



The State of the Minerva Research Initiative

**Minerva Meeting and Program Review
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What is the Minerva Research Initiative?



- **Goal:** Improve our understanding of the fundamental social, cultural, and political forces that shape regions of the world of strategic importance to the US.
 - Defense social science basic research uses rigorous methodology to investigate *why* and *how*, versus *who* or *what*, for mission-relevant questions such as the cultural context and motivations for violent extremism and contributors to social stability.
 - Supports basic research, all via grants and entirely unclassified.
- **Initiated in 2008 by then-Secretary Robert Gates**
 - Aim 1: Revitalize DoD's connections w/ humanities & soft sciences with the academic social science community.
 - Aim 2: Build cultural and foreign area knowledge and insights to inform more effective strategic and operational policy decisions by war planners and warfighters.



Why DoD Invests in Basic Research



“Basic vs. Applied” science:

Scientific knowledge being used vs scientific knowledge that will be used when conditions change

- Basic research probes the limits of today’s understanding and technologies and discovers new phenomena and know-how that **ultimately lead to future capabilities.**
- Basic research funding **attracts some of the most creative minds to fields of critical DoD interest.**
- Basic research provides a broad perspective to prevent capability surprise by **fostering a community of U.S. experts** who are accessible to DoD, and who follow global progress in **both relevant areas, as well as those that may not seem relevant — until they are.**

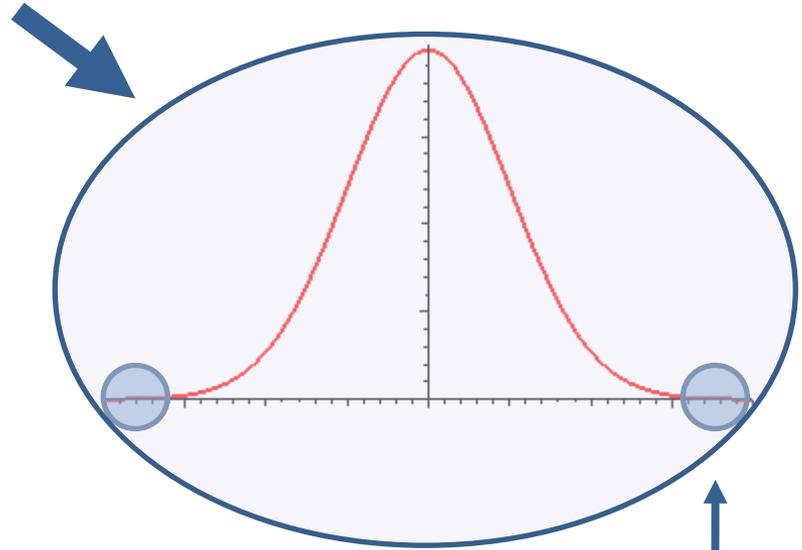


Why DoD Invests in **Basic Research** for Social Science



Social Science : Intel/Policy :: Medical Science : Clinicians

Social Science



IC / Policy



Thrust 1: University-Led Minerva Research



- **Funded research** (read your summary book! 😊)
- **12 MURI-like consortia** (five ending in the next year)
 - 20 single investigator/ small team projects (five ending in the next year)
- **32 ongoing university research efforts**
- **Annual solicitation cycles**
 - **FY13:** 280 white papers, 53 proposals submitted, 14 funded (eight small projects and six large consortia)
 - Submissions reviewed by panels of
 - Defense/USG S&T program managers
 - Defense/USG policy experts
 - DoD-external academics
 - New solicitation out now; white papers due in **November**



Program Management Departures



- **Dr. Joseph Lyons**, Air Force Office of Scientific Research
- **Dr. Elisa Bienenstock**, Army Research Office
- **National Science Foundation Program Officers:**
 - Amber Story
 - Jacqueline Meszaros
 - Mary Rigdon
 - Frederick Kronz
 - Brian Humes



New Minerva Program Managers



- **Dr. Ivy Estabrooke**, Office of Naval Research
- **Dr. Benjamin Knott**, Air Force Office of Scientific Research
- **Dr. John Lavery**, Army Research Office
- **Dr. Frederick Gregory**, Army Research Office
- **New Army Research Office PM: TBA**

Continuing:

- **Harold Hawkins**, Office of Naval Research



FY09-11 Small Team Efforts

(bold: no-cost extensions of performance period)



