

NSF CAREER Review Criteria

(adapted from NSF GPG 13-1 III-A-2)

Reviewers are asked to consider what proposers are doing, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits will accrue if they are successful.

Please rate one proposal on **each** of these questions using a five point scale: 1 = poor; 2 = fair; 3 = good; 4 = very good; 5 = excellent.

And, please give the other two proposals on **overall** rating of: High, Medium, or Low.

1. *What is the potential for the proposed activity to advance knowledge and understanding within its own field or across multiple fields (Intellectual Merit)?*
2. *To what extent will the project benefit society or advance desired societal outcomes (Broader Impacts), including outreach or service to under-represented populations?*
3. *What is the potential of the project to establish a foundation for the researcher's career in both STEM investigations and teaching?*
4. *To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?*
5. *To what extent is the plan for carrying out the proposed activities well reasoned, well organized, and based on a sound rationale?*
6. *Is there an adequate mechanism to assess success of the project?*
7. *How well integrated are the research and education plans?*
8. *How well qualified is the individual to conduct the proposed activities?*
9. *Are there adequate resources available to the PI to support these activities?*
10. *Which of the three applications is the most/least readable? What factors contributed to your judgment of the narrative's readability?*

Sample from successful CAREER proposal in Sociology. The NSF CAREER has a larger than normal requirement for integration of the research and education, as well as work undertaken to achieve societal outcomes relevant to the research. The wording of the section is interesting as an example, and also provides a more general framework for the format and scope of the statement. --bp

Broader Impact

The proposed project will have broad implications both within *and* outside the academy. Given gaps in knowledge about homicide and social network effects, this project has the potential to advance research in five important areas: **(1) our general understanding of fatal and non-fatal violence and gangs; (2) the diffusion of violence among a specific portion of the population; (3) the diffusion of violence from circumscribed networks (such as street gangs) into adjacent populations; (4) longitudinal and dynamic network models; and (5) network effects with regards to health and social behaviors more generally.** Given the broad implications of these findings, dissemination of the results will target peer review publications and conference papers in sociology, criminology, public health, and medicine, as well as general science audiences. More specifically, gang and neighborhood level findings will focus on sociological and criminological audiences, while individual-level findings will target public health and medical audiences. Modeling and statistical techniques used throughout this research will also be written- up for publication in social network journals. Furthermore, I anticipate at least two papers that will target the area of crime epidemics as they relate to epidemiology and medical journals. Preliminary results and findings will be crafted into conference papers for the American Sociological Association, the American Society of Criminology, The Population Association of America, and the International Network for Social Network Analysis. During the later years of the CAREER period, after all analyses are well underway, I would also like to begin a manuscript that formalizes the network approach to violence developed here.

By shedding light on these research areas, this project may also have considerable policy importance for the abatement of gang violence, benefiting not only those involved in gang activity, but also those residing in communities in which gang activity is endemic. Given that gangs and violence more generally tend to be concentrated in communities that have historically suffered from poorer health and lower life expectancy than the rest of the population, the findings from this project may even substantially diminish racial disparities in morbidity and mortality. In particular, the network approach forwarded in this project urges that interventions, policies, and programs aimed at reducing violence might employ social network techniques to direct their efforts. Thus, in contrast to the more typically broad-sweeping policy or interventions based on categorical distinctions, this project suggests that using network techniques to pinpoint groups and individuals at risk of victimization might provide more useful points of intervention, and a more efficacious use of limited resources.

This project will realize its broader impact through three types of activities: **(1) Capacity Building** activities with law enforcement and community organizations; **(2) Educational and Training** opportunities for graduate and undergraduate students; and **(3) Program Evaluation.** The project contains three specific **Capacity Building** efforts. First, throughout data collection, but especially Study 3, I will share the results with the providing agencies and their partners. For example, after a presentation I made to the FBI this past year, the director of training began a dialogue with me about providing some training to FBI research analysts. And, if requested, I will conduct one or two day workshops for agencies and organizations providing data to the project on-site and will leverage my existing relationships to ensure that my research gets into the hands of those who need it.

The second mechanism for capacity building entails a series of training sessions to be held at the annual conference of the National Gang Crime Research Center (NGCRC).¹¹ Now in its 13th year, this conference provides up-to-date training for law enforcement, educators, and community organizations on a wide array of topics pertaining to gangs; in addition, certification at the conference includes continuing education credits that many attendees use for their own professional and career development. Over the past two years, I have conducted a one-hour overview of social network analysis and its potential use in research and intervention. This proposal would expand this overview to a four-hour seminar at the conference over the CAREER period.¹²

The third and perhaps most comprehensive mechanism for capacity building entails a partnership with the National Network for Safe Communities (NNSC).¹³ The NNSC is a coalition of police chiefs, prosecutors, community leaders, service providers, mayors, street workers, scholars, and others concerned about the impact of crime and current crime policies on communities. Coordinated

through the John Jay College of Criminal Justice, the NNSC supports and coordinates innovative crime prevention strategies in nearly 50 jurisdictions across the U.S. The NNSC has pledged to help integrate the network approach of this research in its on-going effort to integrate innovative technologies into violence prevention efforts. In collaboration with NNSC, I have already begun to apply network analysis to a new violence prevention initiative in Chicago and am working with the NNSC to discuss how to further incorporate this framework into the other jurisdictions, including those cities being used in the sample of this study.

