WHO COUNTS REALITY AND WHY IT COUNTS: SEARCHING FOR A
COMMUNITY-BASED APPROACH TO QUANTITATIVE INQUIRY

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ABSTRACT

Community-based research is often discussed in a way that assumes an inherent qualitative methodological
approach. This includes discussions of research design, data collection, and analysis. The limitations of
quantitative research aside, ignoring this strategy for developing knowledge may result in many project
outcomes going undocumented and unmeasured, and it may ultimately be disempowering for the people and
organizations that community-based researchers seek to assist. On this basis, I argue that researchers should
take a more holistic and pragmatic approach to methods and analysis, following efforts to go beyond the
traditional qualitative-quantitative divide. Doing so will provide the basis for addressing a wider range of
community-based project outcomes. Examples from work with traditionally-underserved farmers and
community-based organizations in the United States are used to illustrate possibilities.

At the 2008 meeting of the Rural Sociological Society, critical dialogue occurred
concerning the topic of public sociology between the icons Michael Burawoy and
John Gaventa. A leading critic of traditional research and champion of research
efforts to support participatory development, Gaventa made an important point
about the work of development theorist Robert Chambers. Noting the title of
Chamber’s (1997) book, Whose Reality Counts?: Putting the First Last,
Gaventa said that scholars should also ask, “Who counts reality?” He went on to
discuss many challenges in social research that must be confronted if this work is
to do no harm at the least and make some small contribution to the world at best.

Gaventa’s argument made me stop and think. Some of the ideas he influenced
for this article, however, may go in a direction beyond his original intentions.
Reflecting on Gaventa’s question, I reasoned that there is a large gap in the
theoretical, methodological, and pedagogical work of community-based researchers
(broadly conceptualized here to include those approaches from across place-based,
participatory, and action-oriented frameworks). In sum, many scholars interested
in alternative approaches to research have been scornful of quantitative research
because “quantification” of social phenomena is inherently disempowering.

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Reading across the community-based research literature, it is implicitly assumed, and sometimes explicitly stated, that empowering research is necessarily qualitative research. Many leading authors convey this perspective. For instance in *Action Research*, Ernest Stringer (2007) maintained that:

Unlike quantitative research (sometimes referred to as experimental or positivist research) that is based on precise definition, measurement, and analysis of the relationship between a carefully defined set of variables, action research commences with a question, problem, or issue that is rather broadly defined. (p. 19)

Later in his work, Stringer did acknowledge that quantitative information can be useful as part of a study, but clearly he positioned action research in the qualitative realm.

For his part, Chambers was even more directly critical of quantitative inquiry. In his argument against mainstream development professionals, he argued (2009):

At worst, they grub around and grab what numbers they can, feed them into their computers, and print-out not just numbers but more and more elegant graphs, bar-charts, pie diagrams, and three-dimensional wonders of graphic myth with which to adorn their reports and to justify their plans and proposals. (p. 40)

Again, much like Stringer, Chambers did allow some room and roles for quantitative inquiry by acknowledging, “These criticisms do not question the power, relevance, and utility of science, measurements, and mathematics in many domains” (2009:42). It is important to note that Chambers (2007) has been working on participatory approaches to generating statistics that had a major influence on the development of this article. Those are addressed in a later section.

Acknowledging the logical basis for arguments in favor of the triumph of qualitative over quantitative methods in community-based research, I believe that dismissing quantitative research outright is problematic and overly simplistic. Even more to the point, it may be just as disempowering to the development of knowledge as the approach taken by the much derided positivist methodologists who claim that scientific research is necessarily quantitative. The point is that the quantitative versus qualitative divide has researchers caught in an “us versus them” situation. No matter what their theoretical and methodological allegiances, this
keeps researchers from engaging in work that meets the potential of what the social sciences have to offer community development initiatives. Dismissing ways of knowing and sharing limits researchers’ tools for documenting, analyzing, and disseminating project outputs, outcomes, and gaps in development work. As a remedy, multiple paths need to intersect, including the crossroads of community-based and quantitative research.

THINKING CRITICALLY AND PRAGMATICALLY ABOUT RESEARCH

Statistics are used to characterize the places where people live their lives, whether households, organizations, communities, cities, states, countries, or the global system as a whole. Chambers recognized this in his statement (2009:42), “In power and influence, counting counts.” Many researchers are adept at using statistics to paint pictures and tell generalized stories of groups and places. The rise of the personal computer, advanced multi-level statistical and mapping software, and ready access to a range of secondary data have led to a proliferation of such studies.

