



BROAD AGENCY ANNOUNCEMENT (BAA)

INTRODUCTION:

This publication constitutes a Broad Agency Announcement (BAA) as contemplated in the Department of Defense Grants and Agreements regulations (DoDGARS) 22.315(a). A formal Request for Proposals (RFP), solicitation, and/or additional information regarding this announcement will not be issued.

The Office of Naval Research (ONR) will not issue paper copies of this announcement. The ONR reserves the right to select for award all, some or none of the proposals in response to this announcement. The ONR reserves the right to fund all, some or none of the proposals received under this BAA. ONR provides no funding for direct reimbursement of proposal development costs. Technical and cost proposals (or any other material) submitted in response to this BAA will not be returned. It is the policy of ONR to treat all proposals as sensitive competitive information and to disclose their contents only for the purposes of evaluation.

I. GENERAL INFORMATION

1. Agency Name -

Office of Naval Research,
One Liberty Center
875 N. Randolph Street
Arlington, VA 22203-1995

2. Research Opportunity Title -

Minerva Research Initiative

3. Program Name -

Department of Defense Minerva Research Initiative

4. Research Opportunity Number -

13-024

5. Response Date -

White Papers: Monday, November 18, 2013 3:00 PM EST

Full Proposals: Friday, February 14, 2014 3:00 PM EST

6. Research Opportunity Description -

The Office of Naval Research (ONR) is interested in receiving proposals for the Minerva Research Initiative (<http://minerva.dtic.mil>), a DoD-sponsored, university-based social science research program initiated by the Secretary of Defense. This program is a multi-service effort. Ultimately, however, funding decisions will be made by OSD personnel, with technical inputs from the Services. The program focuses on areas of strategic importance to U.S. national security policy. It seeks to increase the Department's intellectual capital in the social sciences and improve its ability to address future challenges and build bridges between the Department and the social science community. Minerva brings together universities, research institutions, and individual scholars and supports multidisciplinary and cross-institutional projects addressing specific topic areas determined by the Department of Defense. The Minerva Research Initiative aims to promote research in specific areas of social science and to promote a candid and constructive relationship between DoD and the social science academic community.

The Minerva Research Initiative competition is for research related to the four (4) topics and twelve (12) subtopics listed below. Detailed descriptions of the topics can be found in Section VIII, "Specific Minerva Research Initiative Topics." The detailed descriptions are intended to provide the proposer a frame of reference and are not meant to be restrictive. Innovative proposals related to these research topics are highly encouraged. White papers and full proposals are solicited which address the following topics (described in Section VIII of this solicitation):

- (1) **Belief Formation and Movements for Change**
 - (1-A) Belief formation and influence
 - (1-B) Group identity, cultural norms, and security
 - (1-C) Movements for change
 - (1-D) Organizational dynamics in movements
- (2) **Models of Societal Resilience and Change**
 - (2-A) Economic factors
 - (2-B) Governance factors
 - (2-C) Energy, environment, and resource factors
 - (2-D) Additional factors impacting societal resilience and change
- (3) **Theories of Power and Escalation**

- (3-A) The changing role of the state in a globalized world
- (3-B) Beyond conventional deterrence
- (4) Emerging Topics in Conflict and Security**
 - (4-A) Quantification and metrics
 - (4-B) Additional topics

Proposals will be considered both for single-investigator awards as well as larger teams. A team of university investigators may be warranted because the necessary expertise in addressing the multiple facets of the topics may reside in different universities, or in different departments of the same university. The research questions addressed should extend across a fairly broad range of linked issues where there is clear potential synergy among the contributions of the distinct disciplines represented on the team. Team proposals must name one Principal Investigator as the responsible technical point of contact. Similarly, one institution will be the primary recipient for the purpose of award execution. The relationship among participating institutions and their respective roles, as well as the apportionment of funds including sub-awards, if any, must be described in both the proposal text and the budget.

7. Point(s) of Contact -

Questions of a technical nature shall be directed to the cognizant Technical Points of Contact:

Science and Technology Co-Point of Contact:

Dr. Harold Hawkins
Office of Naval Research
Email Address: Harold.Hawkins@navy.mil

Science and Technology Co-Point of Contact:

Dr. Erin Fitzgerald
Basic Research Office, ASD (Research & Engineering)
Email Address: erin.fitzgerald1.civ@mail.mil

Questions of a business nature shall be directed to the cognizant Contract Specialist:

Business Point of Contact:

Mr. Patrick Sisk
Contract Specialist
Contracts and Grants Division
ONR Code: 254
875 North Randolph Street, Arlington, VA 22203
Email Address: patrick.sisk@navy.mil
Telephone: 703-696-6804

Note that many questions may be included in the Frequently Asked Questions section of <http://minerva.dtic.mil>. **Questions submitted within 2 weeks prior to a deadline may not be answered, and the due date for submission of the white paper and/or full proposal will not be extended.**

Amendments will be posted to one or more of the following web pages:

- Grants.gov Webpage – <http://www.grants.gov/>
- ONR Broad Agency Announcement (BAA) Webpage – <http://www.onr.navy.mil/en/Contracts-Grants/Funding-Opportunities/Broad-Agency-Announcements.aspx>

8. Instrument Type(s) -

Awards will take the form of grants only.

9. Catalog of Federal Domestic Assistance (CFDA) Numbers

12.300

10. Catalog of Federal Domestic Assistance (CFDA) Titles -

DOD Basic and Applied Scientific Research

11. Other Information

All Research and Development efforts to be funded under this BAA will consist of basic research and the funds available to support awards are Budget Activity 1. Accordingly, as stated in the section below, the DoD will place no other restrictions on the conduct or reporting of unclassified fundamental research, except as otherwise required by applicable federal statutes, regulations, or executive orders.

Work funded under a BAA may include basic research, applied research and some advanced research. With regard to any restrictions on the conduct or outcome of work funded under this BAA, ONR will follow the guidance on and definition of “contracted fundamental research” as provided in the Under Secretary of Defense (Acquisition, Technology and Logistics) Memorandum of 24 May 2010.

As defined therein the definition of “contracted fundamental research,” in a DoD contractual context, includes research performed under grants and contracts that are (a) funded by Research, Development, Test and Evaluation Budget Activity 1 (Basic Research), whether performed by universities or industry or (b) funded by Budget Activity 2 (Applied Research) and performed on campus at a university. The research shall not be considered fundamental in those rare and exceptional circumstances where the applied research effort presents a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are

unique and critical to defense, and where agreement on restrictions have been recorded in the contract or grant.

Pursuant to DoD policy, research performed under grants and contracts that are a) funded by Budget Activity 6.2 (Applied Research) and NOT performed on-campus at a university or b) funded by Budget Activity 6.3 (Advanced Research) does not meet the definition of “contracted fundamental research.” In conformance with the USD(AT&L) guidance and National Security Decision Direction 189, ONR will place no restriction on the conduct or reporting of unclassified “contracted fundamental research,” except as otherwise required by statute, regulation or Executive Order. For certain research projects, it may be possible that although the research being performed by the prime contractor is restricted research, a subcontractor may be conducting “contracted fundamental research.” In those cases, it is the *prime contractor’s responsibility* in the proposal to identify and describe the subcontracted unclassified research and include a statement confirming that the work has been scoped, negotiated, and determined to be fundamental research according to the prime contractor and research performer.

