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Title: Low-Dose Risk, Decisions, and Risk Communication

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Progress Report

Research Objectives: To conduct basic research on how people receive, evaluate, and
form positions on scientific information and its relationship to low-dose radiation
exposure. There are three major areas of study in our research program. First is the
development of theories, frameworks and concepts essential to guiding data collection
and analysis. The second area is a program of experimental studies on risk perception,
evaluation of science information, and the structure of individual positions regarding low-
dose exposures. This involves the study of existing knowledge and the evaluation of
science information presented within a variety of formats, as educational information,
news media stories, and alternative communication methods (personal contact, small
group interaction, email & internet, etc.). Third is the community-level studies to
examine and record how the social conditions, under which science communications take
place, influence the development of attitudes and opinions about: low-dose exposures, the
available management options, control of radiation risks, and preferences for program
and policy goals.

Research Progress and Implications: This report summarizes work after 20 months of a
36-month project (October 1999 to September 2002). During the first eight months of the
project the research guidelines and procedures were put in place, personnel were
recruited and assigned work areas, experiments to examine radiation exposure attitudes
and perceptions were designed, and a workshop was organized and held (June, 2000)
with experts from the U.S., Canada, and Europe to discuss the theoretical and empirical
work in risk communication. Subsequently, the experimental work was initiated and is
ongoing with the major working papers listed below. Theoretical work focused on the
Social Geography of Risk Communication framework and earlier this year additional
attention was directed toward development of a paper on the topic of the Social History of Radiation with implications for public perceptions of radiation exposure. A program of community-based studies was designed. Fourteen possible sites with radiation exposure issues were screened with site visits and key informant interviews. Three community study areas were selected. These communities are located adjacent to DOE facilities at Rocky Flats, Colorado, Fernald, Ohio, and Brookhaven, New York. Researchers are currently conducting the historical review of available data, extensive interviews key informants and community residents, and participant-observer fieldwork. A survey of each study community is in the final phases of development and will be implemented within the next 90 days. These survey data will allow us to compare and contrast the general public responses to key questions with the key informant interviews. The focus of this work is on how the community social context serves to form public opinion about radiation exposure and related issues. As part of the community work we are initiating a small group study to examine how much social agreement can be achieved among people with distinctly different points of view. This effort will focus on the parameters of understanding differing values, considering necessary tradeoffs, and reaching acceptable process and outcome decisions.

**Planned Activities:** The three areas of work (Theory & Concept Development, Experimental Studies, and Community & Small Group Studies) will continue over the next year with increasing emphasis on analysis and reporting of the research findings. One major focus in the final year will be on defining the range of decision processes within the many public groups we are studying and the implications for risk communication on radiation exposure issues.

**Information Access:** Decision Research maintains a web site at: [www.decisionresearch.org](http://www.decisionresearch.org). This site has a section on the research being done for this project and it lists contact information for researchers. A complete bibliography of Decision Research publications is also available on-line.

The following papers and manuscripts are in progress and will be posted on-line as the review drafts are completed.


The following presentations have been made:


