complexity of many financial instruments is such that nobody can actually trace

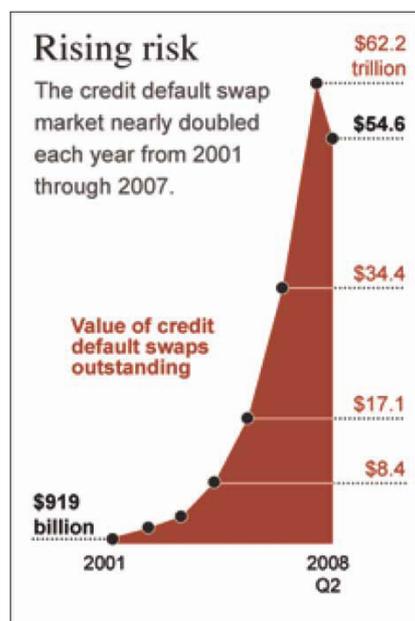


Figure 4. Value of credit default swaps outstanding according to ISDA data.
Source: Varchaver and Benner (2008)

what all is bundled up in some of these financial instruments. Eventually this meant that nobody knew exactly or could understand the composition of their investments, not even those who sold the instruments.

This shadow banking system has thrived on the recoding of instruments, which, at the limit, allowed illegal practices to thrive. For instance, it is now clear that credit-default swaps were sold as a type of insurance. But rather they were actually derivatives. If they would have been sold as insurance the law requires they be backed by capital reserves and be subject to considerable regulation. Making them into derivatives was a *de facto* deregulation and eliminated the capital reserves requirement. Credit-default swaps could not have grown so fast and reached such extreme values if they had been sold as insurance, which would have been the lawful way. None of the financial firms had the capital reserves they would have needed to back \$60 trillion in insurance. Because they were recoded as derivatives, they could have an almost vertical growth curve beginning as recently as 2001.

It is important to emphasize that the viral infection of sub-prime mortgages originated in the United States but spread to other countries via the globalization of financial markets. This spread was helped by the fact that non-national investors are, as a group, the single largest buyers of some of the weakest types of mortgage instruments. Together with banks, non-national mortgage buyers are over a third of all sub-prime mortgage holders. Foreign ownership strengthens the potential for spill-over effects well beyond the United States.

A comparison of the value of all residential mortgage debt (from high to low-quality mortgages) as a ratio of national GDP across developed countries shows sharp variations.²⁷ To some extent, the variation in this value is a function of timing. In the US, the UK and Australia, the housing market has long been private and, importantly, the financial system is highly developed on a broad range of fronts. Thus the incidence of mortgages is both high and widespread in terms of the variety of financial circuits it encompasses. Central to this story is the difference between the value of housing loans as a ratio to GDP and the growth rate of such loans. Thus, the former is very low in countries with young housing markets, such as India and China, where it stands at 10%.²⁸ In contrast, in more mature markets in Asia, this value can be much higher—standing at 60% in Singapore, and 40% in Hong Kong and Taiwan—but the growth rate is much lower. Between 1999 and 2006, the average annual growth of housing loans in India and China was extremely high, certainly above the growth of other types of loans. Both countries have rapidly growing housing markets and are, therefore, at the beginning of a new phase of economic development. While most other Asian countries have not experienced comparable growth rates to India and China in the mortgage market, they have seen a doubling in such loans during this period. If we consider the particular financial innovations of concern in this paper—moderate and low-income households' mortgages and sub-prime mortgages—then we can see how attractive the Indian and Chinese residential mortgage market becomes with their millions of low-income households.

The next two tables (Tables 5 and 6) provide comparative data on the incidence of residential loans to total loans in several highly developed and so-called emerging market countries. These two tables also help situate the residential mortgage market in the rapidly growing and diversifying financial world of loans. Developed countries with multiple financial circuits, such as the US and the UK, clearly show that compared to other types of loans, mortgages are a relatively small share of all loans, even if most households have mortgages. It is important to note that the same low level of mortgage loans to total loans in economies marked by a small elite of super rich individuals has a different meaning in the US and UK: hence, Russia's extremely low

Table 5. Share of residential real estate loans to total loans, developed markets

Country	Residential real estate loans to total loans (%)
Australia	56.46
Austria	13.11
Canada	58.94
Finland	33.79
France	42.00
Germany	17.82
Ireland	13.87
Italy	17.37
Netherlands	28.62
Norway	61.53
Portugal	28.25
Singapore	22.01
Spain	25.85
Sweden	34.48
United Kingdom	20.05
United States	39.46
Average	32.10

Source: International Monetary Fund (2005).

incidence of residential to total loans in the economy is an indication of a narrow mortgage market (mostly for the rich and very rich) and the fact that there are vast financial circuits centered on other resources.

While residential mortgage capital is growing, it needs to be situated in a larger financial landscape. Thus, even though mortgage finance measured as a ratio to GDP is high in countries such as the US and the UK, the total value of financial assets is far higher. As indicated earlier, the

Table 6. Residential real estate loans to total loans, emerging markets

Country	Residential real estate loans to total loans (%)
South Africa	19.92
Russian Federation	9.15
Poland	12.91
Latvia	18.81
Croatia	17.47
South Africa	19.92
Russian Federation	9.15
Poland	12.91
Average	14.16

Source: International Monetary Fund (2005).

ratio of finance as a whole to US GDP is 450%, as it is for the UK. The other story, then, is the extent to which finance has found mechanisms for raising its revenue that have little direct connection to the material economy of countries. In this regard, the securitizing of residential mortgages can be seen as a powerful instrument for the further financial deepening of economies. Finally, yet another way of understanding the mortgage capital is its share in total loans. Tables 5 and 6 show this share for developed and emerging market economies. There is considerable variability within each group of countries. But the general fact is that there is much room for residential mortgage debt to grow in both. And some of this growth may well take the shape of sub-prime mortgages, with its attendant risks for modest-income households and the added leveraging it brings to the financial system.

An important question raised by these developments is the extent to which developed and developing countries will follow this troublesome 'development' path. It has become another way of extracting value from individuals. In this case, through home mortgages that even very poor households are invited to buy, partly because the sellers are merely after the contract that represents an asset, in order to bundle them up and sell the package to an investor, thereby passing on the risk and removing an incentive to care whether the home owner manages to pay the mortgage. Table 7 and Figure 5 show the rapid growth over a very short period of time in the ratio of household debt to personal disposable income, and, secondly, the fact that in some of these countries, much of this debt is foreign-owned—an indication of an emerging global financial market.

Finally, when we compare the ratio of housing mortgage debt to GDP in different regions of the world we can infer the potential for growth in those countries where it is still a minor share (Figures 6 and 7). What points to the massive potential for growth of this innovation is the low incidence of mortgage capital in most countries around the world. Overall the ratio of

Table 7. Ratio of household credit to personal disposable income (%)

	2000	2001	2002	2003	2004	2005
Emerging markets						
Czech Republic	8.5	10.1	12.9	16.4	21.3	27.1
Hungary	11.2	14.4	20.9	29.5	33.9	39.3
Poland	10.1	10.3	10.9	12.6	14.5	18.2
India	4.7	5.4	6.4	7.4	9.7	...
Korea	33.0	43.9	57.3	62.6	64.5	68.9
Philippines	1.7	4.6	5.5	5.5	5.6	...
Taiwan	75.1	72.7	76.0	83.0	95.5	...
Thailand	26.0	25.6	28.6	34.3	36.4	...
Mature markets						
Australia	83.3	86.7	95.6	109.0	119.0	124.5
France	57.8	57.5	58.2	59.8	64.2	69.2
Germany	70.4	70.1	69.1	70.3	70.5	70.0
Italy	25.0	25.8	27.0	28.7	31.8	34.8
Japan	73.6	75.7	77.6	77.3	77.9	77.8
Spain	65.2	70.4	76.9	86.4	98.8	112.7
United States	104.0	105.1	110.8	118.2	126.0	132.7

Source: International Monetary Fund (2006).

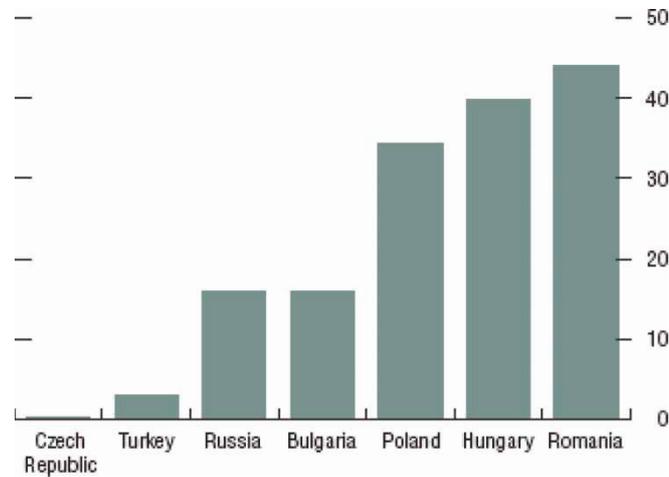


Figure 5. Share of foreign currency denominated household credit, end-2005 (in % of total household credit).
Source: International Monetary Fund (2006, p. 54).

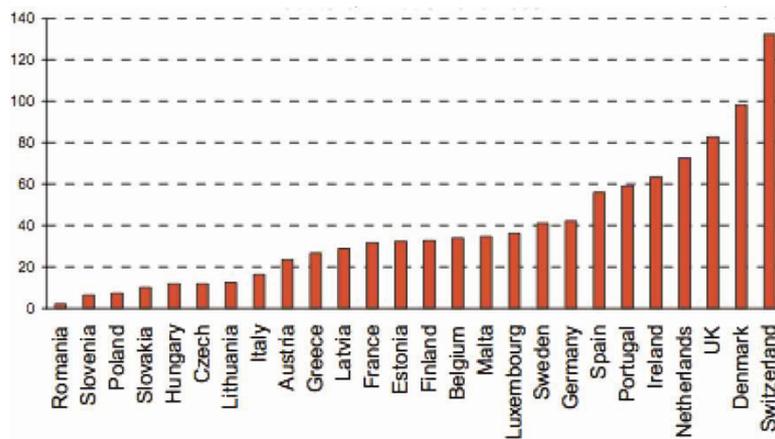


Figure 6. Ratio of outstanding residential mortgage debt to GDP (select countries/end 2006).
Source: Miles & Pillonca (2007).

residential mortgage capital—both high and low-quality mortgages—to GDP tends to be higher among so-called mature market economies, but even here that ratio varies considerably (see Figure 6). The average for the period 2001 to 2006 stood at around a ratio of 20% to GDP for Italy and Austria; closer to 30% for France and Belgium; 40% for Finland, Sweden and Germany; 60% for Spain, Portugal and Ireland; 80% for the UK and the Netherlands and so on (see Figure 6).²⁹

The types of sub-prime mortgages widely sold from 2002 to 2007 could only be systemically mobilized as assets through the delinking between high finance and the specifics of the house, the borrower, the neighborhood. This delinking was constructed through enormously complex instruments, which in turn further raised the level of speculation in the system, rather than

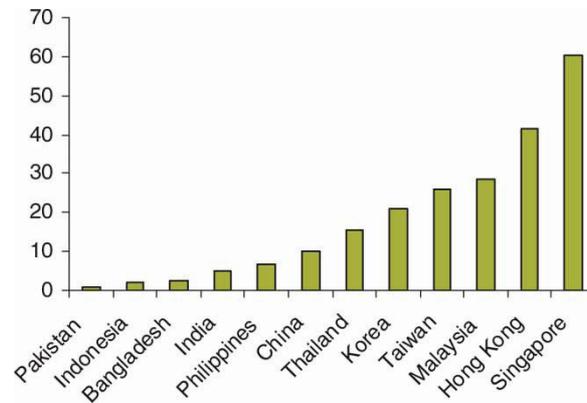


Figure 7. Ratio residential mortgage debt to GDP: emerging Asia (average, 2001–2005).
Source: Warnock & Warnock (2008, p. 26).

taming it with (notional) asset-backed securities. Behind these enormously complex financial instruments created by brilliant financiers and software engineers lies an elementary form of violence and extraction of a specific narrow utility, and a brutal disregard for all else that was involved.

Conclusion: The Expulsion of People and the Incorporation of Terrain

The potential for global replication of the financial innovation that destroyed 15 million plus households in the US, therewith devastating whole neighborhoods is the systemic equivalent, albeit on a much smaller scale, of the global South countries devastated by an imposed debt and debt servicing regime which took priority over all other state expenditures. These are two manifestations of a systemic deepening of advanced capitalism, one marked by its potential to spread globally and the other marked by its full enactment in the global South.

Both cases can be seen as part of a much larger process of financial deepening, one of today's major dynamics characterizing advanced capitalist economies. Financial deepening requires specific mechanisms, which can be extremely complex, as in the case of the type of sub-prime mortgage examined in this article, or they can be quite elementary, as in the debt servicing regime that took off in the 1990s. I examine these two cases through a specific lens: the transformative processes that expand the base of current advanced capitalism. Particular attention went to the assemblages of specific processes, institutions, and logics that get mobilized in this systemic transformation/expansion/consolidation.

One way of thinking of this systemic deepening is as the expansion of the operational space for advanced capitalism—it expels people both in the global South and in the North even as it incorporates spaces. The devastated economies of the global South subjected to a full decade or two of debt servicing, are now being incorporated into the circuits of advanced capitalism through the accelerated acquisition of millions of hectares of land by foreign investors—to grow food and extract water and minerals, all for the capital investing countries. This also holds for such a radically different instance as the sub-prime mortgage crisis, a largely global North dynamic. I see the sub-prime mortgage as extending the domain for high finance but in a way that delinks the financial circuit from the actual material entity that is the house, and hence from the neighborhood, and from the people who got the mortgage. All of these

materialities are excluded from this type of articulation with high-finance—which means that the devastated neighborhoods are expelled from what are, strictly speaking, also traditional circuits of capital. It is akin to wanting only the horns of the rhino, and throwing away the rest of the animal, devaluing it, no matter its multiple utilities. Or using the human body to harvest some organs, and seeing no value in all the other organs, let alone the full human being—it can all be discarded. But unlike the clear realignments we see in vast stretches of the global South, it is not clear how these devastated urban spaces in the global North will be incorporated into the circuits of advanced capitalism.

This systemic shift signals that the sharp increase in displaced peoples, in poverty, in deaths from curable illnesses, are part of this new phase. Key features of primitive accumulation are at work, but to see this it is critical to go beyond logics of extraction and to recognize the fact of systemic transformation, with its system-changing practices and projects—the expulsion of people that transforms space back to territory, with its diverse potentials.

Notes

- 1 This is particularly so if we take a simple and direct definition such as ‘...a primitive accumulation preceding capitalistic accumulation; an accumulation not the result of the capitalistic mode of production, but its starting point’ (Marx, 1992, p. 873).
- 2 ‘The capitalist system pre-supposes the complete separation of the labourers from all property in the means by which they can realize their labour. As soon as capitalist production is once on its own legs, it not only maintains this separation, but reproduces it on a continually extending scale. The process, therefore, that clears the way for the capitalist system, can be none other than the process which takes away from the labourer the possession of his means of production; a process that transforms, on the one hand, the social means of subsistence and of production into capital, on the other, the immediate producers into wage-labourers. The so-called primitive accumulation, therefore, is nothing else than the historical process of divorcing the producer from the means of production. It appears as primitive, because it forms the pre-historic stage of capital and of the mode of production corresponding with it’ (Marx, 1992, pp. 874–875).
- 3 I have long been interested in expanding the analytic terrain within which we understand some classical categories, from citizenship to primitive accumulation, as a way to (a) make these older categories work to elucidate novel conditions, and (b) to identify, potentially, the limits of these older categories to explain current conditions, hence making visible the need for new categories (Sassen, 2008a).
- 4 In my earlier research (e.g. Sassen, 1988, 1991, 2006) I conceptualized these types of operations in the global North—a mix of organizational complexity and destitution/disempowerment—as ‘peripheralization at the core’. In many ways this concept captures the particularity of the short and brutal history of this particular type of sub-prime mortgage.
- 5 For instance, the growing informalization of work in major global cities of the North beginning in the 1980s is often described as a mechanism to lower costs of production. It is that, but it is also a more complex dynamic that contributes to the deepening of advanced capitalism. In my research I find that some (not all) of the components of this informalizing of work are the systemic equivalent of the deregulation of major advanced economic sectors, notably finance and telecommunications. It adds particular forms of ‘flexibility,’ i.e. needed components of production and work for the advanced sectors that could not function/survive formally (Sassen, 2006, ch. 5 and 6).
- 6 Elsewhere (Sassen, 2008b, 2008c) I examine these two cases through a specific lens: the assemblages of specific processes, institutions, and logics that get mobilized in this systemic transformation/expansion/consolidation. Comparing the current assemblage of elements that enables the operations of ‘PA’ as systemic deepening with those of the original in Marx also is a way of establishing the differences—the specific historical and systemic differences. Focusing on assemblages of elements involved in these shifts, rather than positing more deterministic dynamics, also enables factoring in contingency. And here is where a strict application of Marx’s concept of PA cannot work, which can then lead some to object to the use of the category to capture some specific current transformations.
- 7 See Sassen (2008a, ch. 1, 8 and 9) for a development of the theoretical, methodological, and historical aspects.
- 8 This section is based on a larger research project (Sassen, 2008b) that seeks to show how the struggles by individuals, households, entrepreneurs, and even governments are micro-level enactments of larger processes of