Normally, fundamental research is awarded under grants with universities and under contracts with industry. Non-fundamental research is normally awarded under contracts and may require restrictions during the conduct of the research and DoD pre-publication review of such research results due to subject matter sensitivity. As regards to the present BAA, the Research and Development efforts to be funded will consist of basic research. The funds available to support awards are Budget Activity 1.

THIS ANNOUNCEMENT IS NOT FOR THE ACQUISITION OF TECHNICAL, ENGINEERING AND OTHER TYPES OF SUPPORT SERVICES.

II. AWARD INFORMATION

1. Amount and Period of Performance-

- Total Amount of Funding Available: \$15.0M over 3 years. Future funding for an additional two years of effort may become available
- Anticipated Number of Awards: 12
- Anticipated Range of Individual Award Amounts: \$0.20M/year to \$1.50M/year
- Previous Years’ Average Individual Award Amounts: \$0.60M/year
- Anticipated Period of Performance: 3-5 years

III. ELIGIBILITY INFORMATION

All responsible sources from academia, including DoD institutions of higher education and foreign universities, may submit proposals under this BAA. Non-profit institutions and commercial entities may also be included on a university-led team, performing research as subawardees and receiving funding for their efforts. Historically Black Colleges and Universities (HBCUs) and Minority Institutions (MIs) are encouraged to submit proposals and join others in submitting proposals. However, no portion of this BAA will be set aside for HBCU and MI participation.

Federally Funded Research & Development Centers (FFRDCs), including Department of Energy National Laboratories, are not eligible to receive awards under this BAA. However, teaming arrangements between FFRDCs and eligible principal bidders are allowed so long as they are permitted under the sponsoring agreement between the Government and the specific FFRDC.

Navy laboratories and warfare centers as well as other Department of Defense and civilian agency laboratories are also not eligible to receive awards under this BAA and should not directly submit either white papers or full proposals in response to this BAA. If any such organization is interested in one or more of the programs described herein, the organization should contact an appropriate ONR POC to discuss its area of interest. The various scientific divisions of ONR are identified at <http://www.onr.navy.mil/>. As with FFRDCs, these types of federal organizations may team with other responsible sources from academia and industry that are submitting proposals under this BAA.

University Affiliated Research Centers (UARC) are eligible to submit proposals under this BAA unless precluded from doing so by their Department of Defense UARC contracts.

Teams are encouraged and may submit proposals in any and all areas. However, Offerors must be willing to cooperate and exchange software, data and other information in an integrated program with other contractors, as well as with system integrators, selected by ONR.

Some topics may cover export controlled technologies. Research in these areas is limited to "U.S. persons" as defined in the International Traffic in Arms Regulations (ITAR) -22 CFR § 120.1 et seq.

For Grant applications:

The Federal Funding Accountability and Transparency Act of 2006 (Public Law 109-282), as amended by Section 6202 of Public Law 110-252, requires that all agencies establish requirements for recipients reporting information on subawards and executive total compensation as codified in 2 CFR 33.110. Any company, non-profit agency or university that applies for financial assistance (either grants, cooperative agreements or other transaction agreements) as either a prime or sub-recipient under this BAA must provide information in its proposal that describes the necessary processes and systems in place to comply with the reporting requirements identified in 2 CFR 33.220. An entity is **exempt** from this requirement **UNLESS** in the preceding fiscal year it received: a) 80 percent or more of its annual gross revenue in Federal contracts (and subcontracts), loans, grants (and subgrants), and cooperative agreements; b) \$25

million or more in annual gross revenue from Federal contracts (and subcontracts), loans, grants (and subgrants), and cooperative agreements; and c) the public does not have access to information about the compensation of the senior executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 or section 6104 of the Internal Revenue Code of 1986.

IV. APPLICATION AND SUBMISSION INFORMATION

1. Application and Submission Process -

General Information:

The white papers and full proposals submitted under this BAA must address unclassified basic research. White papers and full proposal submissions will be protected from unauthorized disclosure in accordance with applicable laws and DoD regulations. Proposers are expected to appropriately mark each page of their submission that contains proprietary information. Grants awarded under this announcement shall be unclassified.

Important Note: Titles given to the White Papers/Full Proposals should be descriptive of the work they cover and not be merely a copy of the title of this solicitation.

The proposal submission process has two stages.

Stage 1 - Prospective offerors are strongly encouraged to submit white papers to minimize the labor and cost associated with the production of detailed proposals that have little chance of being selected for funding. Further, offerors are strongly encouraged to contact the appropriate Research Topic Chief (see Section VIII of this BAA) for discussion of their ideas to enhance the chances that white papers will receive positive feedback. Based on an assessment of the white papers, the responsible Research Topic Chiefs will provide email feedback to the prospective recipients to encourage or discourage submission of full proposals. The reviewers will advise the recipients whether their white papers outlined proposals that appear to be of particular value to the Department of Defense and the Minerva Research Initiative. A party is allowed to submit a full proposal even if its white paper was not evaluated as being of particular value to the DoD, but the white paper feedback is likely to be a good indicator of how a full proposal based upon the white paper will be evaluated. White papers arriving after the deadline may not receive feedback. Therefore, it is strongly encouraged that all white papers are submitted by the deadline to ensure feedback from the appropriate Research Topic Chiefs.

Stage 2 – Subsequent to white paper feedback, interested offerors are required to submit full proposals. All proposals submitted under the terms and conditions cited in this BAA will be evaluated in accordance with the evaluation criteria stated herein. Offerors can submit a proposal without submitting a white paper. However, interested parties are strongly encouraged to submit white papers within the deadline provided in this BAA so feedback can be obtained.

Submission dates and times may be found in paragraph 3 of this section.

2. Content and Format of White Papers/Full Proposals -

The Proposals submitted under this BAA must be unclassified.

a. WHITE PAPERS

White papers shall be submitted electronically to minerva@osd.mil. The email subject line should contain the following: FY14 Minerva Topic [topic number] white paper

Due Date: The due date for receipt of white papers is no later than November 18, 2013, 3:00 PM Eastern Time. White papers received after the deadline may not be reviewed.

White papers shall comply with the following format.

- Paper size when printed - 8.5 x 11 inch paper
- Margins - 1 inch
- Spacing - single
- Font – No smaller than Times New Roman, 10 point
- Number of pages - no more than four (4) single-sided pages (excluding cover letter, cover, and curriculum vitae).

White papers not complying with formatting instructions will not be evaluated.

White paper content should be as follows:

- A one page cover letter (optional)
- A cover page, labeled “PROPOSAL WHITE PAPER,” that includes the BAA number, proposed title, and offeror's technical point of contact, with telephone number, facsimile number, e-mail address, topic number, and topic title.
- Identification of the research and issues
- Proposed methods
- Potential implications for national defense
- Potential team and management plan
- Summary of estimated costs
- Curriculum vitae of key investigators (not included in page count)

The white paper should provide sufficient information on the research being proposed (e.g., hypothesis, theories, concepts, methods, approaches, data collection, measurement and analyses) to allow for an assessment by a subject matter expert. It is not necessary for white papers to carry official institutional signatures.

Acknowledgement of receipt of a white paper under this BAA will be sent via email to the addressee approximately one week after receipt.

b. FULL PROPOSALS

Full proposals shall be submitted electronically through www.grants.gov. Full proposals sent by fax or email will not be considered.

Registration Requirements for Grants.gov: Proposals must be submitted electronically through Grants.gov. There are several one-time actions your institution must complete in order to submit applications through Grants.gov (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number; register with the System for Award Management (SAM); register with the credential provider; register with Grants.gov; and obtain approval for an Authorized Organization Representative (AOR) to submit applications on behalf of the organization). Go to <http://www.grants.gov/web/grants/applicants/organization-registration.html> for further information.

Applicants who are not registered with SAM and Grants.gov, should allow at least 21 days to complete these requirements. It is suggested that the process be started as soon as possible.

Questions: Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov.

VERY IMPORTANT – Download PureEdge Viewer: In order to view, complete, and submit an application package, you will need to download the appropriate software packages. Go to http://www.grants.gov/applicants/apply_for_grants.jsp for further information.

Submitting the Application

Application forms and instructions are available at Grants.gov. To access these materials, go to <http://www.grants.gov>, select “Apply for Grants,” and then select “Download Application Package.” Enter the CFDA number, 12.300, DOD Basic and Applied Scientific Research.

Application Forms – The forms are contained in the Application Package available through the Grants.gov application process. Offerors must complete the mandatory forms and any optional forms that are applicable (e.g., SF-LLL Disclosure of Lobbying Activities) in accordance with the instructions on the forms and the additional instructions below. The required fields should be completed in accordance with the “pop-up” instructions on the forms. To activate the instructions, turn on the “Help Mode” (icon with the pointer and question mark at the top of the form). Files that are attached to the forms must be in Adobe Portable Document Form (PDF) unless otherwise specified in this announcement.

Form: SF 424 (R&R) (Mandatory)

Complete this form first to populate data in other forms.

Authorized Organization Representative (AOR) usernames and passwords serve as “electronic signatures” when your organization submits applications through Grants.gov. By using the SF 424 (R&R), proposers are providing the certification required by 32 CFR Part 28 regarding lobbying.

Form: Research & Related Other Project Information

Complete questions 1 through 5 and attach files. The files must comply with the following instructions:

Project Summary/Abstract (Field 7 on the form)

The project summary should be a single page that identifies the research problem, proposed methods, anticipated outcome of the research, if successful, and impact on DoD capabilities or broader implications for national defense. It should identify the Principal Investigator, the university/research institution (and other universities involved in the Minerva team, if applicable), the proposal title, the Minerva topic number, and the total funds requested from DoD for the 3-year base period (and, in the case of 5-year proposals, the additional 2-year option period and the potential 5-year total period). The project summary must not exceed 1 page when printed using standard 8.5" by 11" paper with 1" margins (top, bottom, left and right) with font no smaller than Times New Roman, 10 point. To attach a Project Summary/Abstract, click "Add Attachment."

Project Narrative (Field 8 on the form)

The following formatting rules apply for Field 8

- Paper size when printed - 8.5 x 11 inch paper
- Margins - 1 inch
- Spacing - single
- Font – No smaller than Times New Roman, 10 point
- Number of pages - no more than twenty-five (25) single-sided pages.
The cover, table of contents, list of references, letters of support, and curriculum vitae are excluded from the page limitations. Full proposals exceeding the page limit may not be evaluated.

Include the following in Field 8

The narrative's first page **must** include the following information:

- Principal Investigator name
- Phone number, fax number, and e-mail address
- Institution, Department, Division
- Institution address
- Other institutions involved in the Minerva team, if applicable
- Past or current DoD Contractor or Grantee? If yes, provide Agency, point of contact; number
- Proposal title
- Institution proposal number
- Topic number and topic title

- Table of Contents: List project narrative sections and corresponding page numbers.
- Technical Approach: Describe in detail the basic science research to be undertaken. State the objective and approach, including how data will be analyzed and interpreted. Discuss the relationship of the proposed research to the state-of-the-art knowledge in the field and to related efforts in programs elsewhere, and discuss potential scientific breakthroughs. Include appropriate literature citations/references. Discuss the nature of expected results. Discuss potential applications to defense missions and requirements. Describe plans for the research training of students. Include the number of full time equivalent graduate students and undergraduates, if any, to be supported each year. Discuss the involvement of other students, if any.
- Project Schedule, Milestones, and Deliverables: A summary of the schedule of events, milestones, and a detailed description of the results and products to be delivered.
- Management Approach: A discussion of the overall approach to the management of this effort, including brief discussions of: required facilities; relationships with any subawardees and with other organizations; availability of personnel; and planning, scheduling, and control procedures.
 - (a) Describe the facilities available for the accomplishment of the proposed research and related education objectives. Describe any capital equipment planned for acquisition under this program and its application to the proposed research. If possible, budget for capital equipment should be allocated to the first budget period of the grant. Include a description of any government furnished equipment/hardware/software/information, by version and/or configuration that are required for the proposed effort.
 - (b) Describe in detail proposed subawards to other eligible universities or relevant collaborations (planned or in place) with government organizations, industry, or other appropriate institutions. Particularly describe how collaborations are expected to facilitate the transition of research results to applications. If subawards to other universities/institutions are proposed, make clear the division of research activities, to be supported by detailed budgets for the proposed subawards.
 - (c) Designate one Principal Investigator for the award to serve as the primary point-of-contact. Briefly summarize the qualifications of the Principal Investigators and other key investigators to conduct the proposed research.
 - (d) Describe plans to manage the interactions among members of the proposed research team, if applicable.
 - (e) Identify other parties to whom the proposal has been, or will be sent, including agency contact information.
- Curriculum Vitae: Include curriculum vitae of the Principal Investigator and key co-investigators.

All applications should be in a single PDF file. To attach a Project Narrative in Field 8, click “Add Attachment.”

Bibliography and References Cited (Field 9 on the form)

Attach a listing of applicable publications cited in above sections.

Facilities and Other Resources (Field 10 on the form)

This field not required.

Equipment (Field 11 on the form)

This field not required.

Other Attachments (Field 12 on the form)

Attach budget proposal at Field 12. You must provide a detailed cost breakdown of all costs, by cost category, by the funding periods described below, corresponding to the proposed Technical Approach which was provided in Field 8 of the Research and Related Other Project Information Form. Any options must be separately priced. The Research and Related Budget form is not required.

The budgets should adhere to the following guidelines:

Detailed breakdown of all costs, by cost category, by the calendar periods stated below. For budget purposes, use an award start date of 01 September 2014.

For up to a three-year base grant, the cost should be broken down to reflect funding increment periods of:

- 1) Twelve months (01 Sep 2014 to 31 Aug 2015),
- 2) Twelve months (01 Sep 2015 to 31 Aug 2016),
- 3) Twelve months (01 Sep 2016 to 31 Aug 2017)

For a potential two year extension option (large team awards only), the additional cost should be broken down to reflect funding increment periods of:

- 6) Twelve months (01 Sep 2017 to 31 Aug 2018), and
- 7) Twelve months (01 Sep 2018 to 31 Aug 2019).

Note that the budget for each of the calendar periods (e.g., 01 Sep 2014 to 31 Aug 2015) should include only those costs to be expended during that calendar period.