Educational and Training Opportunities for graduate and undergraduate students will be integrated into nearly every aspect of the project. At the graduate level, Research Assistants will have the chance to work on nearly all aspects of this project, including: data cleaning and coding, assisting in data analysis, and co-authoring academic papers and professional reports. Several aspects of this project will also be integrated into my graduate and undergraduate teaching. First, since many of the statistical techniques used in this project are on the forefront of social network modeling, I will use data and analysis from the project to illustrate these techniques and data collection issues in my graduate seminar on “Social Network Analysis.” As I have in the past, I will also allow eager students an opportunity to use data for their class projects—one such student project using some of my data is currently under review in an academic journal [75]. Second, I hope to develop a second graduate seminar on “Social Networks, Crime, and Criminal Organizations” that will combine network and criminological theory to provide new directions for empirical research. Though this course is still in the development stages, it will most likely follow the direction of my forthcoming article, “The Coming of a Networked Criminology” [48] which delineates the utility of network models and thinking as applied to the study of crime and violence. Third, the data on gang conflicts, gang violence, and gang member networks will be highly integrated into my undergraduate course, “Street Gangs and Public Policy.” This course, which I have just recently developed and taught for the first time, is designed to combine a theoretical overview of gangs with an analysis of strategies used to address gang related problems. In this class, undergraduates are required to complete a course project that analyzes a particular element of the gang problem or a particular gang policy—one student parlayed her project into an internship with a local legislator.

As a final educational opportunity, I will design and sponsor a three-day workshop on the use of social network analysis in criminology during years 3 and 4 of the project. This workshop will be hosted at the University of Massachusetts, Amherst, and coordinated through the Social and Demographic Research Institute (SADRI), where I am a faculty associate (see <http://www.umass.edu/sadri/>). The workshop will be designed around: (a) general overview of network theory, (b) the acquisition of technical computer and statistical skills, and (c) the application to the study of crime, deviance, and violence. This new workshop will be based on a two-day methodological seminar I have taught in the past on social networks at UMass’ Center for Research on Families. This workshop will be targeted to members of the American Society of Criminology, the American Academy of Criminal Justice Sciences, the Illinois Academy of Criminology, the Homicide Research Working Group, the British Society of Criminology, the European Society of Criminology, and other similar academic and professional associations.

I am currently involved with the **Evaluation** of several violence reduction strategies in Chicago [70]. Presently, this framework is being used as part of NNSC’s new violence reduction initiative in Chicago. Based on the highly acclaimed Operation Ceasefire program in Boston [8] and the High Point Initiative in North Carolina [76], the NNSC effort in Chicago is a “group based” intervention strategy that attempts to reduce violence through a series of non-law enforcement interventions with the groups/gangs and individuals most responsible for violence and most responsible to be the victims of such violence.

The program pulls together law enforcement, clergy, and multiple community actors to form a working group. This program—and its intervention—aligns directly with the network approach of this proposal and, as such, provides a unique opportunity to assess how the social networks described here might change over time in response to intervention. For instance, if the working group decides to focus on a particular conflict in Figure 1, then it is reasonable to assume that a successful intervention might detect changes in the network structure and patterns of activity around those groups. The longitudinal data to be collected in this project would afford exactly such an opportunity and, to the best of my knowledge, social network analysis is rarely used in program evaluation of any kind. While such program evaluation

is currently only underway in Chicago, the NNSC will work with me to translate such an approach into innovate violence prevention strategies currently being initiated in 50 municipalities within the U.S.

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¹⁰ This implication is similar to the use of “hot spot” mapping to more efficiently direct policing patrols [74].

¹¹ Founded in 1990, the NGCRC is a non-profit agency with the mission of facilitating, promoting, and disseminating research on gangs in cooperation with federal, state, and local governments, non-profit agencies, and educators (see, www.ngcrc.com).

¹² I have already taught several semester-long graduate seminars on social network analysis, two two-day workshops at the Center for Family Research, as well as more than six presentations at various workshops on social network methods.

¹³ More detailed information can be found at: <http://www.jjay.cuny.edu/nnscl>

I usually recommend against footnotes. I think the information needs to be in the narrative—or out! --bp