- economic restructuring in developing countries launched by the IMF and World Bank Programs, as well as in WTO law implementation during the 1990s and onwards.
- 9 In many of the HIPCs, debt service ratios to gross national product (GNP) have long exceeded sustainable limits; many are far more extreme than what were considered unmanageable levels in the Latin American debt crisis of the 1980s (Oxfam International, 1999). Thirty-three of the 41 HIPC countries paid \$3 in debt service payments to the North for every \$1 in development assistance. The IMF asked HIPCs to pay 20% to 25% of their export earnings toward debt service. In 2005, before the debt cancellations of early 2006, these debt servicing levels remained high as a share of gross domestic product (GDP) for most of these countries; by the end of 2006, debt servicing levels had declined but were still significantly higher than net foreign direct investment.
 - 10 The 26 countries that have passed the completion point are: Benin, Guyana, Niger, Bolivia, Haiti, Rwanda, Burkina Faso, Honduras, São Tomé & Príncipe, Burundi, Madagascar, Senegal, Cameroon, Malawi, Sierra Leone, Central African Republic, Mali, Tanzania, Ethiopia, Mauritania, Uganda, The Gambia, Mozambique, Zambia, Ghana, Nicaragua.
 - 11 MDRI promised cancellation of debts to the World Bank (incurred before 2003), IMF (incurred before 2004), and African Development Fund (incurred before 2004) for the countries that completed the HIPC initiative. It should be noted that many global South countries have not completed the HIPC initiative and have not received MDRI debt relief.
 - 12 Still, debt relief does not always function as intended. For example, recent debt restructuring in Guyana caused the country to be \$5 million worse off. The majority of Guyana's debt is to the Inter-American Development Bank (IADB). In early 2007 a deal was made to cancel Guyana's debts but this only canceled old debts at the expense of aid.
 - 13 It is worth noting that this happens at a time of sharp increases in food prices (*The Economist*, 2009). Beyond price, trade bans and crises pose a risk even to rich countries that rely on food imports. See also note 15.
 - 14 On the other side, the World Food Programme spends \$116 million to provide 230,000 tons of food aid between 2007 and 2011 to the 4.6 million Ethiopians it estimates are threatened by hunger, and malnutrition. This co-existence in a country of profiting from food production for export and hunger, even famines, with the taxpayers of the world providing food aid, is a triangle that has repeated itself over the post-World War II decades.
 - 15 Between the start of 2007 and the middle of 2008, *The Economist* index of food prices rose 78%, including over 130% for soya beans and rice. This price increase is sharply higher than the fall to 11% (from the 10-year average of 15%) in the ratio of stocks to consumption-plus-exports in 2009 for the five largest grain exporters (*The Economist*, 2009).
 - 16 The share of the primary sector (which includes prominently mining and agriculture) in inward FDI stock increased to 41% in 2006, up from 5% in 1996; in contrast, the share of the manufacturing sector almost halved to 27% from 40% over that period (UNCTAD, 2008).
 - 17 For comprehensive data see the United Nations Conference on Trade and Development's *World Investment Directory Volume X Africa* (UNCTAD, 2008).
 - 18 The basic source for remittances comes from the Central Bank of each receiving country. These figures exclude informal transfers. The scholarship on these subjects is vast. As such, it is not possible to reference fully each of the major propositions organizing this discussion.
 - 19 Wall Street firms can also benefit. The Inter-American Development Bank (IADB) produced a series of detailed studies which show that, in 2003, immigrant remittances generated \$2 billion in handling fees for the financial and banking sector on the \$35 billion wired back home by Hispanics in the United States—an elementary transaction for the sector.
 - 20 See, generally, Orozco et al. (2005); for regular updates see the quarterly issues of *Migrant Remittances*.
 - 21 See also details about the money generated through illegal trafficking in US Department of State (2004), Kyle & Koslowski (2001), and Naim (2006).
 - 22 This is part of a larger research project, with details of numbers and sources in Sassen (2008a, ch. 5 and 7, 2008b).
 - 23 Thus firms as diverse as Coca-Cola, IBM and Microsoft were doing fine in terms of capital reserves, profits, market presence, and so on. But highly financialized sectors such as the housing market and commercial property market were not, and went down fast, bringing healthy firms down with them.
 - 24 We saw this also in the 1997 Asian financial crisis which destroyed thousands of healthy manufacturing firms in South Korea. These firms had a global demand for their products, with the workforces and the machines. Yet they had to close because credit dried up, preventing them from paying for all the up-front costs of production, and causing the unemployment of over a million factory workers.
 - 25 The financial deepening of economies has become one of the major dynamics characterizing advanced economies. The ratio of global financial assets to global gross domestic product was nearly 350% in 2006. The number of countries where financial assets exceed the value of their gross national product more than doubled from 33 in 1990 to 72 in 2006 (McKinsey & Company, 2008). Securitizing a broad range of types of debt is a key vehicle

- for this financial deepening. The extension of securitization into consumer debt, including mortgages, took off in the 1980s in the US. The sharp growth of mortgages to enable the massive housing construction boom in developed countries in the decades following World War II produced a vast money pool, which became a prime object for securitization in the 1980s. Deregulation became the critical step to enable securitization: mortgages had to be pulled out of their protective encasements—that is, pulled out of millions of small credit unions and hundreds of highly regulated banks. In *The Global City* (Sassen, 1991, see generally ch. 4) I examined how this generated a series of innovations—new types of mortgage instruments, of which the current generation of so-called structured-investment instruments is but the latest. The overall effect was a vast expansion of credit in the mortgage sector.
- 26 The trends in financial globalization point to geopolitical shifts. The US is still the largest financial power with \$56.1 trillion assets, almost a third of the world's financial assets. Europe's Eurozone financial markets were almost \$40 trillion, and including the UK's \$10 trillion and Eastern Europe's \$1.4 trillion puts Europe close to the US. The Euro is becoming a strong alternative global currency to the dollar, with the value of euro currency in circulation surpassing the latter in mid-2007; it is also the top currency for the issuing of international bonds. Japan, China, India, and several other Asian countries are a fast growing third financial block. The composition of financial assets in these major national and regional financial markets varies sharply. The largest components in the US are equity securities and private debt securities, which together account for 70% of the financial market. In contrast, in China, bank deposits account for 55% of financial assets.
 - 27 The IMF, which reports these measures, bases them on several sources: IMF national accounts data; European Mortgage Federation; Hypostat Statistical Tables; the US Federal Reserve; the OECD Analytical Database; Statistics Canada; and IMF staff calculations (see IMF, 2005, 2006).
 - 28 In China, the total value of mortgage finance is higher than suggested by residential mortgage lending data alone because loans to developers are not well recorded and could be rather large.
 - 29 See IMF (2007, ch. 3). Note that these measures are based on the diverse sources listed above in note 27.

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VIPCAT

Violent Intranational Political Conflict And Terrorism
RESEARCH LABORATORY

Modeling Dynamic Violence: Integrating Events Data Analysis and Computational Modeling

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Project Outline

- Modeling heterogeneous actors in insurgent conflicts
- Combining computational models with statistical models
- Capturing population sentiment (computationally and empirically)
- Combining enhanced event data with sentiment data
- Merging academic and military insights
- Exploring Counter-factual techniques to yield insights into successful & unsuccessful US DIME actions

Parsimonious Approach

A passage from Lewis Carroll's *Sylvie and Bruno Concluded*, 1893, Chapter Eleven - The Man in The Moon

'What a useful thing a pocket-map is!' I remarked.

