

DNA and the Criminal Justice System: A Web-Based Community of Practice

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Introduction

The development of the Internet is strongly intertwined with the possibility of increasing the flow of information among knowledgeable actors. This is particularly important for today's government, which is characterized by increasingly complex tasks and decentralized structures. As we move to integrate technologies into our government, such as DNA into the criminal justice system, the need for a dialog within and across government agencies becomes ever more crucial. In this project, we examine DNA in the criminal justice system to uncover the role of the Internet in the diffusion of learning across governmental units. Our objective is twofold: First, we offer a model to augment existing institutions in creating a discourse around DNA and the criminal justice system by creating a community website on the subject. Second, we outline a research design to study the impact of that website on the criminal justice system.

Theoretical Background

The challenge to a decentralized system, which is typical of policy communities in the US, is to develop policies that can facilitate the fruitful spread of information. Generally, information is easier to create and spread within an organization than between organizations. The formal structure of an organization has a strong impact on the shape of the informal networks within it—ties tend to be within divisions, between peers, with advice between levels of hierarchy generally unidirectional (e.g., Han, 1996; Lazega & van Duijn, 1997).

The decentralization within the US governmental system at the stage of a transition into increasingly digitally maintained structures is critical. While a potential negative result is represented by the absence of the intra-organizational mechanisms that might arise for the sharing of information and learning within the organization, a potentially positive result is the experimentation (and thus learning) that might result in a decentralized system that would not occur in a centralized system. In our system of decentralized government most public managers are not within the same formal organization. Another mechanism to deal with decentralization is to belong to professional organizations, including a number of information sharing mechanisms. In the case of DNA and the criminal justice system, it is crucial for stakeholders to overcome the structural disadvantage that decentralization creates with respect to the spread of knowledge.

Here, the federal government has taken the lead in promoting the spread of information. By sponsoring the DNA database CODIS, the FBI has taken the role of facilitating the creation of communication within this community of primarily state and local labs. Nonetheless, our own evaluations of the websites of 17 organizations with an interest in DNA and the criminal justice system show that the information flows across these organizations suffer from certain inefficiencies (such as limited flows of information, unidirectional highly segregated information flows, or intransparent information flows). The central part of our project is a web-based forum for the exchange of information among individuals and institutions who are professionally involved in this area. Its aim is to assist these individuals and institutions in managing the challenges that DNA and the criminal justice system pose.

A Web-Based Community of Practice

The community website (<http://www.dnapolicy.net/index.php>) represents the core of the project. It serves as a communication platform for individuals involved in DNA and the criminal justice system, and therefore caters to a particular policy community. Access to the content is restricted for invited and

registered members only and offers personalized access as well as functionalities for each community. The functionalities have already been implemented and comprise:

- News - information, useful links supported by RSS news feeds and by news submitted by community members;
- Depository - scientific, practitioners, legislative resources, workshop material, articles provided, collected and published by the community members;
- Forum- ongoing discussion on the subject in a protected community space with various interaction possibilities, e.g. opening discussion threads, posting, rating, cross-community discussions;
- Community information - “who knows what” contact information to allow individual interaction.

Data Collection and Analysis

Data for the project are being collected and will be analyzed through a multi-level, multi-method research design. The website offers a research tool for data collection that will allow us to evaluate the website’s impact on the criminal justice system. In particular, we will carry out the following steps of data collection:

1. Preliminary in-depth interviews with selected members of the community;
2. Site visits and document research;
3. Network questionnaire (upon registration as web community user);
4. Website tracking: We will trace any single user’s action at the website. This will generate a detailed user interaction profile that can be aggregated and correlated with other collected data (e.g., which areas and contents of the website are visited, how often, what is user looking for at the website; sequence of site visits; individual search behavior; who starts discussion threads about what, who posts what; who contacts whom, etc.).

Expected Results

The development of a community website connected to the issues around DNA and the criminal justice system is designed as an intervention aimed at members of those communities. We will collect data on user actions (interaction with other users, use of information, dissemination of information, etc.) from two sources: both the community website and an online questionnaire will allow us to trace the process of information diffusion and learning within and across several distinct virtual communities.

The website tracking data will be analyzed on a monthly basis. The key relationship that will be examined is whether the website has an impact on knowledge, diffusion processes, and attitudes, controlling for actor-level resources and jurisdiction characteristics. We expect this analysis to yield important insights on the development of the community network, the communication processes, formal and informal structures, and leadership roles, to name a few.

Furthermore, the website will provide a useful long-term resource for individuals with an interest in DNA and the criminal justice system. On the whole, we expect that the website will have a significant effect on the pattern of information acquisition and diffusion by the members of the targeted policy communities, and will ultimately impact the criminal justice system.

References

- Han, S. K. (1996). Structuring on-the-job networks. *Social Networks*(18), 47-67.
- Lazega, E., & van Duijn, M. (1997). Position in formal structure, personal characteristics, and choices of advisors in a law firm: A logistic regression model for dyadic network data. *Social Networks*(19), 375-397.