The focus of those studies is typically on the problems that people and places face. For instance, the State of Mississippi, and especially that part of the state known as the Delta region, is often called one of the poorest places in the country, a place where people live in third world conditions, a place where racial strife and inequality go hand-in-hand. Many of these characterizations of people and place may be factually accurate, but it is worth asking whether this approach to characterizing people and the places where they reside constitutes good social science. Do the people from Delta towns really need a researcher telling them what they and most non-scientists already recognize – that they suffer from the effects of persistent poverty? While quantitative research provides a valuable set of tools for understanding the social world, these tools are often used in ways that are problematic and disempowering.

Admitting these weaknesses of quantitative research, however, similar arguments can be waged against traditional approaches to qualitative research. Compare a statistical report on the social and economic conditions of a place with the typical qualitative report. The former tells a restricted story by using numbers, charts, and graphs, but the latter paints a limited view as well, using selected stories and quotations. Although each of them provides insights and they make valuable contributions to the knowledge base, both are incomplete. More often than not, there is little attention paid to how the results might be useful for informing action toward social change and development.
Neither strictly quantitative nor strictly qualitative research approaches are necessarily useful for community work in pursuit of change. There are limitations in both realms. Chambers (2007:9) took on this issue in arguing, “qualitative and quantitative have in common that whether separately or together their dominant mode is extractive, that is, they are used to gather and take away data for analysis.” So, rather than just dismissing a particular research method, scholars would do better to acknowledge inherent weaknesses and work to design studies that overcome the challenges plaguing the broader research enterprise.

FACING ISSUES OF EMPOWERMENT IN QUANTITATIVE RESEARCH

The stark reality is that statistics are used in decision making. No matter how much scholars may lament the objectification and quantification of people’s lives, people in positions of power use the results to describe situations and make decisions. A good example of this is that a periodic census of the population is mandated in the *U.S. Constitution*. Furthermore, data from the U.S. Census Bureau (www.census.gov), such as the Decennial Census and the American Community Survey, are used for everything from deciding political districts to calculating state and local qualifications for government funding of important educational, social service, and community programs. Failing to recognize and engage with this challenge, researchers committed to purely qualitative methods are leaving people with only some of the tools needed to obtain power to shape their own lives and transform the ways in which decisions are made.

Professional qualitative scholars may overlook it, but people working at the grassroots level often recognize the importance of statistics to their lives. For example, I have been involved in several projects working with limited-resource farmers to document their needs, interests, and recommendations concerning rural development policies and programs. Through the leadership of the Rural Coalition, numerous community-based groups were engaged in a common project. Starting with a workshop focused on the design and methods upon which the project would be based, some academic members of the team – myself included – were convinced that the community partners would want to do oral history interviews and group processes at the expense of quantitative approaches.

Instead of a myopic view, however, the community workers were much more grounded and practical in their orientations. They noted the importance of both quantitative and qualitative methods. Through dialogue, they clearly recognized the weaknesses of censuses, survey research, and other methods of quantitative work. Simultaneously, they pointed out the power of statistics and the importance of being
able to summarize vast amounts of information. They also pointed out that many times people in positions of power want to hear the statistics, similar to Chamber’s (2009:42) note that “counting counts.” In the end, they did not just call for the qualitative research viewed by academics as participatory and empowering. Instead, they called for the research enterprise as a whole to move in the direction of participation and empowerment.

I use this example to demonstrate the point that community-based partners often take a broader view than do professional scholars. To catch up, we need to avoid the one-size-fits-all and silver bullet approaches to research, no matter what the methodological flavor. There are multiple dimensions to society, and access to a wide range of tools is needed for describing, understanding, and interpreting those dimensions. Attempts to identify the one best approach lead researchers down paths that can only end in the development of incomplete knowledge.

Researchers should engage in work across methodological boundaries. Specializing and developing expertise in particular approaches is fine for individual researchers, as this type of specialization is needed for continued refinement of the different tools available and for obtaining the expertise in how to use them. Yet we should avoid discounting the contributions that others might have to offer. Interdisciplinary and multi-methods teams provide a basis for breadth and depth in any study, and they contribute to innovation.

Engaging with quantitative research methods and statistical analysis techniques is warranted as important for individual empowerment and broader liberation as well. Empowerment is often listed as a goal of community-based, participatory, and action-oriented forms of research. As one illustration, Daniel Selener (1997:42) has maintained that “the overall outcome participatory researchers aim for is empowerment of the oppressed” (emphasis in original). Unfortunately, other than noting the disempowering effects of quantitative research, there is little attention in the literature directed toward the potentially empowering influence of building quantitative literacy, skills, and research capacity.

Again, however, people working on the frontlines of community offer some insights to fill the gaps. In their book entitled Radical Equations, Civil Rights organizer Robert Moses and his coauthor Charles Cobb (2001) argued:

\[\text{The idea of citizenship now requires not only literacy in reading and writing, but literacy in math and science. And the way we guarantee this necessary literacy is through education conceived of much more broadly than what goes on in classrooms. (p. 12)}\]
Although Moses and Cobb were referring to the importance of teaching algebra using socially relevant and active learning strategies, their point is equally valuable to the social sciences and pursuit of change through formal and popular education strategies. In a similar vein, Eric Gutstein (2006) linked math literacy to empowerment in his work entitled, *Reading and Writing the World with Mathematics*. Building from Paulo Freire’s (1970) concepts of reading the world and writing the world through the word, Gutstein (2006:30) argued that, “*Reading the mathematical word* is equivalent to developing mathematical power” (emphasis in original). He noted that not understanding mathematical concepts and calculations may prevent students from accessing important information and limit their achievement in the face of real barriers. He concluded the point by stating (30), “students need specific tools to successfully transform society; mathematical power is such a tool.”

Gutstein (2006:27) also addressed what it means to “write the world with mathematics,” by connecting it with broader social change. He stated, “I view writing the world with mathematics as a developmental process, of beginning to see oneself capable of making change” (27).

In terms of educating in both formal and informal settings, teachers should avoid forcing students into qualitative versus quantitative boxes. The same can be said for how we interact with community partners on applied projects. Instead of strictly arguing for the one best approach to research, or even making people think in “one versus the other” ways, the goal should be to help people build their research toolboxes and facilitate skill development for choosing and using the tools appropriate to the project at hand. In other words, building off C. Wright Mills’ (1959) concept, they should help students to develop the use of research tools as part of their intellectual craftsmanship. Method alone should not drive research.

**EXPLORING OPPORTUNITIES FOR A COMMUNITY-BASED APPROACH**

So, what does this mean for how we approach and classify research? There are different ways of asking research questions and multiple tools that may be used. Confronting this issue is not a new or novel initiative, but it is instead part of an ongoing effort to open participation in knowledge development. The popular epidemiology (Brown 1997; Clapp 2002) and citizen science (Irwin 1995) movements are particularly noteworthy examples of this in the realms of environmental studies and public health.

I maintain that researchers should take a more holistic and pragmatic approach to methods and analysis, following efforts for mixed methods to go beyond the traditional qualitative-quantitative divide, thinking more in terms of
intensive/extensive (Sayer 1992; Stoecker 2005) and exploratory/confirmatory (Onwuegbuzie and Leech 2005; Onwuegbuzie and Teddlie 2003) distinctions. Furthermore, there are opportunities for making the construction of statistical information more participatory (Chambers 2007).

In *Research Methods for Community Change*, Randy Stoecker (2005) argued for community-based researchers to eschew the traditional qualitative versus quantitative distinction and instead follow Andrew Sayer’s (1992) lead in distinguishing between intensive and extensive research. According to Stoecker (2005:7), “Academic researchers have often seen qualitative research on a few cases as good only for suggesting variables that can be better studied by large-scale quantitative survey research.” From a different position, “community workers trying to find out what is causing a real community problem are more likely to use the general results obtained by such large surveys to suggest things to look for in tracing… problems in their own community using an intensive research model” (7). However, Stoecker (2005:7-8) shed light on the fact that “Community workers also conduct their own extensive model large-scale survey when they are trying to understand neighborhood residents’ perceptions or opinions, or trying to ascertain the extent of housing deterioration in a community.” Stoecker’s viewpoint offers a holistic and pragmatic alternative to the traditional qualitative versus quantitative divide. It provides a more useful strategy for classifying ways of knowing.

Anthony Onwuegbuzie and Nancy Leech (2005; also see Onwuegbuzie and Teddlie 2003) offered a compatible and compelling approach to classifying and distinguishing between research approaches. In their call for methodological pluralism, these authors made exploratory and confirmatory distinctions. They argued for a framework occupied by exploratory methods of analysis (e.g., exploratory theme analysis, descriptive statistics, exploratory factor analysis, cluster analysis) and confirmatory methods of analysis (e.g., confirmatory theme analysis, inferential statistics).

Taken together, these authors (Onwuegbuzie and Leech 2005; Onwuegbuzie and Teddlie 2003; Stoecker 2005) have provided the basis for a framework consisting of two research continua (see Figure 1). One continuum is whether methods of data collection and analysis are more intensive or extensive. The other continuum concerns the focus of being exploratory or confirmatory. Intensive-exploratory research has traditionally been the domain of qualitative researchers and extensive-confirmatory research has been the domain of quantitative researchers. Still, other combinations are possible and present opportunities for growth and development through community-based research.
Over the life of a community-based project, doing work across these continua would be advantageous. To summarize the importance of mixed methods, Chambers (2007:6) noted, “Complementarities have been recognized between depth and detail from qualitative research and representativeness and statistical robustness from quantitative research. The two also inform, correct, and augment each other.” From an evaluative standpoint, mixed methods allow for investigation of process, outputs, and outcomes from development projects, ranging from specific case studies to broader comparisons with population trends.

