

## **The Role of NPOs/NGOs in Building Science and Technology Social Capital within Underrepresented Communities**

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People of color and women, especially those living below the poverty line, are less likely to have social capital than their counterparts. Lack of social capital negatively correlates with job promotion, owning homes, financial stability, and inherited social networks. They also have less influence on policy, and are less likely to create social mobility for themselves. One of the areas where this gap becomes evident is in the development and utilization of technological and scientific advances. Specifically, a gap lies between populations that have access to scientific and technological advancements, including but not limited to medical treatments, decision makers, and information surrounding scientific principles and emerging technology. The development and use of genetically engineered food, synthetic biology, and other emerging technologies are areas of science and technology where this gap can be seen.

As NPOs/NGOs increasingly provide civic goods and services for underrepresented communities, including addressing hunger and food security, questions arise for social scientists and practitioners as to how NPO/NGO management can be more conducive for building technology and science social capital within these communities on an international stage. An appropriate research topic for social scientists involved with emerging technology may be to explore how NPOs/NGOs can actually create or build social capital for underrepresented populations with regard to the development and utilization of emerging technology and its applications.

There are two reasons why this kind of study would be important for non-profit management. First, NPOs/NGOs are increasingly becoming organizations that provide civic goods and services that are necessary for many people to function in today's society, especially women, people of color and the poor. Often times, these civic organizations are increasingly being associated with the degradation of social capital for underrepresented communities (Wacquant, 1998; Bourdieu, 1985; 1986). Second, because these types of organizations represent civic goods and services, NPOs/NGOs have a unique position in society. Their perpetual interactions with these populations may prove to be a source of social capital for these underrepresented communities. As our society's population grows, and governmental programs become obsolete, like social security benefits, NPOs/NGOs serve more and more of the population; more NPOs/NGOs are being contracted to provide governmental services; more NPOs/NGOs are operating globally (Cross & Lin 2008; Leana & van Buren 1999). These face to face interactions that serve to be a possible source of social capital, can also, be adapted to strategically and continuously meet the needs of these underrepresented groups, with regard to emerging technology being utilized in their neighborhoods, which are in constant change as well.

Focusing on social capital for the underrepresented communities also ensures that the NPO/NGO is meeting the needs of the population they serve, in real time. Adequately meeting the needs of a NPOs/NGOs' target population is a big debate in the academic-practitioner community. The growing critique of service organizations are that they are in the business of repeat customers. Service organizational goals are not geared toward serving the consumer in such a way that they gain social mobility or social capital, it is to ensure that the populations have just enough to get by with their current circumstances. This model of service delivery allows for a recurring circle of continued care instead of providing a means where skills are built and utilized to acquire and maintain social capital, and therefore social mobility. This model of service delivery also denies other consumers assistance because of the dependence factor the model builds. The literature calls this support capital, a type of social capital that attempts to help individuals deal with their current circumstances versus leverage capital, which allows individuals to "change their life circumstances and take advantage of opportunities" (Hepworth & Stitt 2007, pg. 898).

Since there are several types of individual social capital as defined by the literature, the following is a sample of social capital constructs that can be associated with science and technology: 1) Network capital, specifically, the power dynamics that result from networks in the form of information sharing and decision making power; 2) Human capital or legitimacy i.e. education level, technical and industrial certifications or licenses, experience with scientific applications and processes, acquisition of new skills; 3) Economic capital which i.e. access to funding, access to information about what is being funded, and for what purpose.

Not only do NPOs/NGOs need to build social capital for those they serve, but research has found that the NPOs/NGOs that obtain and maintain organizational high social capital have a better opportunity to meet the needs of the populations they serve. Organizations high in social capital are allowed flexibility, attain more legitimacy and funding, which in turn leads to more survivability, therefore allowing for more individuals of underrepresented communities to be served, increasing NPO/NGO and individual effect on the societal forces. Organizational social capital also has several definitions and may have several connections to science and technology. The following types of organizational social capital can be associated with science and technology; 1) structural capital, which are the patterns of linkages in its networks with other organizations that produce new knowledge concerning leveraging of public money, the ability to harness emerging technology, the ability to adapt the workforce; 2) relational capital: a) trust and b) norms associated with the legitimacy of the organization; and 3) cognitive capital: the organization's ability to create and sustain ongoing relationships through collaboration and/or cooperation processes.

Being that social capital is defined as resources and norms embedded in the social structure that are accessed by purposive action, the question arises as to how to access these embedded resources or how to change the norms and rules surrounding these resources so that they can be more easily accessed. Essentially, NPOs/NGOs shape societal structures by building social capital for the underrepresented groups that they serve, who in turn, act as individual actors shaping the society's rules about who gets access to the resources. Schneider (2006) stated that "social relationships and patterns of trust (social capital) that enable people to gain access to resources like government services, organization funding, and jobs are crucial..." (pg. 243). Society is simultaneously, shaping and influencing NPOs/NGOs and individuals of underrepresented communities. These connections can be utilized to ensure that the voices of underrepresented communities not only can be heard, but can be used to design the technological and scientific contributions to the society they live in.

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