Annual budgets should be driven by program requirements. Elements of the budget should include:

- Direct Labor – Individual labor category or person, with associated labor hours and unburdened direct labor rates. Provide escalation rates for out years. Provide the basis for the salary proposed.
- Administrative and clerical labor – Salaries of administrative and clerical staff are normally indirect costs (and included in an indirect cost rate). Direct charging of these costs may be appropriate when a major project requires an extensive amount of administrative or clerical support significantly greater than normal and routine levels of support. Budgets proposing direct charging of administrative or clerical salaries must be supported with a budget justification which adequately describes the major project and the administrative and/or clerical work to be performed.
- Indirect Costs – Fringe benefits, overhead, G&A, etc. (must show base amount and rate). Provide the most recent rates, dates of negotiations, the period to which the rates apply, and a statement identifying whether the proposed rates are provisional or fixed. If the rates have been negotiated by a Government agency, state when and by which agency. Include a copy of the current indirect rate agreement.
- Travel – Identify any travel requirements associated with the proposed research and define its relationship to the project. List proposed destinations, cost estimate, and basis of cost estimate.
- Subawards – Provide a description of the work to be performed by the subrecipients. For each subaward, a detailed cost proposal is required to be included in the principal investigator’s cost proposal. Fee/profit is unallowable.
- Consultant – Provide consultant agreement or other document that verifies the proposed loaded daily/hourly rate. Include a description of the nature of and the need for any consultant's participation. Strong justification must be provided, and consultants are to be used only under exceptional circumstances where no equivalent expertise can be found at a participating university. Provide budget justification.
- Materials – Specifically itemized with costs or estimated costs. An explanation of any estimating factors, including their derivation and application, shall be provided. Include a brief description of the offeror's procurement method to be used (competition, engineering estimate, market survey, etc.). Justify.
- Other Directs Costs – Provide an itemized list of all other proposed other direct costs such as Graduate Assistant tuition, laboratory fees, report and publication costs and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists). NOTE: If the grant proposal is for a conference, workshop, or symposium, the proposal should include the following statement: “The funds provided by ONR will not be used for food or beverages.”
- Fee/Profit – Fee/profit is unallowable.

Funding breakdown corresponding to the proposed Technical Approach which was provided in Field 8 of the Research and Related Other Project Information Form must also be attached.

Research and Related – Senior/Key Person Profile Form

Attach statements of current and pending support for the Principal Investigators and co-investigators listed in the proposal, as applicable. These statements require that each investigator specify all grants and contracts through which he or she is currently receiving or may potentially receive financial support. Describe the research activities and amount of funding. Biographical sketches are required for the Principal Investigator and for other key personnel. Please be sure to include education and years.

Full Proposal Receipt Notices

After a full proposal is submitted through Grants.gov, the Authorized Organization Representative (AOR) will receive a series of three e-mails. It is extremely important that the AOR watch for and save each of the e-mails. Offerors will know that the proposal has been properly received when the AOR receives e-mail Number 3. Retain the Submission Receipt Number (e-mail Number 1) to track a submission. The three e-mails are:

Number 1 – The applicant will receive a confirmation page upon completing the submission to Grants.gov. This confirmation page is a record of the time and date stamp for the submission.

Number 2 – The applicant will receive an e-mail indicating that the proposal has been validated by Grants.gov within a few hours of submission. (This means that all of the required fields have been completed.) This initial email will also include a grants.gov tracking number.

Number 3 – The third notice is an acknowledgment of receipt in e-mail form from grants.gov. The e-mail is sent to the authorized representative for the institution. The e-mail for proposals notes that the proposal has been received and provides the assigned tracking number. The document, Tracking Your Application Package, located at <http://www.grants.gov/assets/TrackingYourApplicationPackage.pdf> explains this process.

The proposal is not considered properly received until the AOR receives email #3.

Late Submission of Full Proposals

Any full proposal submitted through Grants.gov where the time and date for submission (e-mail Number #1) is after the deadline for proposal submission in Section IV, paragraph 4 below will be late and **will not be evaluated** unless the Grants.gov website was not operational on the due date and was unable to receive the proposal submission. If this occurs, the time specified for the receipt of proposals through Grants.gov will be extended to the same time of the day specified in this BAA on the first workday on which the Grants.gov website is operational.

Be advised that Grants.gov applicants have been experiencing system slowness and validation issues which may impact the time required to submit proposals. After proposals are uploaded to grants.gov, the submitter receives an email indicating the proposal has been submitted and that grants.gov will take up to two days to validate the proposal. As it is possible for grants.gov to reject the proposal during this process, it is **STRONGLY** recommended that proposals be uploaded at least two days before the deadline established in the BAA so that it will not be received late and be ineligible for award consideration. It is also recommended to start uploading proposals at least two days before the deadline to plan ahead for any potential technical and/or input problems involving the proposer's own equipment.

3. Significant Dates and Times

Anticipated Schedule of Events		
Event	Date (MM/DD/YEAR)	Time (Local Eastern Time)
Pre-Proposal Conference/Industry Day	N/A	
White Papers Due Date	11/18/2013	3:00 PM
Notification of Initial Evaluations of White Papers*	12/20/2013	
Oral Presentation of White Papers*	N/A	
Notification of Evaluations of Oral Presentations*	N/A	
Full Proposals Due Date	02/14/2014	3:00 PM
Notification of Selection for Award *	04/15/2014	
Contract Awards*	09/01/2014	
Kickoff Meeting*	12/01/2014	

*** These dates are estimates as of the date of this announcement.**

V. EVALUATION INFORMATION

1. Evaluation Criteria

White papers will be evaluated by the responsible Research Topic Chief to assess whether the proposed research is likely to meet the objectives of the specific topic and thus whether to encourage the submission of a full proposal. The assessment of the white papers will consider the same criteria as the evaluation of full proposals.

Full proposals responding to this BAA in each topic area will be evaluated using the following criteria. The first two evaluation factors are of equal importance:

- (1) Scientific merit, soundness, and programmatic strategy of the proposed basic social science research; and
- (2) Relevance and potential contributions of the proposed research to research

areas of DoD interest as described in Section VIII.

The following three evaluation criteria are each of lesser importance than any of the above two, but are equal to each other:

- (3) Potential impact on the offeror's ability, through the proposed research, to perform and train students in defense-relevant social sciences;
- (4) The qualifications and availability of the Principal Investigators and key co-investigators (if applicable); and
- (5) The realism and reasonableness of cost.

Cost sharing is not a factor in the evaluation. However, if an offeror would like, it can propose cost sharing. Cost sharing may support items such as salaries, indirect costs, operating expenses, or new equipment. In each category, show the amount and nature of the planned expenditure share (e.g., equipment, faculty release time for research). A signed statement of commitment regarding the cost sharing or matching funds described above must be obtained from the appropriate institutional and/or private sector officials, and included at time of submission. **The cost sharing or matching plan should be included in the budget justification.**

Decisions for exercising options, should funding be available, will be based on accomplishments during the base years and potential research advances during the option years that can impact DoD research priorities and capabilities. Potential options only applies to large team awards.

2. Evaluation Panel

White papers will be reviewed either solely by the responsible Research Topic Chief for the specific topic or by an evaluation panel chaired by the responsible Research Topic Chief. An evaluation panel may consist of subject matter experts who are Government employees. Systems Engineering and Technical Assistance (SETA) contractor employees may provide technical and administrative assistance to the evaluation panel. These individuals will sign a conflict of interest statement prior to receiving proposal information.