Going beyond mixed methods, Chambers (2007) has taken several additional steps by addressing the construction of statistics through participatory research.
His work is moving toward innovations past the limits of traditional quantitative research via questionnaires to participatory methods that can be utilized to generate statistical data. At a minimum, these data provide checks on and augment data from questionnaires and census counts. However, he has maintained that participatory methods can often generate more accurate and meaningful data (Chambers 2007). As part of participatory research activities (e.g., mapping, modeling, sorting, ranking, voting), numbers can be generated through counting, measuring, estimating, ranking, and making additional calculations.

EXAMPLES

Borrowing from some methods being used to synthesize quantitative research with a community-based approach, I have been involved with a diverse group of researchers, practitioners, and traditionally-underserved farmers (women, racial/cultural minorities, and small-scale producers) to conduct research and inform the policymaking process. This work has now encompassed more than a decade, much of it affiliated with a multi-institutional collaborative network called the Institute for Community-Based Research. Efforts have included focus groups organized by local community-based groups, facilitated by diverse partners, and documented by a trained evaluation team. Through several iterations over the years, participants were asked to:

- Provide individual-level quantitative data by responding to questionnaires about their farm operations and interactions with government agencies.
- Participate in processes to document and count types of experiences, such as writing short responses about positive (green) and negative (red) interactions on colored cards that were later collected and tabulated.
- Engage in group processes that involved role-playing and relative ranking (e.g., by using “money” to assign program funding) to address preferences.

Augmenting formal focus group research settings, people participated in workshop and conference meetings organized to share results from the research, provide critical reactions to the research team, and translate the information into policy recommendations. Participants in these meetings ranged from farmers and farm workers to leaders from community groups and larger nongovernmental organizations (NGOs), and representatives from USDA (U.S. Department of Agriculture) agencies.
Additionally, members of community groups were trained in interviewing techniques for both standardized and open-ended questionnaires, and had input on the questions asked. They then assisted with data collection. Their involvement in survey research provided much needed data, and the process helped them to develop research skills and organizational capacity.

Building from these processes, a research team has been working across several of these projects to analyze existing quantitative data from the U.S. Census of Agriculture (www.agcensus.usda.gov/), assist leaders from community groups to understand/interpret the secondary data, and engage their organizations’ members in assessing the accuracy, gaps, and ways of improving the available information. This interaction took place during focus groups and participatory meetings (for example, see Kleiner et al. 2012).

Results from these projects have been used to inform NGO efforts to reform existing programs and policies within the USDA and to propose the development of more innovative and socially just initiatives (Green and Kleiner 2009). Examples include, but are not limited to, establishment of an Assistant Secretary of Civil Rights position within the USDA, construction of the Minority Farm Registry for better outreach and census counts, and major reforms toward improvements in disaster, conservation, and new/beginning farmer initiatives. Although the research alone was not responsible for these changes – it took a major advocacy campaign across numerous NGOs and their networks – the results did provide information that was otherwise unavailable through more traditional studies.

Another example of integrating quantitative research is with a community-based program in which I have been involved, that is exploring population changes at local and regional levels to understand the implications of such dynamics to the work of nonprofit organizations (Green, Kleiner, and Thomas 2012; Kleiner et al. 2011). This ongoing program entails working with leaders of community organizations to identify research questions of importance to their respective groups’ grassroots initiatives. Then college students access and conduct preliminary analysis of secondary data from sources such as the Decennial Census, American Community Survey, and vital records on births, diseases, and deaths. This is followed by presentation of the findings to community partners and then engaging them in facilitated dialogue about the research. The community partners critique the work, identify gaps, offer interpretations, and develop revised research questions. These conversations are documented and incorporated into the findings. Additionally, residents of the community are interviewed and/or participate in focus groups to diversify the voices represented in the research. Students then take
on the responsibility for developing revised narratives that become the shared intellectual property of the community partners and the university-based scholars.

CONCLUSION
Through community-based research and as a diverse body of scholars, I propose that we address the questions around who counts reality and why it counts by being proactive. Engaging with each other, the collective “we” will count reality and make sure that it really does count in informing community building, development initiatives, and policy changes. This will require a holistic framework that goes beyond traditional divides over quantitative versus qualitative methods to include a place for pragmatic and pluralistic approaches to research and development of knowledge. These should include attention to the intensive-extensive and exploratory-confirmatory research continua and innovations in participatory construction of quantitative data and empowerment by being able to read and write the world.

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