Mapping genealogies of militant groups (<i>Stanford U</i>)	Cyber deterrence: Strategy and the network society (<i>King's College London</i>)
Strategies of violence, tools of peace, and changes in war termination (<i>Columbia University</i>)	Fighting and bargaining over political power in weak states (<i>UC-Berkeley</i>)
Predicting the nature of conflict: An evolutionary analysis of tactical choice (<i>Virginia Commonwealth University and Virginia Military Institute</i>)	Status, manipulating group threats, and conflict within and between groups (<i>University of Guelph and Indiana U</i>)
Alternative models of conflict bargaining (<i>UVA, U Mississippi and SUNY – Binghamton</i>)	Modeling dynamic violence: Integrating events, data analysis, and computational modeling (<i>College of William and Mary, UNC-Charlotte, U of Georgia, Southern Illinois U-Carbondale, and BYU</i>)
Behavioral insights into national security issues (<i>UT-Dallas and UVA</i>)	
The strategic limits and potential of public diplomacy in U.S. national security policy (<i>USC</i>)	How politics inside dictatorships affects regime stability and international conflict (<i>UCLA and Penn State</i>)
Avoiding water wars: Environmental security through river treaty institutionalization (<i>U Georgia</i>)	Deciphering civil conflict in the Middle East (<i>Ohio State University</i>)
Modeling discourse and social dynamics in authoritarian regimes (<i>Cornell, U Memphis, and UT-Austin</i>)	People, power, and conflict in the Eurasian migration system (<i>Social Science Research Council, U Arizona, Kennan Institute, U Maryland, Moscow State University</i>)



Thrust #2: Minerva Faculty Chairs at PME



Minerva-supported rotating research faculty positions for DoD-external academic scholars at defense academic institutions

Goal:

- **Build in-house expertise in the social sciences** at the strategic level across the Services and within the Department
 - **Enhance connectivity** between civilian university-based social science research community and Defense educational institutions.
- Bringing together social science expertise and the institutions' deep understanding of military history and warfighter needs while training current and future officers.
- This year: 12 scholars in Minerva research areas at 8 Service and Joint War Colleges and Academies



Minerva Faculty Chairs at PME



School	Topic	Minerva Chair Holder
Army War College	Conventional Arms Control in Europe for Tactical Nuclear Weapons	COL Jeffery McCausland (ret)
	Dark Globalization and New Insurgency Forms	Robert Bunker, Claremont Graduate University
Air University	<i>Asian-Pacific Security: Past, Present, and Future</i>	TBD
Marine Corps U	<i>Al Qa'ida; Saddam's Nuclear Pursuit</i>	Norman Cigar
Naval War College	Cultural Knowledge and National Security	Montgomery McFate
	<i>Wars of the Middle East in the 20th century</i>	Wick Murray
	<i>Military Adaptation to the Civilian Protection Norm</i>	Sarah Sewall, HKS & Fmr DASD for Peacekeeping and Humanitarian Assistance
NDU/NWC	Corruption and Underground Economies	Susan Aaronson, GWU
NDU/INSS	Federalism in Iraq/ Iraq's Energy Pursuits	Denise Natali



Minerva Faculty Chairs at Academies



School	Theme	Topic	Minerva Chair Holder
USAFA	<i>US-China Strategy</i>	<i>China Goes to Africa: A Strategic Move of the Grand Rise?</i>	<i>Phil Wang Georgia Tech</i>
	US-China Strategy	The Chinese Communist Party's transition from planned to market economy via organizational reform	Charlotte Lee
USMA	Social Structures in the Muslim World	Dynamic network models of salafist-motivated terrorism	Luke Gerdes
	<i>Cultural Topologies of African Villages</i>	<i>Ethnocultural and Political Interactive Research in Tanzania</i>	<i>Makame Muhajir</i>
USNA	<i>The Influence of Culture on War</i>	<i>History of Culture and Warfare</i>	<i>John Nagl</i>
	The Influence of Culture on War	History of Culture and Warfare	Meredith Lair



FY14 Priority Research Areas



FY 14 Topics

Belief Formation and Movements for Change

Models of Stability and Change

Power and Escalation

Emerging Topics

- Belief formation and influence
- Group identities and cultural norms
- Movements for change
- Collaboration and competition between violent groups

- Economic and governance factors
- Energy, environment, and resources
- Demographics and other factors

- The changing role of the state in a globalizing world
- Beyond conventional deterrence

- Quantification and Metrics
- Additional Topics

Example Applications

Terrorism, Revolutions

Stability Ops, Arab Spring 2.0

China, Cyber, Emerging powers



Global Coverage

88 countries in
FY14





Minerva Efforts:

MEASURING SUCCESS



Measuring success: (1) Knowledge Generation



Leaders and operators applying Minerva outcomes

- **Why we care:**
 - Demonstrates **value** of Minerva research.
- **Notable examples of success:**
 - Minerva researchers were asked in 2010 to validate new COMISAF policy of "courageous restraint" (e.g. exercise patience before dropping bombs on Afghan compounds) as a course of action. Seeing results, then-CJCS ADM Michael Mullen asked, "How do I get more academics like you to serve?"
 - AFRICOM J2 utilizes a suite of data and tools generated by a Minerva effort on environmental security in Africa. In 2013 the team's mapping tool was recognized by top geospatial tool firm ESRI for "bringing together data from many organizations, previously housed in disparate locations, to provide the most complete picture yet of climate security and development in Africa."
(One of 150 awards of more than 100,000 submissions)



Measuring success:

(1) Knowledge Generation



Peer-Reviewed Publications

- **Why we care:**
 - Demonstrates validation from the academic community of the **quality** of the work, its **novelty**, and the perceived **impact** of research insights
- **Notable examples of success:**
 - “Poverty and Support for Militant Politics: Evidence from Pakistan.” *American Journal of Political Science*, 57(1): 30-48. 2013.
(from project “Terrorism, Governance, and Development” project)
 - “Climate Change and Insecurity: Mapping Vulnerability in Africa,” *International Security* 37(4). 2013. (from project “Climate Change and African Political Stability”)
 - “Do Working Men Rebel? Unemployment and Insurgency in Afghanistan, Iraq, and the Philippines.” *Journal of Conflict Resolution* 55(4): 496-528. 2011.
(from project “Terrorism, Governance, and Development”)
 - “Language style matching predicts relationship initiation and stability”. *Psychological Science* 22(1):39-44. 2011.
(from project “Modeling discourse and social dynamics in authoritarian regimes ”)



Measuring success:

(1) Knowledge Generation



Policy Publications, Books, and Op/Eds

- **Why we care:**

- Articles in top publications like *Foreign Policy* and the *Wall Street Journal* **translate** research insights from the academic to the policy world, and selection for publication demonstrates the **value** for the policy community.
- Op/eds **translate** research-generated knowledge to a public audience

- **Notable examples of success:**

- Following April 2013 Boston Marathon bombings, Minerva researchers were featured in *Foreign Policy*, *Bloomberg News*, *Fox News*, and elsewhere.
- Nazli Choucri published her Minerva research-based book *Cyberpolitics in International Relations* through the MIT Press in Nov 2012.
- Ed Steinfeld contributed the March 2013 *Wall Street Journal* op/ed "Made in America, and Everywhere Else: Obama's plans to revive U.S. manufacturing run counter to the reality of global supply chains."
- John Nagl was interviewed on the NPR *Talk of the Nation* segment "The Impact of War: What's Changed In The Military, And What's Next" in June 2013.



Measuring success:

(1) Knowledge Generation



Briefings and consultation to senior civilian & military leadership

- **Why we care:**
 - Demonstrates **relevance** of the work and **interest** level from defense leadership
 - **Translates** research insights from the academic to the defense strategic and operational worlds
- **Notable examples of success:**
 - December 2011 to **COM-PACOM ADM Robert Willard**: Researchers identified innovation drivers and key trends in the Chinese defense economy based on open source Chinese documents and interviews, helping to better understand the reform and the pace of modernization in China's defense industry
 - December 2012 to **UN Under Secretary General** and Exec Dir of UN Women Michelle Bachelet: Researchers from Arizona State shared work on counter-radicalization related to women and Muslim fundamentalism.
 - February 2013: **J5 Pakistan Afghanistan Coordination Cell** asked Minerva researchers to brief on the economics of insurgencies and "constructive COIN"



Measuring success:

(2) Building communities



New DoD research contributors

- **Why we care:**
 - Complex problems are best solved reaching out to a **diversity** of expertise and perspectives. DoD must better leverage the strengths of the Nation's academic research institutions **across the social sciences**.
 - We aim to fund the world's top social scientists to help DoD tackle some of the Nation's most critical challenges. If the set of contributors is static then **new and more innovative perspectives may be missed**.
- **Notable example of success:**
 - In FY13, over one half of the invited full proposals and six of the fourteen awards made were led by principal investigators who had never before received DoD funding.



Measuring success:

(2) Building communities



Students graduated

- **Why we care:**
 - Students and postdocs contributing to Minerva-funded defense social science efforts join the academic community with **deepened understanding of defense-relevant social science** and are more likely to make **future contributions** to the mission-critical social, cultural, and behavioral knowledge base.
- **Notable examples of success:**
 - Minerva-funded student and postdoc Aila M. Matanock joined the faculty at the University of California, Berkeley in 2013 as an assistant professor of political science. Her research on terrorism and civil war examines the strategies that militant groups, governments, and nonstate actors employ to fight these conflicts, end them, and build a lasting peace in their aftermath.
 - Postdoc Nicholai Lidow went on to start the company FieldPulse Research, applying cutting-edge methods developed in his academic research to provide customers from government, NGOs, and industry with rapid surveys and statistical and geospatial analysis in Africa, Latin America, Asia, and the Middle East.



Measuring success:

(2) Building communities



Workshops and training seminars held

- **Why we care:**
 - Joint academic-government workshops and researcher-organized tutorials for government representatives demonstrate **engagement** between the academic community and the defense community and help to **directly translate** social and cultural insights to the decision makers who might apply them.
- **Notable examples of success:**
 - Annual UCSD-organized summer workshop on the “Relationship Between National Security and Technology in China” (2010-): Gov/industry/academic participants examine how China is mobilizing and applying its economic, political, strategic, corporate, financial, intellectual, and scientific capabilities.
 - Joint workshop with SOCOM Joint Interagency Task Force: Univ of South Florida researchers developed a metric empirically characterizing tribal cohesiveness, which appears to be a predictor of the susceptibility of those tribes to Al Qaida influence in Africa. This metric and related work motivated a joint SOCOM-USF workshop, attended by DoD, USG, academia, and key partner nations. **Workshop resulted in operational recommendations.**



Measuring success:

(2) Building communities



Researchers **entering** government

- **Notable examples of success:**
 - Ashton Carter, Explorations in Cyber International Relations
→ Now Deputy Secretary of Defense
 - Eric Rosenberg, Explorations in Cyber International Relations
→ Now DASD Cyber
 - Jeremy Weinstein, co-PI Terrorism, Governance, and Development
→ fmr National Security Staff
→ now Chief of Staff to U.S. Ambassador to the United Nations
 - Sarah Sewall, Minerva Research Professor, Naval War College
→ Nominee, Under Secretary of State for Civilian Security, Democracy, and Human Rights



Coordinating across DoD and USG



- **Coordination between S&T programs**
 - Military Services – **Service research organizations** execute Minerva university research, **PME** institutions host Minerva Chairs
 - Minerva coordinates with research program correlates at **NSF** and the **UK Research Councils** (e.g. held joint futures workshop in February 2013)
 - Other sociocultural S&T coordination takes place with **DHS, iARPA, FBI, USAID**
- **Connecting Minerva and DoD Policy & Op Communities**
 - Minerva participates in the Defense Intelligence Social and Cultural Coordinating Committee (DISCCC), led by OUSD(Intelligence)
 - **OSD Policy** (e.g. Strategy, SO/LIC, Cyber Policy, Middle East, African Affairs) Staff serve as advisors, reviewers, and potential customers for Minerva university and Minerva Chair research
 - **COCOMs**: Joint workshops planned by Minerva researchers and AFRICOM, SOCOM, PACOM
 - Minerva researchers serving as subject matter experts for **SMA** studies supporting JS and COCOM needs
 - Briefings requested throughout DoD, IC, State, USAID



2013 Minerva Meeting and Program Review

THE DAYS AHEAD



Minerva Meeting Agenda – Day 1



- **Keynote by Chris Kojm, Chairman of the National Intelligence Council (NIC)**
- **2013 Minerva Awardee Blitz**
- **Panel discussions:**
 - Track A: Belief Formation and Movements for Change
 - Track B: Models of Societal Resilience and Stability
 - Track C: Power and Escalation
- **Poster Session and Networking**
 - Explorations in Cyber International Relations
 - Finding Allies for the War of Words: Mapping the Diffusion and Influence of Counter-Radical Muslim Discourse
 - Homeownership & Societal Stability: Causal Effects in Central Eurasia
 - A Global Value Chain Analysis of Food Security and Food Staples for Major Energy-Exporting Nations in the Middle East and North Africa
 - Emotions and Intergroup Relations
- **Networking Reception at the Beacon Hotel Sky Bar**



Minerva Meeting Agenda – Day 2



- **Panel discussions:**
 - Track A: Belief Formation and Movements for Change
 - Track B: Models of Societal Resilience and Stability
 - Track C: Power and Escalation
- **Lunch and panel discussion:**
“The conflict in Syria: Insights from Minerva”
- **2013 Minerva Awardee Blitz, Part II**
- **Wrap-Up**
- **Bonus sessions for researchers:**
Data accessibility, BAA, and more



<http://minerva.dtic.mil>

http://minerva.dtic.mil/doc/2013_MinervaResearchSummaries_0905.pdf

QUESTIONS?