Full proposals will undergo a multi-stage evaluation procedure. The respective evaluation panels will review proposals first. Cost proposals will be evaluated by Government business professionals and support contractors. Findings of the various topic evaluation panels will be forwarded to senior DoD officials who will make funding recommendations to the awarding officials. Restrictive notices notwithstanding, one or more support contractors or peers from the university community will be utilized as subject-matter-expert technical consultants. However, proposal selection and award decisions are solely the responsibility of Government personnel. Each support contractor's employee and peer from the university community having access to technical and cost proposals submitted in response to this BAA will be required to sign a non-disclosure statement prior to receipt of any proposal submission.

Due to the nature of the Minerva program, the evaluation panels and reviewing officials may on occasion recommend that less than an entire Minerva proposal be selected for funding. This may

be due to several causes such as insufficient funds, research overlap among proposals received, or potential synergies among proposals under a research topic. In such cases, proposal adjustments will be agreed by the offeror and the government prior to final award.

VI. AWARD ADMINISTRATION INFORMATION

1. Administrative Requirements –

- Central Contractor Registration: All Offerors submitting proposals or applications must:
 - (a) be registered in the System for Award Management (SAM) prior to submission;
 - (b) maintain an active SAM registration with current information at all times during which it has an active Federal award or an application under consideration by any agency; and
 - (c) provide its DUNS number in each application or proposal it submits to the agency.
- Access to your Grant Award

Hard copies of award/modification documents will no longer be mailed to Offerors. All award/modification documents will be available via the Department of Defense (DoD) Electronic Document Access System (EDA).

EDA

Effective 01 October 2011, EDA is a web-based system that provides secure online access, storage, and retrieval of awards and modifications to DoD employees and vendors.

If you do not currently have access to EDA, you may complete a self-registration request as a “Vendor” via <http://eda.ogden.disa.mil> following the steps below:

Click "New User Registration" (from the left Menu)
Click "Begin VENDOR User Registration Process"
Click "EDA Registration Form" under Username/Password (enter the appropriate data)
Complete & Submit Registration form

Allow five (5) business days for your registration to be processed. EDA will notify you by email when your account is approved.

Registration questions may be directed to the EDA help desk toll free at 1-866-618-5988, Commercial at 801-605-7095, or via email at cscassig@csd.disa.mil (Subject: EDA Assistance)

Grant awards greater than \$100,000, require a certification of compliance with a national policy mandate concerning lobbying. Grant applicants shall provide this certification by electronic submission of SF424 (R&R) as a part of the electronic proposal submitted via Grants.gov (complete Block 17). The following certification applies to each applicant seeking federal assistance funds exceeding \$100,000:

CERTIFICATION REGARDING LOBBYING ACTIVITIES

(1) No Federal appropriated funds have been paid or will be paid by or on behalf of the applicant, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the Federal contract, grant, loan, or cooperative agreement, the applicant shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The applicant shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S.C. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

i. REPRESENTATION REGARDING AN UNPAID DELIQUENT TAX LIABILITY OR A FELONY CONVICTION UNDER ANY FEDERAL LAW – DOD APPROPRIATIONS -

All grant applicants are required to submit the completed "Certification for Tax Delinquency and Criminal Violation" form. This form shall be included as an attachment to the required proposal documents submitted via Grants.gov, and may be found here: <http://www.onr.navy.mil/Contracts-Grants/submit-proposal/~media/Files/Contracts-Grants/Downloadable%20Forms/Tax-Delinquency-Criminal-Violation.ashx>. This form makes the following certification:

(1) The applicant represents that it is ___ is not___ a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

- (2) The applicant represents that it is__ is not __a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

NOTE: If an applicant responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the agency suspension and debarment official (SDO) has considered suspension or debarment and determined that further action is not required to protect the Government's interests. The applicant therefore should provide information about its tax liability or conviction to the agency's SDO as soon as it can do so, to facilitate completion of the required consideration before award decisions are made.

VII. OTHER INFORMATION

1. Government Property/Government Furnished Equipment (GFE) and Facilities

Government research facilities and operational military units are available and should be considered as potential government-furnished equipment/facilities. These facilities and resources are of high value and some are in constant demand by multiple programs. It is unlikely that all facilities would be used for any one specific program. The use of these facilities and resources will be negotiated as the program unfolds. Offerors submitting proposals for grants should address the need for government-furnished facilities in their technical proposal.

2. Security Classification

RESERVED*

3. Use of Animals and Human Subjects in Research

If animals are to be utilized in the research effort proposed, the Offeror must complete a DoD Animal Use Protocol with supporting documentation (copies of AAALAC accreditation and/or NIH assurance, IACUC approval, research literature database searches, and the two most recent USDA inspection reports) prior to award. For assistance with submission of animal research related documents, contact the ONR Animal Use Administrator at (703) 696-4046.

Similarly, for any proposal for research involving human subjects, the Offeror must submit or indicate an intention to submit prior to award: documentation of approval from an Institutional Review Board (IRB); IRB-approved research protocol; IRB-approved informed consent form; proof of completed human research training (e.g., training certificate or institutional verification of training); and any further documentation as required by the executing Service (note Service of the Topic Chief). In the event that an exemption criterion under 32 CFR.219.101 (b) is claimed, provide documentation of the determination by the Institutional Review Board (IRB) Chair, IRB vice Chair, designated IRB administrator or official of the human research protection program

* "Reserved" indicates that no security classifications apply to this solicitation.

including the category of exemption and short rationale statement. This documentation must be submitted to the executing Service Human Research Protection Official (HRPO), by way of the Topic Chief. For assistance with submission of human subject research related documentation, contact the appropriate Topic Chief.

4. Department of Defense High Performance Computing Program

The DoD High Performance Computing Program (HPCMP) furnishes the DoD S & T and DT & E communities with use-access to very powerful high performance computing systems. Awardees of ONR contracts, grants, and assistance instruments may be eligible to use HPCMP assets in support of their funded activities if ONR Program Officer approval is obtained and if security/screening requirements are favorably completed. Additional information and an application may be found at <http://www.hpcmo.hpc.mil/>.

5. Organizational Conflicts of Interest

All Offerors and proposed subcontractors must affirm whether they are providing scientific, engineering, and technical assistance (SETA) or similar support to any ONR or other military service or DoD technical office(s) through an active contract or subcontract. All affirmations must state which office(s) the offeror supports and identify the prime contract numbers. Affirmations shall be furnished at the time of proposal submission. All facts relevant to the existence or potential existence of organizational conflicts of interest (FAR 9.5) must be disclosed. The disclosure shall include a description of the action the offeror has taken or proposes to take to avoid, neutralize, or mitigate such conflict. In accordance with FAR 9.503 and without prior approval, a contractor cannot simultaneously be a SETA and a research and development performer. Proposals that fail to fully disclose potential conflicts of interests will be rejected without technical evaluation and withdrawn from further consideration for award. For additional information regarding OCI, contact the appropriate Topic Chief. If a prospective offeror believes that any conflict of interest exists or may exist (whether organizational or otherwise), the offeror should promptly raise the issue with the appropriate Topic Chief by sending his/her contact information and a summary of the potential conflict by e-mail to the Business Point of Contact in Section I, item 7 above, before time and effort are expended in preparing a proposal and mitigation plan. If, in the sole opinion of the Contracting Officer after full consideration of the circumstances, any conflict situation cannot be effectively avoided, the proposal may be rejected without technical evaluation and withdrawn from further consideration for award under this BAA.