'That's another thing we've learned from your Nation,' said Mein Herr, 'map-making.

But we've carried it much further than you.
What do you consider the largest map that would be really useful?'

'About six inches to the mile.'

'Only six inches!' exclaimed Mein Herr.
'We very soon got to six yards to the mile.
Then we tried a hundred yards to the mile.
And then came the grandest idea of all!
**We actually made a map of the country,
on the scale of a mile to the mile!**

'Have you used it much?' I enquired.

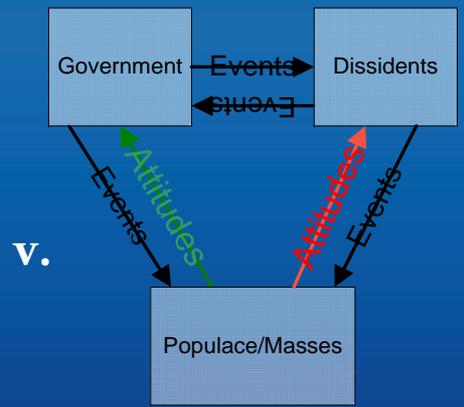
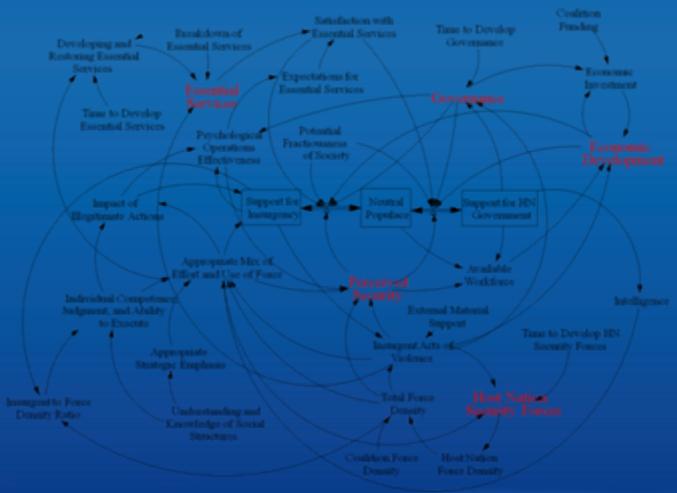
'It has never been spread out, yet.'
said Mein Herr:

**'the farmers objected:
they said it would cover the whole country,
and shut out the sunlight!**

So we now use the country itself, as its own map,
and I assure you it does nearly as well.'

Models

- Highlight Key Causal Mechanisms
- Filter Out Extraneous/Secondary Effects
- **Deliberate** simplification of the world, which allows us to focus on how motivations and actions are interrelated



v.

An enduring problem in counterinsurgency:
which strategy works?

- Struggle for hearts and minds
- War of attrition
- Combination of both

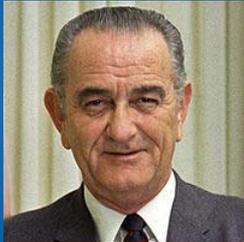
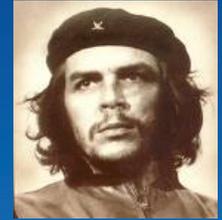
Need better ability to model and experiment using
insights from social scientists and the military

Key Intervening Variable

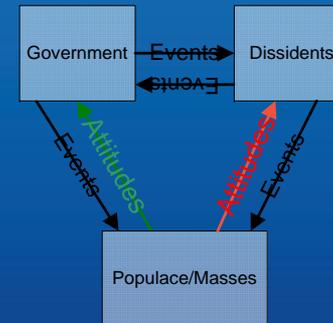


“We must rely on the force of the popular masses, for it is only thus that we can have a guarantee of success. The guerilla must move among the population as a fish swims in the sea” Mao Tse Tung (1966, 57).

Guerrillas must draw their “greatest force from the mass of the people” Che Guevara (1966, 50).



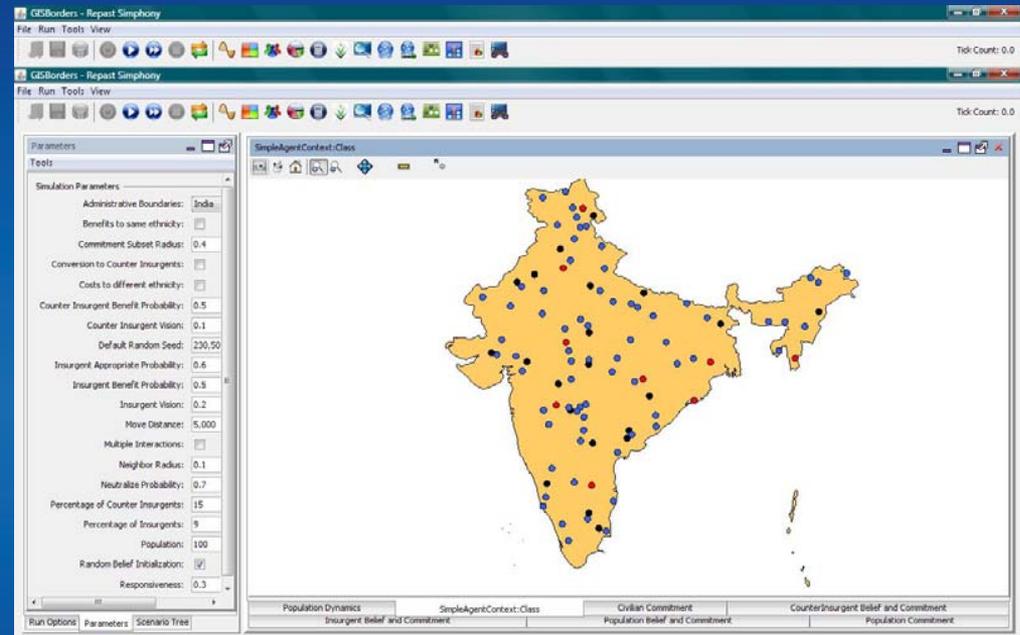
“The ultimate victory will depend upon the hearts and the minds of the people” (LBJ 1965)



Triadic Model of Government-Dissident-Populace Interactions

Model Summary I

- Environment: GIS representation of India
- 3 types of agents
 - Population
 - Insurgents
 - Counterinsurgents
- 3 characteristics
 - Commitment
 - Responsiveness
 - Beliefs



