

# **COMMUNITY-BASED PARTICIPATORY RESEARCH: IMPLICATIONS FOR SCIENCE AND TECHNOLOGY DECISION- MAKING IN THE UNITED STATES**

**Jill Chopyak, Khan Rahi and Babar Sher**

*The Loka Institute, Amherst, Minnesota, USA*

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## **Summary**

The article examines how community-based research fits within the context of US science and technology policy. It examines the history of US science and technology funding trends, and how such trends ignore citizen participation or input in science and technology.

The article then examines community-based research as a way of addressing this issue, and how it is impacting science and technology decision-making worldwide. The article ends with policy recommendations that will encourage citizen participation in decision-making.

## **1. Introduction**

Science and technology policy in the United States since the Second World War has included three predominate players: industry, Federal Government, and universities/established research institutions.

Each of these players have held a particular role in setting the agenda of US science and technology policy to the mutual benefit of all three. The key player left out of this

equation, however, has been the public—those most affected by developments in the scientific and technological sectors.

Over the past fifty years, the primary role of the US government in science and technology has been that of funding research and development (R&D). From 1953–1978, the US government funded 50–60% of total R&D funding in the USA. Half of this has consistently been spent on defense-related areas. This funding went to academic researchers in universities and federally-sponsored research institutions, and to public and private laboratories that furthered broad Federal objectives, such as military security. Occasionally, developments from this research had a commercial use, and were used and marketed for profit, but this was not the norm. During this period, science and technology was controlled and developed by experts, who would transfer this information and results to the public as needed. Public involvement in the process was not considered, except as a consumer of the commercial innovations resulting within industry.

After 1978, commercial R&D funding began to supersede the federal government, making the market and private sector the drivers of scientific and technological developments. This trend has continued to the present day. Currently, industry R&D spending is two to three times the amount of Federal spending. This shift has changed the relationship between universities, Federal funding institutions, and industry. University research funded by industry (rather than government) has increased over the past decade and continues to rise.

This has implications for research ethics, accountability, and conflicts of interest. At the same time, the public increasingly understands complex scientific and technological developments, as researchers are choosing to work within non-governmental or public-interest based research organizations. The old relationship between science and society – dominated by a one-way communication between the expert and society – will have to fit into a new mold of relationship: one that is based upon communication, public involvement, and new models of trust.

This new framework has been tested in many areas around the world. Methods that encourage citizen input in science and technology decision-making are being used in many European countries, and have expanded to other parts of the world. For example, the Danish ‘consensus conference’ model has been done in countries throughout the world (USA, Japan, Korea, Australia, Israel and other European countries). This model puts the average citizen in the position to make policy recommendations on highly complex science and technology issues. It demonstrates that when citizens are given the necessary information, they can make balanced judgments and reach a consensus about complex policy issues, providing a clear and cogent set of recommendations.

In addition to bringing citizen input into science and technology decision-making at the national levels, there is a movement towards bringing citizen participation and input into the research process within communities. The Dutch have modeled this process through the development of ‘science shops’ – centers within universities that provide research assistance to grassroots organizations, local government, worker groups and other public-interest organizations at little or no cost. The Dutch shops have spurred

developments of science shops in other countries, including the United States, Canada, Ireland, Korea, and Israel.

## **2. Public Participation in the Research Process: The History of Community-Based Research**

The process of bringing public access into the research process is known as community-based research – a collaborative partnership between researcher and community. Turning the traditional research model on its head, community-based research (CBR) is conducted by, or in participation with, the community that is affected by the problem the research attempts to address.

Practitioners who challenged conventional top-down approaches to international development pioneered CBR several decades ago. In the early 1970s, researchers – primarily in Asia and Latin America – began to question the reductionist orientation of most research, and its inability to solve the myriad of problems individuals within these societies were facing. Working with oppressed communities, researchers began to collaborate with community members in designing and implementing research projects that had direct relevance to their struggles.

The idea of community-based research grew during the 1980s as those involved in international development grew increasingly frustrated with their inability to solve problems related to community development, education, health and poverty. Development practitioners began to work closely with researchers and community members using participatory research methods as a way of developing effective solutions to many of the problems they were facing.

By 1997, the Fourth World Congress on Action Research in Colombia, included presentations on local and international community-based research projects. For example, villagers from Kenya, Cameroon, Nepal, Pakistan, Guatemala, and Colombia presented a collaborative project with researchers to strengthen community water management.

The Urban University and Neighborhood Network in the US presented a project where researchers from seven large cities in the State of Ohio, each with its own state university, linked themselves with neighborhood-based organizing and development groups in their cities.

## **3. Community-Based Research in the USA**

CBR began in the United States during the late 1970s and early 1980s as public policy reduced services provided by the Federal government. Such policy changes pushed citizens to take action, affecting change in their own communities without government assistance. Citizen-based organizations proliferated, taking on responsibilities previously done by Federal institutions. Because many of the people and organizations believed in the norms, values and laws of democratic decision-making and using knowledge to create change, they have worked since that time to defend the

rights of ordinary citizens against the harmful impact of science and technology decisions and transformations.

Community-based research emphasizes the incorporation of the often-forgotten ordinary citizens in finding solutions. It is a collaborative and participatory process that involves a partnership between citizens (socially and economically marginalized community members, grassroots activists, concerned citizens, workers) and university researchers or professional scientists aimed at finding critical solutions to a wide range of social, environmental and economic problems.