6. Project Meetings and Reviews

In addition to an annual Minerva-wide program review held in the Washington, DC area, individual program reviews between the Service sponsor and the performer may be held as necessary. Program status reviews may also be held to provide a forum for reviews of the latest results from experiments and any other incremental progress towards the major demonstrations. These meetings will be held at various sites throughout the country. For costing purposes, offerors should assume that 40% of these meetings will be at or near the appropriate Service Headquarters and 60% at other contractor or government facilities. Interim meetings are likely,

but these will be accomplished via video telephone conferences, telephone conferences, or via web-based collaboration tools.

7. Military Recruiting On Campus

Military Recruiting on Campus (DoDGARS Part 22.520) applies to domestic U. S. colleges and universities. Appropriate language from 32CFR22.520 Campus access for military recruiting and Reserve Officer Training Corps (ROTC) will be incorporated in all grant awards.

VIII. SPECIFIC MINERVA RESEARCH INITIATIVE TOPICS

The Minerva program topics and corresponding subtopics indicate illustrative questions of interest to the Department of Defense. Topics are not mutually exclusive and proposals may consider issues relating to questions, scope, or regions beyond those listed. DoD encourages innovative submissions that, in addition to the generation of knowledge in critical areas, also build new communities, new frameworks, and new opportunities for dialogue.

Proposals may either leverage existing data or collect new data. Preference may be given to studies by experts capable of analyzing source material in the original languages and to studies that exploit materials that have not been previously translated. It is expected that collecting viable empirical data relevant to context and situation may require field research.

Researchers are encouraged to incorporate novel research methods, such as using remote sensing methods to validate field studies. Well-theorized models linking micro and macro analyses and cross-method approaches seeking to simultaneously analyze inductively, state hypotheses, and test deductively are also of interest. Researchers should aim to balance the specificity of their proposed research with the generalizability of the expected results.

Disciplinary approaches of interest include but are not limited to anthropology, cognitive science, demography, economics, history, human geography, political science, psychology, sociology, area studies, and computational sciences. Interdisciplinary approaches are encouraged. Researchers need not focus exclusively on the contemporary period, but they must be able to explain the relevance of findings to contemporary political and strategic contexts.

FY2014 MINERVA RESEARCH INITIATIVE TOPIC #1

Belief Propagation and Movements for Change

Recent developments in South Asia, West Africa, and the Middle East highlight the need for improved understanding of influence and mobilization, especially when leading to violence. Decreasing terrorism and political violence requires an understanding of the underlying forces that shape motivations and mobilize action. The United States and its partners must consider these cultural dynamics to effectively craft communications and operations that fulfill their intended purposes while mitigating potential unintended consequences.

Regions of interest include South Asia, Middle East/ North Africa, West Africa, Latin America

Subtopic 1-A: Belief formation and influence

Research on belief formation and emotional contagion may help analysts, policy makers, advisors, and trainers better understand the impact of operations on seemingly disparate populations. This research may also inform the development of countermeasures to help reduce the likelihood of militant behaviors.

Themes of interest include:

- Intracultural variability in belief systems (including comparative assessments with belief systems in the United State) and its applicability to decision making processes.
- Trends in processes that spreading ideologies across culturally diverse populations and beyond membership in specific organizations.
- Factors that make specific individuals influential within a particular cultural context.
- Factors impacting perceived credibility, trust, and internal and external security in a society. How might foreign policy actions or engagement strategies generate or undermine this credibility or trust?
- The influence, if any, of social networks, social media, and traditional media on collective behavior.
- The emergence of Internet-based culture and identity as factors shaping individual beliefs.
- Mixed model approaches to measurement and validation of the effectiveness of mechanisms of influence, (e.g., change in attitude distributions across a population. Under what context might counterinsurgency strategies like providing economic assistance or investment in local infrastructure and services effectively result in long-term shifts in the local population's objectives, behavior, or beliefs?

Subtopic 1-B: Group identity, cultural norms, and security

It is commonly understood that beliefs and behaviors are strongly shaped by cultural context, and these relationships can help inform policy-making. The Department of Defense seeks research to rigorously test the impact of cultural factors, to include identity and local norms, on beliefs and behaviors. Proposals providing contextualized analysis beyond modelization are encouraged.

Themes of interest include:

- The role, if any, of identity in building or undermining political unity and coalitions, especially across disparate communities and religious groups, and independent of formal political or geographical boundaries.
- The impact of globalization, if any, on individual and group identities and social structures (e.g., role transitions, identity crises, merging and division of networks).
- Indicators (behavioral and otherwise) of the strength of group identity and the relationship, if any, between solidified identity and effective mobilization toward change.

- The relationship, if any, between religious ideologies and the behavior of sub- or trans-state actors bound by ethnic, tribal, and regional identities.
- Social and political dimensions of beliefs — e.g., the role, if any, of:
 - The state in defining or politicizing religion.
 - Religion and culture in modulating social, economic, and political vulnerabilities across regions of interest.
 - Religion and culture in jurisprudence and maintaining rule of law.
- Culture-specific spoken communication mechanisms to garner credibility, express knowledge and uncertainty, or communicate =.
- The impact, if any, of culture on a society's definitions of credibility, corruption, and legitimacy.
- Indicators of the susceptibility to types of corruption for a given group or region.
- The impact, if any, of U.S. culture and U.S. military service subcultures in shaping cross-cultural interactions with allies, coalition partners, host nation personnel, non-governmental organizations (NGOs), and others.
- Other trends driving change in group identities and cultural norms, and the impact of these changes on conflict and security in local, regional, or global settings.

Subtopic 1-C: Mobilization for change

The Department of Defense is interested in better understanding what drives individuals and groups to mobilize to institute change. In particular, models that explain and explore factors that motivate or inhibit groups to adopt political violence as a tactic will help inform understanding of where organized violence is likely to erupt, what factors might explain its contagion, and how one might circumvent its spread.

Themes of interest include:

- Factors that foster or inhibit an individual's transition from passive support of fringe social movements to active political mobilization.
- The role, if any, of traditional communication mechanisms and new media technologies for influence and political mobilization, including radicalization, de-radicalization, and terrorist recruitment.
- The role, if any, of diaspora and displaced persons and communities within movements.
- Factors that differentiate those who join violent organizations from other prepared individuals who do not. Similarly what factors differentiate those who disengage from violent organizations from engaged participants who do not?
 - The role, if any, of non-ideological factors (e.g., profit, shame, trust) in mobilizing or deterring political violence.
 - Drivers of disengagement from extremist and violent groups compared to those from extremist but non-violent groups.
 - Factors leading formerly violent actors to return to violent organizations. Is ease of

disengagement role-dependent?

- Differences between violent group and “lone-wolf” instantiations of political violence.
- Factors distinguishing repressive, destabilizing, violent, and reform-oriented organizations and movements.
- The use of established social, cultural, political, and religious institutions and symbols to justify violence or promote resilience to emergent movements.
- Community or state level variables that promote or inhibit the popularity of violent ideologies and tactics.
- Measurements of the impact and efficacy of various government approaches (e.g. legal, technical, operational, education and training) to counter transnational criminal organizations.
- Novel models and statistical methods to predict relatively rare events relative to the total size of any given population, such as acts of terrorism and social conflict.
- Threat finance and illicit networks.
- Other approaches exploring mechanisms for and contributors to political mobilization.