Model Summary II

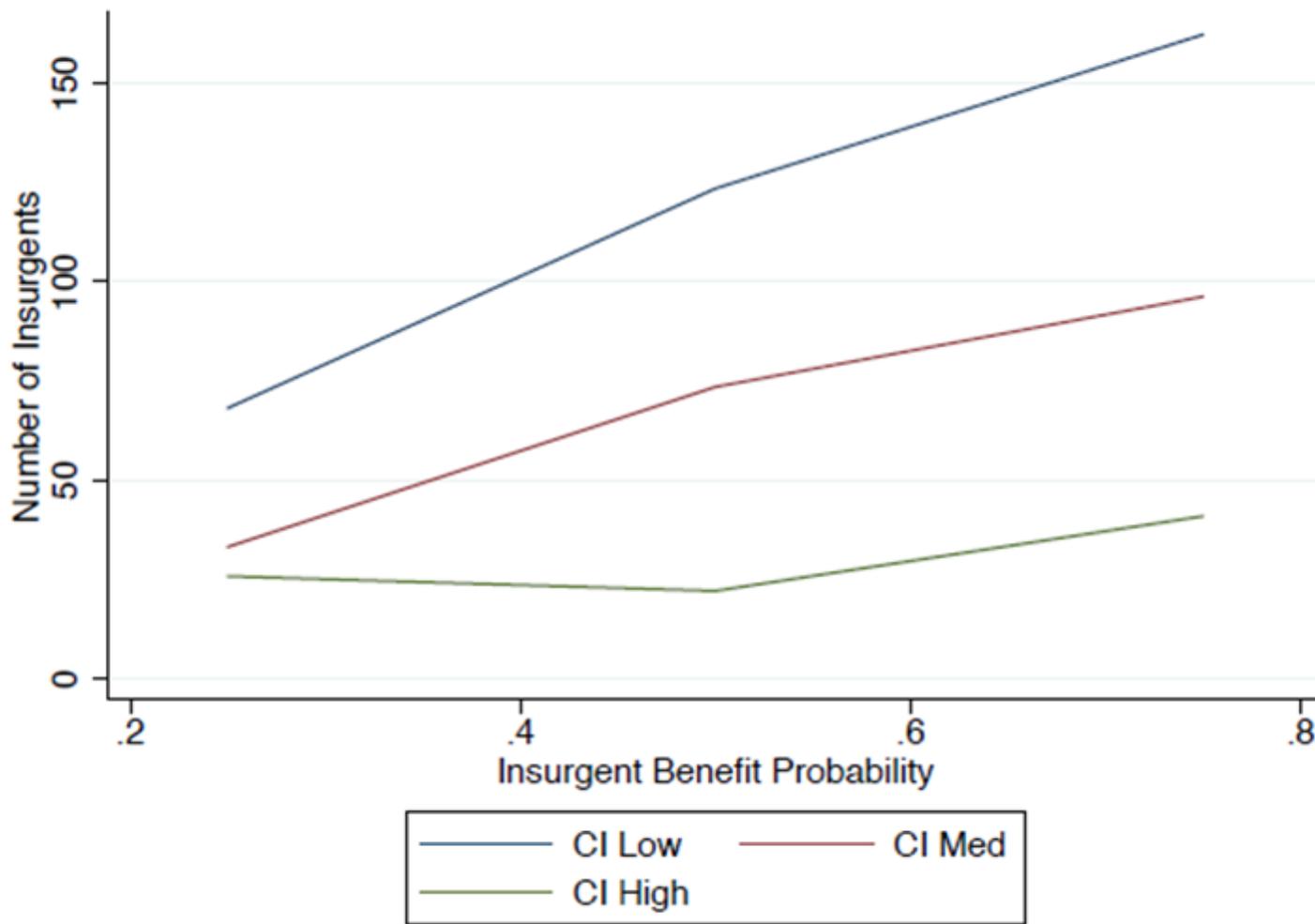
- Movement: random and purposive
- Interaction: costs and benefit provision affect population's commitment
- Updating: move closer or further from CI/I; switch types
- Goal: develop baseline model with intuitive assumptions and plausible results

Effect When Insurgents Play Benefits

Condition	Insurgent Probability	Counterinsurgent Probability	Avg Number of Insurgents	Trend
1	0.25	0.25	68	Insurgency grows stronger.
2	0.5	0.25	124	
3	0.75	0.25	162	
4	0.25	0.5	33	Insurgency grows stronger
5	0.5	0.5	74	
6	0.75	0.5	96	
7	0.25	0.75	26	No discernible effect
8	0.5	0.75	22	
9	0.75	0.75	41	

Table 3: Results of models in which *insurgents increasingly play benefits*; Note: Parameters that do not vary in initial runs: 1000 iterations, agents are allowed to carry out multiple interactions within their local radius, responsiveness higher bound =0.33, the total population is 1000 agents with 5% insurgents and 10% counterinsurgents, vision is set to 1 for counterinsurgents and 2 for insurgents, insurgent appropriate probability is 0.2, neighbor radius is 1, and the neutralize probability is 0.6.

Graphed Effects of Insurgent Benefits

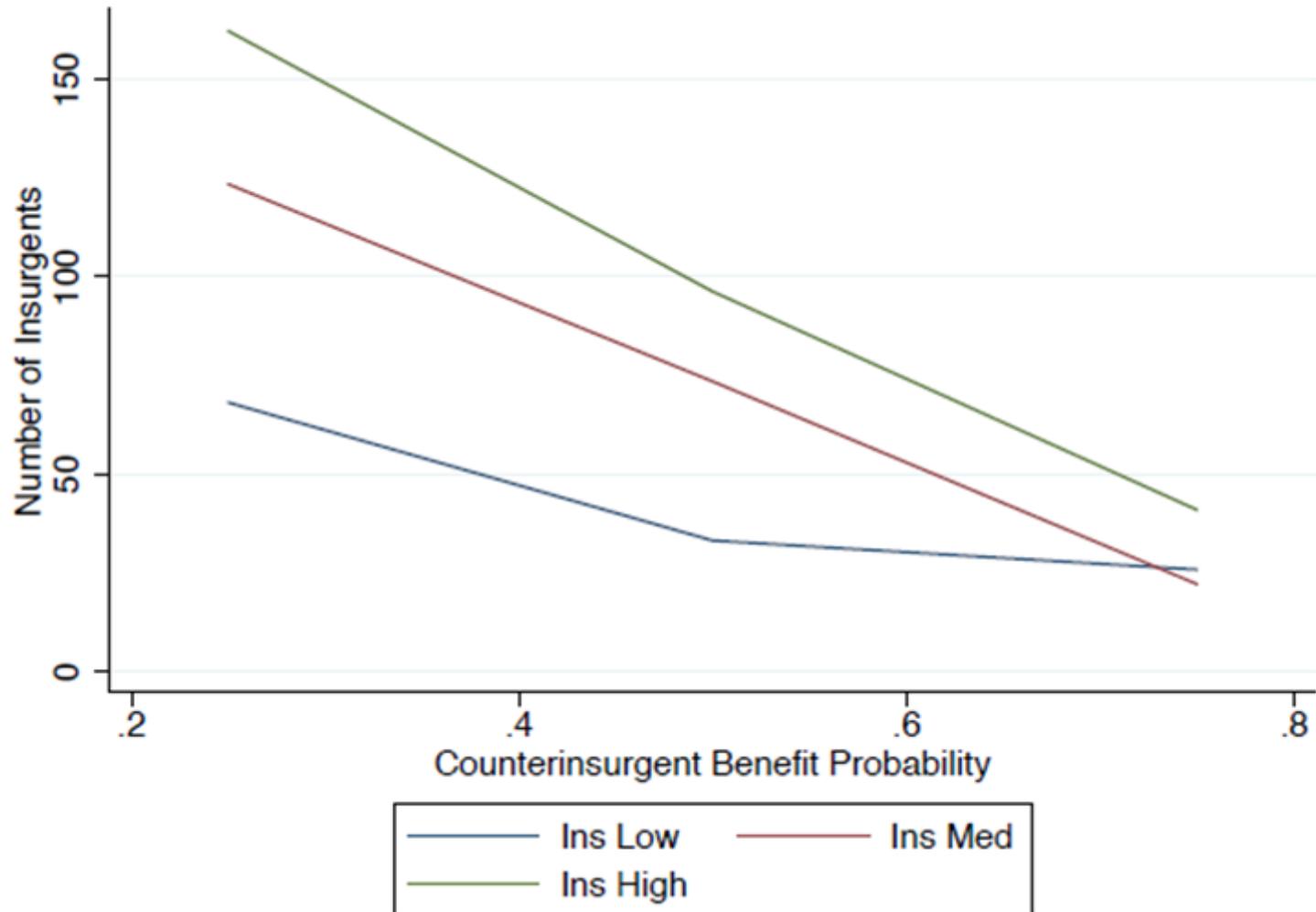


Effect When CIs Play Benefits

Condition	Counterinsurgent Probability	Insurgent Probability	Avg Number of Insurgents	Trend
1	0.25	0.25	68	Insurgency grows weaker
2	0.5	0.25	33	
3	0.75	0.25	26	
4	0.25	0.5	124	Insurgency grows weaker
5	0.5	0.5	74	
6	0.75	0.5	22	
7	0.25	0.75	162	Insurgency grows weaker
8	0.5	0.75	96	
9	0.75	0.75	41	

Table 4: Results of models in which *counterinsurgents increasingly play benefits*; Note: Parameters that do not vary in initial runs: 1000 iterations, agents are allowed to carry out multiple interactions within their local radius, responsiveness higher bound =0.33, the total population is 1000 agents with 5% insurgents and 10% counterinsurgents, vision is set to 1 for counterinsurgents and 2 for insurgents, insurgent appropriate probability is 0.2, neighbor radius is 1, and the neutralize probability is 0.6.

