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Statement of research interests
CSISS specialist meeting on Health Risk Perception and Spatial Analysis

My research centers on the social production of health inequality, particularly the ways that cultural and social processes affect gendered and racialized disparate health outcomes. I have been involved in cultural anthropological field research related to health inequities among urban migrants working as barmaids in Uganda, native Hawaiian families in Honolulu, Melanesian Fijian women and men in three communities on a small, rural island in Lau, Fiji, deinstitutionalized mentally retarded adults in urban Los Angeles, primary care physicians working as gatekeepers to mental health care in Santa Barbara, and, most recently, Mexican-origin agricultural workers and their families in rural Santa Barbara County, California.

This latter research has focused on aspects of farmworker health in central coastal California. This work has included a study of the public health system's and private nonprofit organizations' roles in the diagnosis and treatment of tuberculosis among farmworkers, and a prospective study of farmworker maternal and newborn health. Both studies use an environmental justice approach to examine links between the full array of farmworker living and working conditions, health care access, health care delivery practices, and particular health consequences and treatment outcomes. As an offshoot of these studies, I have also embarked on an historical study to track the emergence of racialized discourse in biomedicine and public health about the etiology and treatment of infectious disease among Latino immigrants in California in the first 3 decades of the 20th century. I am now in the planning stages for a larger-scale project that will examine both women and men in the farmworker community in California, looking at a number of issues related to immigration, health assimilation, stress, and illness. This work attempts to capture (sociologically) the local processes that underpin the population-wide production of accelerating health inequality in the US among the working poor. An additional on-going study has examined a local case of community conflict over pesticide drift and perceived negative health impacts among Anglo suburban residents.

My interests in risk exposures and perception of risk have emerged from this research. Farmworkers arguably represent an archetype for workplace hazard and risk exposure. Yet, in the communities around us in California, public discourse about risks from exposures to agricultural chemicals has centered on downstream food consumers, suburban home owners on the agricultural-urban interface, and children in public schools. For the frontline exposed, immigrant and often undocumented, the social processes of risk assessment are explicitly distinct, fulfilling culture and risk experts Mary Douglas and Dorothy Nelkins' judgments about the 'forensic uses of risk acceptability' in a global society. One promising method to complicate (and hence disrupt) these disparities seems to me to be spatial analysis.

In recent years a number of leading scholars in anthropology, sociology, and decision theory have coalesced understandings about the socially constructed nature of judgments about risk, and how such judgments vary according to a number of key social, political

and economic variables. Health risk judgments in particular have assumed a position of centrality in the current global geopolitical environment, and the renewed emphasis on behavioral research at the NIH in determining solutions to thorny health assessment and education problems largely stems from widely reported but poorly understood divergences of experts' and lay persons' judgments about health risks (e.g., Sobo 1995; Harthorn and Oaks 2003; Pidgeon, Kasperson, and Slovic 2003). The spatial (and spatial/temporal) analysis of risk perception is a largely unexplored arena that offers much for expanding understandings of perception of risk. The most sophisticated psychometric studies of risk perception among American respondents (see Slovic 2000; Slovic, Fischhoff and Lichtenstein 2000) now assess effects of as many as 90 hazards and 18 different parameters of risk characteristics, but spatial analysis as an explicit approach is missing

The attractions to me of bringing GIS to this set of problems are several. On the most basic level, the ability to visualize data and spatial patterns offers a powerful tool for education and research. This capacity links directly to the development of Public Participation GIS (PPGIS) and should interest anthropologists, whose work often involves participatory engagement with lay/community members. Through PPGIS we aim to make complex health data patterns understandable to affected community members.

Additionally, although an underdeveloped area of GIS, the development of a "pluralistic GIS," one that can incorporate and represent multiple realities and particularly what has been called socially differentiated knowledge, has been an acknowledged challenge for a number of years (e.g., Harris and Weiner 1996). The possibility of representing spatially the multiple perceptions of different units of the population (or even the same sectors over time) would seem to offer policy makers and community members the chance to understand the patterns underlying risk avoidance, risk amplification, and other classic dilemmas in risk analysis. The perception of health risk presents a particularly sensitive and important 'multiple reality,' one that scholars have shown to be the key determinant of community and individual response to exposure to health hazards.

And finally, the ability to layer data at different scales in a GIS offers great promise to those of us in anthropology and sociology who are attempting to represent the relationships between complex local processes and data on the one hand and large-scale macro forces such as globalization, regional economic transformation, and transnational migration on the other.

References cited

- Douglas, Mary. 1992. *Risk and Blame: Essays in Cultural Theory*. New York: Routledge.
- Harris, Trevor, and Daniel Weiner, 1996. *GIS and Society: The Social Implications of How People, Space, and Environment Are Represented in GIS*. NCGIA Initiative 19 Specialist Meeting, Koinonia Retreat Center, South Haven, Minnesota. Technical Report 96-7. Santa Barbara, CA: NCGIA, University of California at Santa Barbara.

- Harthorn, Barbara Herr, and Laury Oaks, eds. 2003. *Risk, Culture, and Health Inequality: Shifting Perceptions of Danger and Blame*. Westport, CT: Praeger.
- Nelkin, Dorothy. 1989. "Communicating Technological Risk: The Social Construction of Risk Perception." *Annual Review of Public Health* 10:95-113.
- Pidgeon, Nick, Roger Kasperson, and Paul Slovic, eds. 2003. *The Social Amplification of Risk*. Cambridge: Cambridge Univ. Press.
- Slovic, Paul, ed. 2000. *The Perception of Risk*. London; Sterling, VA: Earthscan.
- Slovic, Paul, Baruch Fischhoff, and Sarah Lichtenstein. 2000. Facts and Fears: Understanding Perceived Risk. In *The Perception of Risk*. P. Slovic, ed. pp. 137-153. Sterling, VA: Earthscan.
- Sobo, Elisa J. 1995. *Choosing Unsafe Sex: AIDS-Risk Denial among Disadvantaged Women*. Philadelphia: University of Pennsylvania Press.