Subtopic 1-D: The structural dynamics of disruptive organizations

Themes of interest include:

- Analyses of the topology, power structure, productivity, merging and splitting, and overall resilience of change-driven organizations.
- Factors differentiating roles within change-seeking organizations, especially those groups utilizing violent tactics.
- Dependency network analyses to identify key relationships for conflict mitigation and, in the developing world, to inform selection of development strategies.
- Increasingly the world has witnessed the expansion and merging of various groups such as violent extremist organizations (VEOs) and transnational criminal organizations. Such unifications/collaborations are believed to take place largely for reasons both tactical (e.g., money, arms, training, connections) and strategic (e.g., promise of growth, competitive advantage) rather than ideological. Analyses of interest include:
 - Characteristics of groups that merge and the conditions under which they merge. When do mergers succeed or fail and why?
 - Who are the decision makers and what are the consensus mechanisms within these “blended” organizations? What cognitive systems lie beneath these decision-making processes?
 - What ideological, operational, and strategic goals, if any, are most likely to change after a merge or transition, and why?
- Other approaches exploring the structural dynamics of insurgent organizations and how and why they merge, collaborate, compete, or divide.

Research Topic Chiefs:

- Topics 1-A, 1-B, 1-C:
Dr. Harold Hawkins (Office of Naval Research), harold.hawkins@navy.mil, 703-696-4323
- Topic 1-D:
Dr. John Lavery (Army Research Office), john.e.lavery4.civ@mail.mil, 919-549-4253

FY2014 MINERVA RESEARCH INITIATIVE TOPIC #2

Models of Societal Resilience and Change

The objective of this research track is to develop new insights into the social dynamics within states in general and authoritarian states in particular, and examine the factors that impact societal resilience, societal collapse, and the corresponding tipping points. The Department of Defense is interested in innovative frameworks and new data that may assist policymakers in developing improved methods for anticipating and identifying potential areas of unrest, instability, and conflict. Insights may inform strategic thinking about resource allocation for defense efforts and humanitarian aid as well as insights for national policy and engagement with both state and non-state actors before, during, and after transformations like those seen in recent regime transitions in North Africa and the Middle East.

Regions of interest include Sub-Saharan Africa, South Asia, Latin America, Middle East, Southeast Asia

Subtopic 2-A: Economic contributors to stability

Themes of interest include:

- The impact, if any, of changing economic activity, both formal and informal, on group, societal, state, regional, and international stability and security.
- The relationship, if any, between security, military capability, and national and international economic prosperity in the 21st century. In what context might sanctions be leveraged to build rather than undermine regime support?
- Economic and political science perspectives on economic reform and global market integration in terms of security, societal resilience, and instability.
- The roles, if any, of government and international organizations in monitoring, regulating, and understanding informal markets.
- The size and political impact of informal economies and illicit trade, including supply chains.
- The role, if any, of illicit trafficking (e.g., arms, drug, human, wildlife) in fueling violence.
- The potential role, activities, and impact of profit-motivated and violent non-state actors on social order, migration, and corruption, and in perpetuating fragility at the state and transnational levels.
- The role, if any, of ideology in the formation and functioning of underground markets.
- Interactions of underground markets with legitimate markets.
- Assessments of underground markets that sell and buy components, such as data, tools, and access, that enable many nations to acquire their cyber capabilities, resources, and talents. How do underground markets in the cyber realm compare to underground markets of physical goods?
- Economic models of impacts from disruptive cyber intrusions and cyber crime, and the transference of these capabilities to others.

Subtopic 2-B: Governance contributors to stability

Themes of interest include:

- The role, if any, of norm-based governance factors such as reputation, trust, reciprocity, enforcement of compliance, and self-regulation on effective governance and stability. Do these factors change within a cyber-security context?
- The relationship, if any, between government institutions (e.g., military, police) and the population and various subpopulations in areas such as generalized trust, legitimacy, social integration, corruption, etc.
- Community attitudes toward crime, fault, punishment, and justice, and the compatibility or consistency of those attitudes with formal criminal justice systems.
- Non-governmental alternatives to formal state institutions for the provision of security, goods, and services, and their effect on state sovereignty and legitimacy.
- Common characteristics shared by organizations that successfully challenge states, such as the services they provide, their forms of mobilization, and their relationship with residents.
- Ungoverned, under-governed, misgoverned, contested, and exploitable areas, and the geographical, political, civil, and resource factors that create these safe havens for insurgents.

Subtopic 2-C: Energy, environment, and resource contributors to stability

Themes of interest include:

- Definitions and models of the critical variables of state instability due to resource scarcity or imbalance, including food and water insecurity. Can early indicators of societal stress be identified?
- The societal impacts (including political and economic) of long-term environmental stress in both the developing world and the industrialized world. What feedback loops exist?
- The role and second order effects of climate change or extreme events on population migration.
- The relationship, if any, between changes in energy usage and the environment, perceptions of risk, and subsequent human behavior.
- The relationship, if any, between extractive mineral wealth, agricultural practices, property rights, economic and social inequality, and conflict, especially at a sub-national level. For example, NGOs have pushed for transparency of the supply chain for conflict minerals and conflict gold, possibly reducing trade for citizens in conflict areas. How might the net gain or loss in stability of such actions be measured?
- Other interdisciplinary analyses of relevant human and natural system processes and complex interactions among human and natural systems at diverse scales, e.g., emergent properties, cognitive systems complicit in both reflective and intuitive inference-making, etc.

Subtopic 2-D: Additional factors impacting societal resilience and stability

Themes of interest include:

- The impact and strategic implications of demographic changes (e.g., youth bulge, urban trends, race, age, mobility, employment status, per capita wealth) on internal and external stability.
- Factors determining societal resilience in *megacities* – how some are the most efficient use of space, and other are failing to cope with rapidly urbanization.
- The role of women's status in issues of global conflict.
- Sociological implications of cyber-conflict (e.g., social order, conflict, de-legitimacy, health issues, trust in authority).
- Other approaches to examine the sources of societal resilience and instability, and the sources of present and future conflict.

Research Topic Chiefs:

- **Topics 2-A, 2-B:**
Dr. Ben Knott (Air Force Office of Scientific Research), benjamin.knott.2@us.af.mil, 937-344-0880
- **Topics 2-C, 2-D:**
TBD (Army Research Office); contact erin.fitzgerald1.civ@mail.mil with questions.

FY2014 MINERVA RESEARCH INITIATIVE TOPIC #3

Theories of Power and Escalation

Political science and international relations have traditionally emphasized the roles of and relationships between formal institutions such as states, inter-governmental organizations, and non-governmental organizations. Today, however, many conventional assumptions regarding power relationships and escalation theory no longer hold.

The objective of this research track is to offer new theories, models, and approaches to power projection and conflict escalation that consider strategic behavior between various transnational actors across domains in a globalized, rapidly interconnecting, and cyber-enabled world. For rising military powers, this research will yield a deeper understanding of the social, cultural, and historical factors that define strategic priorities, drive approaches to international engagement, and shape state-internal balances of power between political, military, and industrial forces.

Areas of interest include non-state institutions, rising military powers, potential alliance partners, and cyber domains.

Subtopic 3-A: The changing role of the state in a globalizing world

Phenomena such as the “flattening” of labor markets and the increasing flow of people across state borders (whether through immigration or as refugees) have influenced demographics and created global communities that transcend traditional state boundaries. At the same time, the global diffusion of power is yielding a multipolarity of global leadership with its own broad implications. Targeted study may yield new models for effective state behavior in this changed global landscape.