Graphed Effects of CI Benefits



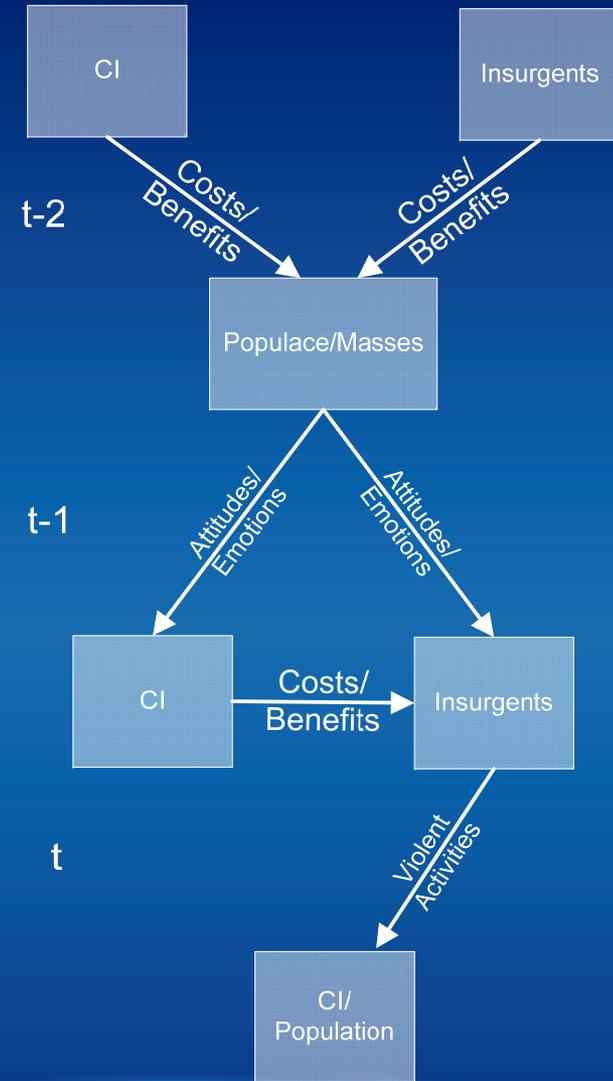
Initial ABM Results

- (Support): When insurgents **increase** benefits to the population, this leads to an **increase** in insurgent strength
- (Hearts and Minds): When counterinsurgents **increase** benefits to the population, this leads to a **decrease** in insurgent strength
- (Attrition): When counterinsurgents **increase** costs imposed on the population, this leads to an **increase** in insurgents strength

Two-Stage Empirical Model

Stage 1: Examine Relationship of CI and Insurgent Costs and Benefits on Population Sentiment

Stage 2: Examine relationship between population sentiment and insurgent strength (i.e. violent activities)



Research Design

Unit of Analysis: Month

Case Study: India (1998-June 2010)

Proxy Variables (Automated in near-real time)

Insurgent Strength = Counts of Violent Insurgent Attacks

Costs = Hostile Acts (curfews, repressive actions, armed clashes, etc.)

Benefits = Cooperative Acts (meetings, agreements, judicial decisions in favor of adversary, etc.)

Sentiment: Positive and negative statements directed towards or about actors of interest (government/CIs & insurgents).

Operationalization

Automated Events Data (E-News Stories/*Xenophon*^{© SAE})

- Total of Scaled (+.01 to +10) hostile acts (curfews, repressive actions, armed clashes, etc.)
- Total of Scaled (+.01 to +10) cooperative acts (meetings, agreements, judicial decisions in favor of adversary, etc.)

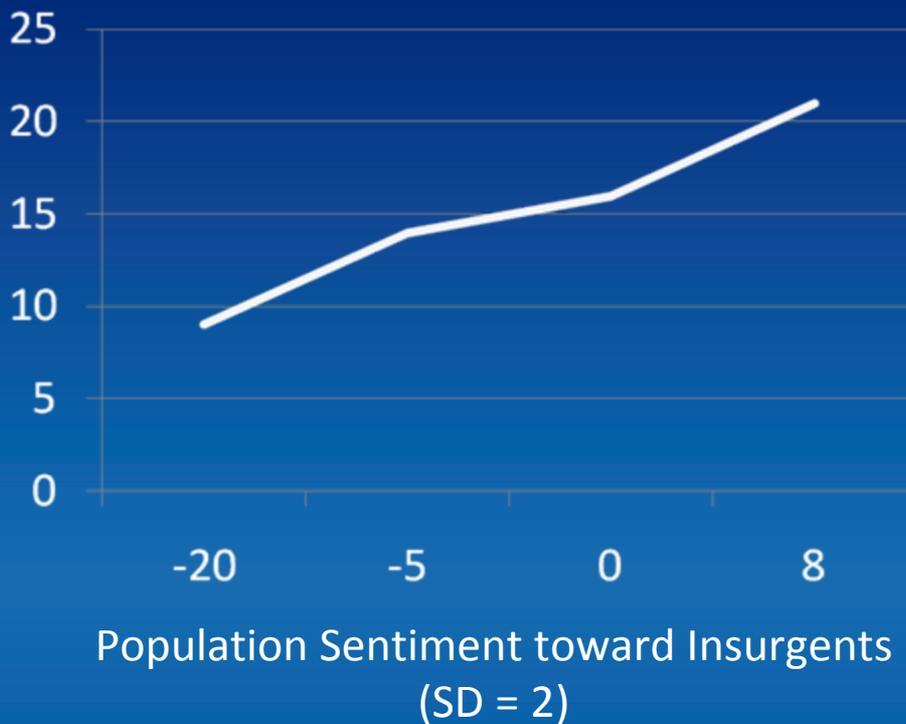
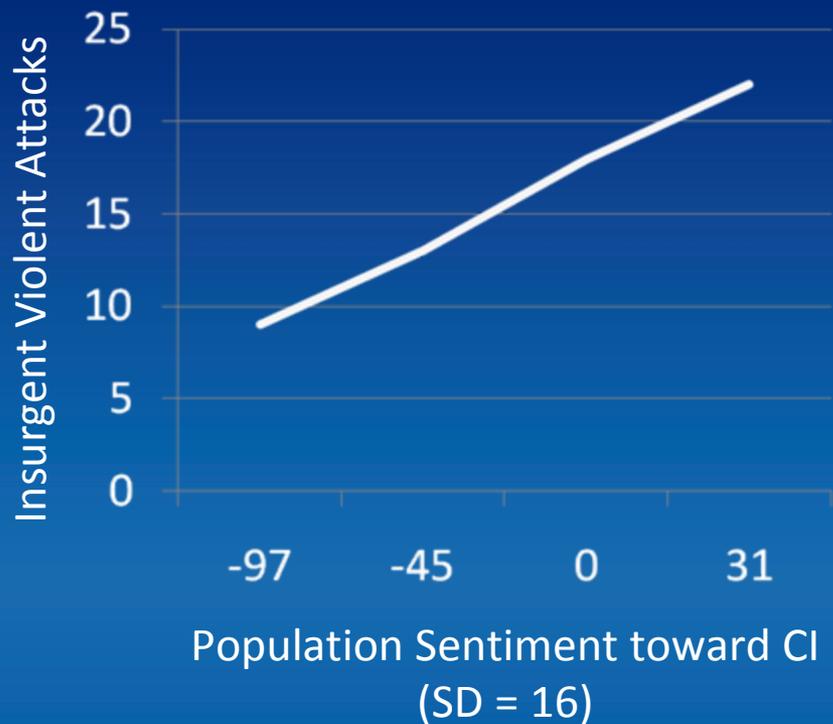
Automated Sentiment Data (E-Blogs/*Pathos*^{©SAE})

- Sentiment: Positive and negative statements directed by social/general population actors and/or bloggers towards or about actors of interest (government & insurgents).

