Social Sciences in the Army: Long Live Minerva

Elisa Jayne Bienenstock, ARO, Army Minerva Manager

Chris Arney, USMA, Network Mathematician
• Cheung; UC-San Diego; The Evolving Relationship Between Technology and National Security in China: Innovation, Defense Transformation, and China's Place in the Global Technology Order; 60 Months; FY09-FY14; Minerva Research Initiative (MRI); $9,699K

• The US Military and others have underestimated China’s ability to modernize their military capabilities
• This Minerva project has advanced our understanding of what and how China is pursuing and weaponizing new technology by:
  • Providing a theoretical framework
  • Monitoring economic, scientific and military activities
  • Utilizing Chinese language, in addition to English language. sources
  • Building bridges to China and Chinese scholars of related topics
  • Conducting interviews of engineers, scientists and others critical to Chinese efforts to modernize
  • Building a database of actors and industries of interest to allow quantitative analysis
• Gavin; Univ TX-Austin; Climate Change, State Stability, and Political Risk in Africa; 60 Months; FY09-FY14; Minerva Research Initiative (MRI); $7,623K
  • Climate Change and African Political Stability (CCAPS) is focused on understanding how climate change impacts economic and political stability in Africa
  • Provides data models, based on statistical analysis of relationship between climate conditions and outcomes
  • Produces detailed yet intuitive maps of findings and predictions
Lewis; Monterey Institute of Intl. Studies; Iraqis Wars with the US from the Iraqi Perspective: State Security, WMD, Civil-Military Relations, Ethnic Conflict and Political Communication in Baathist Iraq; 60 Months; FY09-FY14; Minerva Research Initiative (MRI); $1,794K

- The objective of this project is to utilize original archives, located at the Conflict Resolution Records Center (CRRC) at the National Defense University, of Iraqi documents detailing the discussions and activities of the members of the Saddam Hussain regime pertaining to the acquisition and use of chemical, biological, radioactive or nuclear weapons (CBRN).
- Documents provide retrospective view on the objective situations to be compared with the US perceptions at the time.
- Content analysis, performed by an interdisciplinary team benefits from fluency in contemporary Iraqi, experience in CBRN production and detection, and expertise in Iraqi culture, history and politics allow nuanced analysis of these detailed records.
Army Research Institute: Cultural Understanding (Jessica Gallus & Jennifer Klafehn)

- Cross-Cultural Assessment;
- Development Following Negative Cross-Cultural Experiences;
- Multicultural Perspective Taking;
- Identifying Dynamic Environments for Cultural Competencies;
- Socio-cultural Aspects of Mission Performance;
- Team, Leader and Organizational Predictors of Cross-cultural Competence;
- Modeling Intercultural Collaboration and Negotiation; (began in FY08 as collaboration between the ARO, ARL – HRED, and ARI.)
- Schema for cultural understanding;
- Cross-Cultural Competence in ROTC Cadets;
- Cross-cultural competence toolkit;
- Advisor skills for Military Transition Teams;
- Technology tools for cultural training.
Army Research Office: Social Science (Jeff Johnson)

- VISION: seek to understand human behavior through mathematical, computational, statistical, simulation models that provide fundamental insights into human socio-cultural dynamics.
- Projects:
  - Statistical Inference for Cultural Consensus Theory;
  - High Risk Rapid Ethnographic Assessment Tool (HRREAT);
  - Dynamic models of the effect of culture on collaboration and negotiation;
  - Rapid Ethnographic Assessment and Data management Integration Toolkit (READ-IT);
  - Games Theory, Culture and Institutional Path Dependence;
  - An Examination of the Relationship between International Telecommunication and State Sponsorship of Terrorism;
Army Research Laboratory --- HRED

• Research in the human and socio-cultural dimensions;

• Optimizing soldier performance and soldier-machine interactions;

• Human factors to ensure that soldier performance requirements are considered in technology development and system design;
Minerva at West Point
(It’s the questions that drive us)

- Make the military smarter (Asia and Africa – community and culture)
- Interdisciplinary thinking for future leaders (cadet benefit)
- Change the educational/intellectual culture (new liberal arts college model)
- Broaden disciplines, build multi-disciplinary teams, forge the new world of modern knowledge and education
- Merge information science and social science and build an engaged community
- Embrace the complexity of real issues (qualitative and quantitative modeling). The world is not linear, not reductionist, not banana, nor binary
Embrace the Complexity