



DEPARTMENT OF THE AIR FORCE  
AIR FORCE RESEARCH LABORATORY

May 11, 2004

**SOCIAL SCIENCES GRADUATE STUDENTS:  
ARE YOU UP TO THE CHALLENGE?  
MAKE \$12,000.00 IN 3 MONTHS THIS SUMMER!**

**Background:** The Directed Energy Bioeffects Division of the Air Force Research Laboratory, Human Effectiveness Directorate, is interested in partnering with academia on a set of applied literature reviews. The United States Air Force (USAF) has developed a *non-injurious, non-carcinogenic "energy beam"* device which may provide US forces with a non-lethal capability in military operations other than war (peacekeeping, peace enforcement, humanitarian operations, area denial, crowd control, etc.). The energy beam uses non-ionizing millimeter wave technologies to deposit energy in the top 0.3mm of the skin. An almost immediate sensation of heating and irresistible pain is experienced by a targeted person; targets can readily determine the direction from which the unseen energy comes and respond by moving out of the beam's path or moving away from the beam. With redirection or withdrawal of the energy beam, the painful sensations cease and the person is left unharmed. Extensive animal and human testing on the bioeffects of the energy beam has already been conducted.

**Tasking:** There are a number of *social sciences questions that need to be addressed*. How will targets, bystanders, other members of the (sub)culture/nation, and global observers react to use of this technology? What perceptions and attributions are likely? How would use of such a technology influence rumors and conspiracy theorizing? What will various audiences likely think (cognition), feel (emotion), or do (behavior) in response to use of such a "futuristic" technology? In an effort to pursue these questions, the Directed Energy Bioeffects Division intends to fund 3 applied literature reviews. These literature reviews should survey relevant literature on (but not necessarily limited to) such *topics* as:

- activism/participation in collective behavior
- aggression
- attributions
- attitudes, attitude change, and attitude extremification
- coercion
- collective (non)normative behavior
- conspiracy theories
- cross-cultural similarities/differences
- crowd behavior(s) and dynamics
- ethno/religio/political conflict
- inter-group behavior and conflict
- justice perceptions/procedural justice/legitimacy
- perceptions
- persuasion/influence

- political socialization
- public and political opinion
- religious studies
- riots
- rumor generation and propagation
- use of force in law enforcement

Literature reviews will need to conclude with, to the extent possible, **(1)** the array of likely or probable reactions by various targets/audiences, **(2)** differences or patterns in anticipated responses by culture (cross-cultural considerations must be included), nation, state, ethnicity, or religious belief, **(3)** information, media, or tactics which might minimize hostile responses to (and negative attributions about) the technology and its users, and **(4)** anticipated political “fallout” in response to use of such a technology. A diversity of views/interpretations is desired.

**Who is eligible?:** Applicants for funding must be citizens of the U.S. or the U.K. Applicants must not have a criminal record. It is desired that these applied literature reviews be completed by senior graduate students who have completed their master’s level work and are presently in good standing in a fully accredited program. Applicants must demonstrably have the support and recommendation of their academic or dissertation adviser. Applicants from the following *disciplines* are expected to be most competitive:

- Psychology (esp. social, organizational, or political psychology)
- Sociology
- Anthropology
- Religious Studies
- Political Science
- Economics
- International or Area Studies
- Journalism

**How do I apply?:** In not more than 3 pages, propose how you intend to accomplish the task; indicate the topics you intend to most thoroughly cover in your literature review. Send **(1)** a cover letter on your university/institutional letterhead indicating all your contact information (phone, e-mail address, fax, and mailing/postal address), **(2)** the 3-page proposal (with your name as a running head), **(3)** a letter of recommendation on university/institutional letterhead from either your academic/dissertation advisor, a member of your dissertation committee, or your department chair, and **(4)** a copy of your CV or resume. Send your application package to the following address **not later than June 11, 2004:**

Ms Rhonda Lee  
 Future Technologies Project Coordinator  
 Conceptual MindWorks, Inc.  
 8262 Hawks Road, Bldg 1170  
 Brooks City-Base, TX 78235

**Funding and Timeline:** Those selected will submit a completed comprehensive literature review not later than **100 days** after their formal acceptance of selection. This is clearly a “quick

turn” commitment on the part of a selectee, and applicants are encouraged to ensure their schedules can accommodate the commitment before applying. Selectees may be given some reading material on the energy beam and will be provided paid travel to the Directed Energy Bioeffects Division in San Antonio, TX, to receive as much as 8 hours of introductory briefings on the energy beam technology and application. Selectees will be paid **\$12,000.00**.

**A note of encouragement:** It is realized that the existing literature will not directly address the questions you seek to answer. Rather, the task asks that you integrate what does exist in the literature and make, to the extent possible, an informed assessment about possible and probable reactions to use of such a weapon. This will not be easy, and there are no “right” or “politically correct” answers. *If you are up to an intellectual challenge that could potentially influence those making decisions and policy in the United States, then this is a project for you!*

**Other issues:** Once submitted, your literature review will become the property of the U.S. Government. Someone will coordinate with you on publication options, either within government channels or in the open/academic literature. Publications and presentations of/from the review will have to be first approved by the U.S. government.

**Questions?:** If you have any questions, please feel free to contact Ms Rhonda Lee, Future Technologies Project Coordinator, at 210-536-4768 or via email: rhonda.lee@brooks.af.mil.

We look forward to seeing your application,

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JONATHAN T. DRUMMOND, Major, USAF  
Chief, Human Effects Center of Excellence  
Directed Energy Bioeffects Division