IVs	DV 1: Pop Sentiment to CI_{t-1}		DV 2: Pop Sentiment to $Insurgents_{t-1}$		DV 3: Insurgent Violence _t (Negative Binomial)	
Pop Sentiment to CI_{t-1}					.0064**	.0033
Pop Sentiment to $Insurgents_{t-1}$.0302**	.0145
CI to Insurgents Hostile Totals _{t-1}					.0051***	.0013
CI to Insurgents Hostile Totals ² _{t-1}					$-.6.35 \times 10^{-06}***$	$-.1.73 \times 10^{-06}$
CI to Insurgents Cooperation Totals _{t-1}					.0011	.0011
CI to Insurgents Cooperation Totals _{t-1}					-.0017	.0013
CI to Population Hostile Totals _{t-2}	-.0439*	.0233	.0044**	.0020		
CI to Population Cooperation Totals _{t-2}	.0307*	.0167	-.0020	.0021		
Insurgents Population Hostile Totals _{t-2}	-.0136	.0702	.0053	.0083		
Insurgents Population Cooperation Totals _{t-2}	-.2045	.1917	.0016	.0211		
N		148		148		149

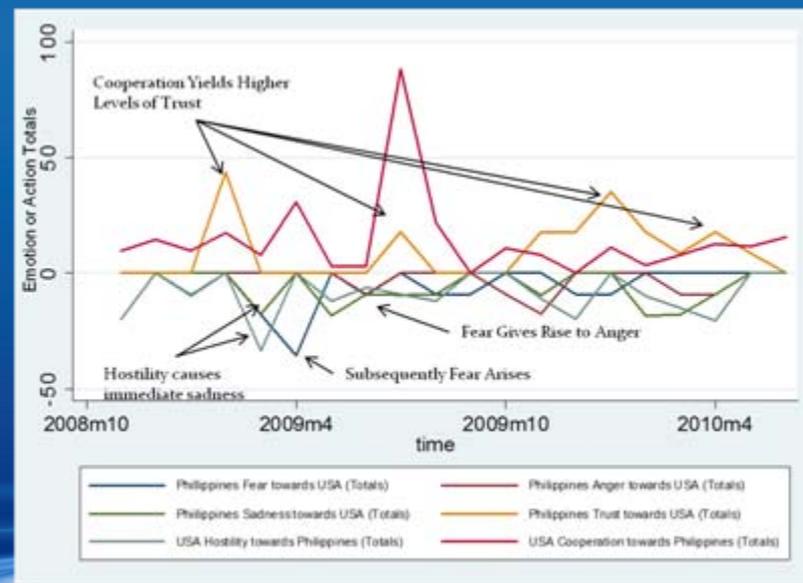
Statistical Significance *** >.01, ** >.05, * >.10 (A constant was estimated for each model but is not displayed in the table for space considerations).

Effect of Pop Sentiment On Insurgent Violence



Discussion

- NSF-Minerva work is midstream: Beta version of model and event-sentiment data
- Model and data need to be refined to the subnational level
- Incorporate other GIS data into ABM; vary full set of parameters
- Analyze reciprocal relationship between theory, data & model.
- Incorporate & analyze impact of emotions on violence.



finding allies for the war of words

mapping the diffusion and influence of counter-radical Muslim discourse

Minerva Research Initiative

Mark Woodward, ASU

in collaboration with partners from:

Northwestern University

CERI-Sciences Po (France)

University of South Florida

THE CENTER
FOR THE
STUDY OF
RELIGION AND
CONFLICT

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finding allies for the war of words

mapping the diffusion and influence of counter-radical Muslim discourse

Our Purpose: Find Counter-Radical Allies

- **Locate** trans-national **Muslim networks** of ideas and actors **opposing** extremist **ideologies**, and;
- **Identify cultural and religious** movements that **limit** the appeal of radical ideologies at the grassroots level;
- By considering political and religious categories **internal** to Muslim discourse in **local languages**, using objective analytical criteria;
- In **regions** where there is the greatest likelihood of impact.

Current Region Opportunities structure



Research Methods

1. *Ethnography & Discourse Analysis*

- Interpretations
- Messages
- Symbols
- Leaders
- Media

2. *Web Mining and Mapping*

- Aggregation
- Interactions
- Phase Shift
- Networks
- Influence

Verification & Validation

- Workshops
- Triangulation
- Field Data

3. *Survey Methods*

- Social and Political Opinions
- Consumer Profiles
- Demographics

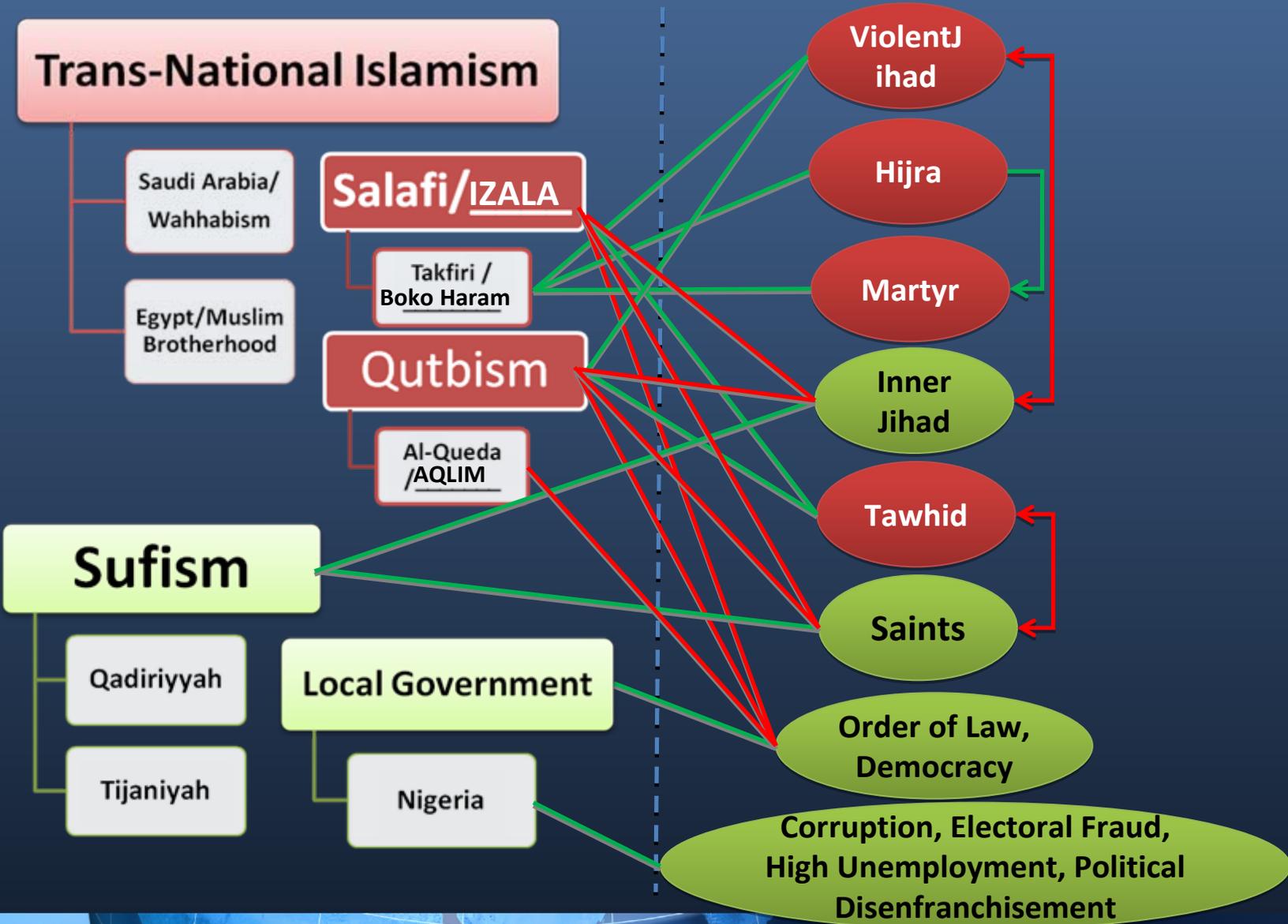
Mapping Trans-National Muslim Networks

1. Mapping **radicalizing, counter-radicalizing** and **moderating** voices, forms and trends:
 - *who is saying/doing what*
 - *to whom/with whom*
 - *how*
 - *with what intent*
2. Identify competing and synergistic strategies
3. Assess the impact, popularity and spread of voices/forms

The Emerging Theoretical Framework

- **Binary** distinctions **don't** illuminate **overlaps**, **movements**, and **trends**.
- **Complex models** capture the **dialog** and **interactivity** of:
 1. **strategies** to attract support;
 2. **reasons** for opposition, and;
 3. the **middle ground**.