Community-based organizations and the public have increasingly challenged universities in the USA to direct their research and public educational resources towards 'real-life' situations in their communities. There are many examples of universities taking up this challenge and involving themselves in their communities, directly and indirectly making such resources available to citizens groups and in the process affecting significant change.

Such efforts are not always easily done, however. Within the community sector, there exists a historical mistrust of institutional and professional research. Not being from or rooted in the community, researchers have traditionally come into a community without a sense of its cultural, social and political relationships. Their research often has had significant implications for local decision-making, particularly in terms of resource distribution. Many researchers – despite their desire to truly help – instead have exacerbated community problems. The lack of trust between researcher and community has led many individuals in the USA to rely more on community-based organizations, where people they know and trust are driving or doing the research themselves. In such cases, community members evaluate and determine the existence of a problem, decide how to solve the problem they just defined, and implement solutions.

#### **4. Community-Based Research: Research for Change**

As a collaborative approach to inquiry, CBR makes use of techniques and strategies commonly applied in the behavioral and social sciences and which take into account people's history, culture and emotional lives. It favors consensual and participatory procedures that enable people to investigate systematically their problems and issues, devise plans to deal with these problems, and formulate powerful and sophisticated accounts of their situations. Common features of CBR include its accessibility to both professionals and nonprofessionals, and that its applicability is designed into the process from the beginning.

CBR seeks to make people participate actively in formulating solutions to problems at hand. This encourages a feeling of ownership and motivates individuals to invest their time and energy to help shape the nature and quality of their lives. The growing interest in CBR methodologies amongst non-governmental organizations (NGOs), community-based organizations, researchers, and funders is expanding our knowledge about CBR methodologies and impacts. The following highlights the key issues facing CBR practitioners in the USA:

1. The main concern amongst practitioners is securing community participation in the research process.
2. There are efforts to develop appropriate indicators to assess the multiple impacts community-based research projects are having on communities and society.
3. The public is increasingly concerned about research ethics, accountability, and conflicts of interest as industry funding for research is penetrating the university. These concerns are making CBR more attractive as it addresses many of these issues through its emphasis on public participation.
4. Many NGOs who are using CBR methodologies have deliberately sought to incorporate participatory methods into the broad context of their work. For example, they are using community-based research practices in their appraisal, monitoring and evaluation processes.

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## Biographical Sketches

**Jill Chopyak** is currently the Executive Director of the Loka Institute, a national non-profit organization working to bring a community voice into research, science and technology decision-making. Her background is in international trade issues, sustainable agriculture and international environmental policy. Previous to her work at Loka, Jill worked in Washington, DC for Redefining Progress, where she conducted research on a variety of topics, including: the federal statistical system, global climate change, and economic mechanisms to encourage the transfer of low-emission technologies from industrialized to developing countries. From 1992–1994, Jill worked in southern Italy where she founded a one-year, sustainable land management program for young people. As an intern at UNICEF in Geneva, Switzerland in 1989, Jill conducted research on the effects of World Bank and IMF structural adjustment policies on Latin American children. Her publications include *The Great Data Paradox: Threats to the Integrity of the Federal Data System in the Information Age*, *The Micro Effects of Macro Policies: GATT and Vermont Agriculture*, and *Community-Based Research: Research for Action*. Jill holds a BA in Global Issues and an MA in International and Intercultural Management from the School for International Training, and is a member of the Board of Directors of The Other Economic Summit (TOES/US).

**Khan Rahi** is the Coordinator of the Loka Institute's Community Research Network (CRN) project. Khan is a community based researcher and community development organizer in human services and race relations. He has worked with community-based organizations and a cross-section of institutions within the human services field in North America. Mr. Rahi has conducted several action research projects and organizational reviews dealing with different aspects of access and equity problems affecting diverse immigrant communities. A particular focus of Khan's work has been the analysis of partnership and coalition-building initiatives. Khan is also a non-governmental organization representative (NGO) in the International Metropolis Project which is a network of 20 countries and six international organizations that share perspectives on immigration policy by means of applied academic research. He is a member of the Management Board and Chairs the Community Partnership Council of the Centre Excellence for Research on Immigration and Settlement-Toronto Metropolis Centre. He has held a number of community advisory positions at all levels of government and public institutions and special purpose bodies, including the Task Force on Community Access And Equity, City of Toronto (1999-00). Board Member, Custody Review Board (Young Offenders) Government of Ontario. Khan Rahi is an Afghan-Canadian residing in Toronto, Ontario. He has an M.A. in Sociology, University of Manitoba, Canada B.A. in Sociology, University of Lethbridge/American University of Beirut.

**Babar Sher** is currently an intern at the Loka Institute, working primarily on a project to establish guidelines for community-based research. Originally from Pakistan, Babar has been associated with the field of development since 1995. He has worked with the Cavish Development Foundation, a local non-governmental organization in Pakistan, focusing on issues of participation, institutional development, and gender. Before working with the Cavish Development Foundation, Babar worked with ACTIONAID Pakistan in their project area in the Southern Punjab. The major focus of the program was the establishment of equitable and accountable community organizations that could take on the development activities in their villages. Babar has experience in training, management, advocacy and building community management structures. He holds a Master's Degree in Geography from Punjab University Lahore-Pakistan, and is currently completing a Master's in Sustainable International Development from Brandeis University, USA.