Themes of interest include:

- The balance of power between the state and other traditional institutions.
- Modern vehicles of power projection, including:
 - Differences in the application of strategies for power projection, e.g., economic, political, military, cultural, by state and non-state actors.
 - Proportionality and legitimacy (norms) versus legal or military control as instruments of power.
 - Proxy wars and “vicarious belligerency” as vehicles of power projection by both states and institutions.
- Drivers affecting how a state or states influence, interact, cooperate, and compete with others to achieve nation-state level objectives, including:
- The growing influence of international law and normative processes on the ability of states to achieve desired goals.
 - The range of visions of the state’s future that is present in its political discourse.
 - Trends and drivers for military growth and modernization, strategic interests, and technological advances in rising military powers.

- Drivers and impacts of increased influence from international organizations, non-governmental organizations, and other phenomena such as social movements, on both the state and the international system.
- The changing definitions and compositions of global alliances, including:
 - The role of credibility and trust in establishing international alliances among stakeholders to respond to global issues.
 - The use of principal/agent theory to inform engagement with weak democracies or weak autocracies.
- Assessments of technological system development, security policy and strategy, economic systems, and the broader evolution of society in a globally networked world, including:
 - The implications of the growing reliance on cyber technologies for assessing threats, identifying strategic vulnerabilities, and maintaining crisis stability.
 - The intersection of national interest, international standards, and the associated standards bodies.
 - The impact, if any, of emerging technologies on global culture and political dynamics (including information diffusion, social structures, and power relationships).
 - The impact, if any, of increasing technological capability among insurgents on state government and military power structures.
- Area studies, such as:
 - Political, military, and social environments in rising regional powers and their implications for regional stability.
 - Relations between regional partners such as China and Pakistan over time.
 - Technological and economic aspects of great power competition, as well as the role of transparency and corresponding governance mechanisms.
- Strategies to influence the actions, reactions, and iterative counteractions of allies, partners, third parties, and non-state centers of decision-making.

Subtopic 3-B: Beyond conventional deterrence

Since the end of the Cold War, technology developments and shifts in the environment have challenged and stretched traditional models of conflict escalation and deterrence. Not only do space and cyberspace represent relatively new domains for international actor engagement, but information and communications technologies have empowered individuals and non-state actors to compete with states and potentially threaten state interests across geographic domains as well as cyber and space. Traditional theories of deterrence may no longer be relevant today or in the future security environment.

When actors face asymmetric risks in a given domain, cross-domain deterrence approaches are often necessary. States can choose to exercise leverage where they are strongest and target areas where the adversary is the weakest. For example, a state may attempt to deter cyber-attacks by military actions at sea or on the ground, by economic means, through participation or non-

participation in international treaties, or other approaches. Such deterrent actions across domains yield major challenges that require further study.

The objective of this research track is to offer new theories, models, and approaches to escalation and deterrence theory that incorporate strategic behavior among international actors across new and traditional geographic domains.

Themes of interest include:

- General frameworks for deterrence across different domains, actor types, and issue areas.
- The role of population influence (including social media) in shaping deterrence tactics.
- The effect of unique features of space and cyberspace — related to such factors as information availability, infrastructure vulnerability, or attribution — on existing models of deterrence.
- Asymmetry of stakes and how those stakes change as a crisis or conflict evolves.
 - How can threats be calibrated across different domains for specific actors?
 - How might proportionality of responses be determined in cross-domain deterrence?
 - How can misperception of threats and signals across all domains be reduced?
 - How does the structure of an organization affect its ability to send and process signals of aggression across domains?
- The links between specific *diplomacy, information, military, and economic* (DIME) actions and escalation or de-escalation of unfolding crises. Researchers will ideally look at the combined effect of at least two of the four DIME strategies using empirical data. Some topics that would benefit from analysis and insight include:
 - Novel approaches for validation of proposed causal dynamics between DIME actions and unfolding crises.
 - Dynamics of coalition management during complex multilateral security interventions where each actor has its own military and domestic concerns (e.g., the International Security Assistance Force in Afghanistan).
- Social and cultural aspects – the “human side” – of cyber security.
- Cyber governance strategies in terms of policies, organizational and technological changes, economic institutionalizations and persuasions, and behaviors.
- Public attitudes within China, the United States, Russia, and the European Union toward the usage of cyber activities to support military goals.
- What are the key benefits and costs to the “Internet information freedom” model? Is the current U.S. model sustainable?
- Other novel approaches to escalation and deterrence theory that incorporate strategic behavior among international actors across new and traditional geographic domains.

Research Topic Chief:

- Dr. Ivy Estabrooke (Office of Naval Research), ivy.estabrooke@navy.mil, 703-588-2396

FY2014 MINERVA RESEARCH INITIATIVE TOPIC #4

Emerging Topics in Conflict and Security

Just as the Cold War gave rise to new ideas and fields of study such as game theory and Kremlinology, the challenges facing the world today call for a broader conception and application of national power that goes beyond military capability. Accordingly, the Department of Defense is interested in new approaches and methods to identify issues that have been overlooked yet may define the future security environment.

Subtopic 4-A: Quantification and metrics

(address only in conjunction with one or more additional Minerva topics)

While qualitative research provides distinct and important insights for many defense issues, there are cases where quantitative models offer particular advantages. In particular, quantitative models offer more consistent and reproducible data manipulation, well-defined comparisons between sets of data, and the potential for trend assessment and forecasting.

To leverage these analysis opportunities, many researchers use quantitative models and numerical representations to denote more subjective observations. Such quantification and metrics may be well suited for an immense variety of physical phenomena, but there is little understanding of to what extent they can be applicable for social phenomena. In addition, different quantification and metrics for given sociological phenomena can lead to radically different computational models and results, and by extension lead to radically different social and cultural insights intended to inform defense policy and operational decisions.

In the interest of addressing these issues and strengthening models built to inform security issues, the Department of Defense seeks fundamental interdisciplinary research in the context of defense-critical problems to inform and create quantification (how one chooses numbers or vectors or points on manifolds to represent social phenomena) and metrics (how “close” two social phenomena are to each other) that are based on sociological and socio-cognitive principles.

Additional themes of interest include:

- Data validation and universal standards for accounting for sampling bias in data collected in order to better assess efficacy of the government’s efforts.
- Scaling spatial econometric, time series, and multi-level model analysis to encompass n -dimensional variables approximating a societal unit of analysis.
- Novel methods to better infer causal connections from unstructured qualitative data (e.g., patrol reports) rich in detail for a specific context. Insights into relevant causal mechanisms may be available from academic disciplines that are often overlooked, such as business (relationship contracts, supply chain management), microeconomics (competition, cooperation, networks), and evolutionary biology, as well as political science, psychology, sociology, and anthropology.

Subtopic 4-B: Additional topics

The Department of Defense Minerva program welcomes additional research proposals addressing other areas of international affairs, international security, and national security that are newly emerging or have not been properly understood.

Research Topic Chiefs:

- **Topic 4-A:**
Dr. John Lavery (Army Research Office), john.e.lavery4.civ@mail.mil, 919-549-4253
- **Topic 4-B:**
Dr. Ben Knott (Air Force Office of Scientific Research), benjamin.knott.2@us.af.mil, 937-344-0880