NIGERIA: Bi-partite graph of Organizations and Markers

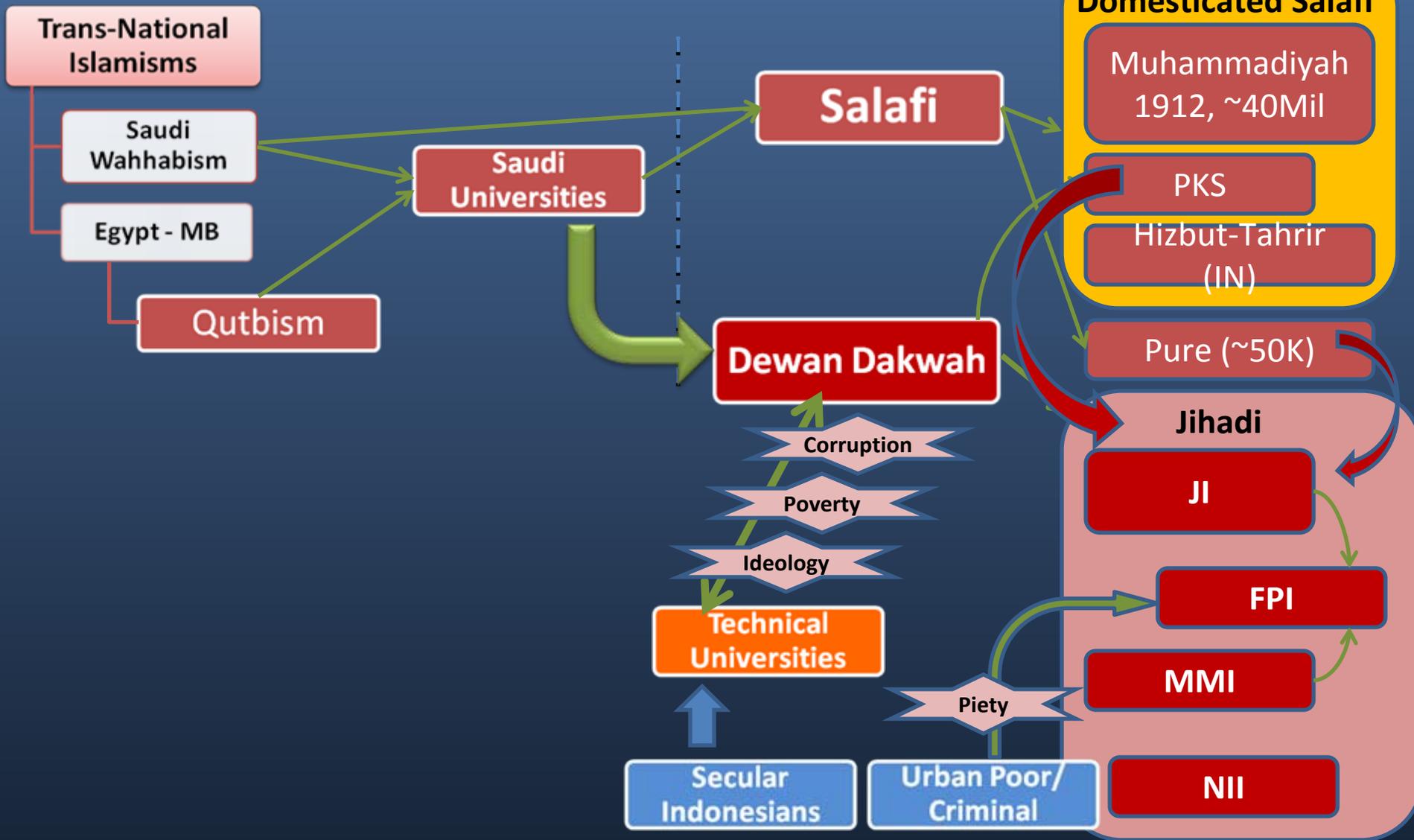


Counter-Radicalism

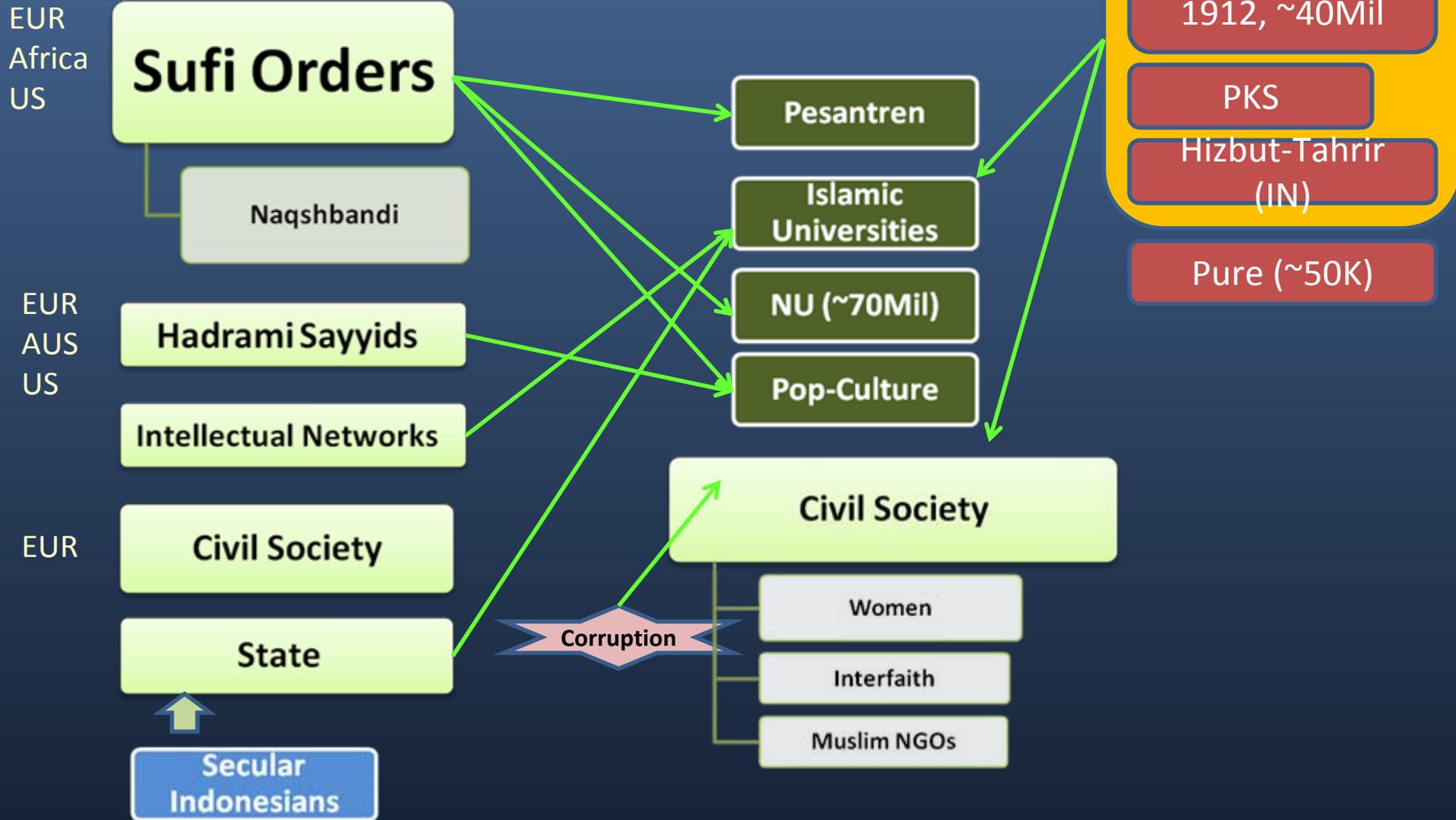
Counter-radicalism can manifest in many forms:

- **Rarely secular**
- Rejects
 - **Violence**
 - **Radical religious practice**
- Supports
 - **Flexible interpretation of Islamic texts**
 - **Popular culture**
 - **Religious tolerance**
 - **Empowerment of women**
 - **Democracy**

INDONESIA RADICALIZATION PATHWAYS



INDONESIA COUNTER-RADICAL PATHWAYS



Characterizing Social Movements

- We hypothesize a model based on **four continuous variables**.
- Both “radical” and “counter radical” movements in Muslim societies exhibit various combinations of these features.

Our best friend is:



Policy Pathways

Radicalization	Counter-Radicalization
Use technical universities	Use Islamic universities
Wahhabi ideology targeting youth from secular families	Sufi ideology targeting youth from religious families
Scholarships to Saudi Universities from technical universities	Scholarships to US Universities from Islamic universities
Arabic language Institutes	English language instruction in Pesantren
Grants for Wahhabi organization	Grants for Muslim civil society organizations
Promote foreign cultural/intellectual traditions	Promote local cultural/intellectual traditions