Introduction to the *The Oxford Handbook of Multi and Mixed Methods Research Inquiry.* Sharlene Hesse-Biber & R. Burke Johnson. Editors. (New York: Oxford University Press, Forthcoming, March, 2015).

Navigating a Turbulent Research Landscape
Working the Boundaries, Tensions, Diversity and Contradictions of Multi and Mixed Methods Inquiry

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Abstract

The metaphorical concept of border work provides an introductory starting point for this Handbook's overall vision. To engage in multi and mixed methods research (MMR) requires working at the borders of disciplines and navigating across a turbulent MMR landscape characterized by deep epistemic, theoretical, and methods divides. The chapter introduces the research challenges multi and mixed methods researchers confront in doing border work. Researchers are introduced to a wealth of research strategies that provide "ways forward" for incorporating ethics, diversity, social justice, and social policy into the MMR praxis. This chapter also tackles the range of new technologies, theoretical perspectives, and MMR designs for bridging qualitative and quantitative divides. The chapter ends with the collective research insights and wisdom gathered from our Handbook authors who shared their research insights and the items they would place in their MMR backpack for their journey.

Keywords: multimethods, mixed methods, border work, new technologies, diversity, ethics, social justice, social policy

The concept of a border provides a metaphor for imagining the journey this Oxford Handbook of Multi and Mixed Methods Research Inquiry will take you on. The concept of a border informs the Handbook's very organization and the underlying themes contained within its different parts. Each part of the Handbook can be considered to be a type of border. Within each part lie chapter layers of sameness and difference. As readers move between these chapters and from one part of the

Handbook to another, they engage in crossing borders. Navigating borders and crossing borders is the act of doing border work. Let's explore these concepts in more detail.

Paula Gunn Allen (1992) used the term border studies to refer to those researchers crossing the borders of multiple disciplines. Higonett (1994) employs the anthropological term contact zone to depict the interactions and engagements of scholars working at disciplinary borders that are not "static lines of demarcation" but "improvisational and interactive." A border "localizes what it strives to contain or release. It is rarely a smooth seam." Borders are sites of innovation, "of rupture, connection, transmission," and those working at the borders begin to "move beyond one-way questions" (Higonett, 1994, pp. 2–3; See also Hesse-Biber & Leckenby, 2003).

Traditional academic disciplines set up borders. Residing within them are the specific methods practices and theoretical perspectives that are often influenced by departmental cultures. They provide research courses training students in specific disciplinary methods and encourage publications in targeted disciplinary journals. Academic disciplinary borders can and do pose barriers to those researchers who engage with mixed methods research.

Mixed methods research projects, in contrast, seek to forge a diffuse and open set of interdisciplinary and trans-disciplinary research relationship structures—a process known as "de-disciplining" (see Richardson, 2000). Transgressing disciplinary boundaries can open up new ground for mixed methods researchers from different disciplines to collaborate and engage with new questions, a space to brainstorm about their ideas and research praxis, as well a place for forging new pathways toward working in interdisciplinary work. Crossing disciplinary borders may require mixed methods researchers to become flexible, patient, resilient, sensitive to difference, and willing to take risks in applying theory and praxis.

The fields of multi and mixed methods research (MMR) holds a prominent place in the de-disciplining process given their potential to provide the flexibility to tackle complex analytical and interpretative issues that arise when bringing diverse ways of thinking and different types of data to bear in seeking answers to multifaceted questions (See Part III: Contextualizing MMR Within and Across Disciplines and in Applied Settings, in this volume). To engage in border work means that you, the researcher, will begin to see yourself working the tensions that lie within and between these borders. This type of work will often remove you from your methods and theoretical comfort zones. Practicing MMR entails crossing a range of different borders. For example, a research sociologist who uses economic theory and quantitative data to understand the rates of violence against women may thereby create an innovative theory of violence not found within his or her own discipline. While crossing borders can provide some unique opportunities, such crossing of borders also contains a set of cautionary tales. Patai and Koertge (1994) call attention to "interdisciplinary opportunism"—a situation where scholars who appropriate work from another field do so in a random and uncritical manner. While they apply this idea to scholars working within women's studies, their concerns apply to all scholars who work at the borders of multiple disciplines. Crossing borders also implies crossing important epistemological, methodological, and pedagogical divisions within and between these spaces. Working across these different divides, then, requires caution when borrowing concepts and ideas from other disciplines: Are you using ideas/concepts from other disciplines uncritically? Is your definition syncing with another's? Have you gained enough expertise in a range of disciplines to know you are doing so? Do you have the research methods and analytical interpretive and writing skills you will need to traverse and engage with these borders?

Working at the borders and reaching across lines of demarcation also allows the researcher to engage with a range of differences, and in doing so, act to change the world. To engage in border work is to engage in some way with "the other(s)." Living in the contradictions and tensions serve to illuminate what may often be

invisible (see chapters in this volume by Cram & Mertens; Szostak; and Hankivsky & Grace). Border work often requires creativity and risk taking as researchers negotiate a balance between being "at home" and being in exile"—a place Teresa de Lauretis (1988) notes, where one is giving up a "place that is safe."

The MMR landscape also contains a set of research actors whose goals are multiple and diverse, with some seeking new knowledge frames and understandings with the goal of social justice and social transformation (Mertens, 2007, 2009 ; Cram, this volume; Freshwater & Fisher, this volume); others seek to generate new paradigmatic frames of knowledge-building that can facilitate new research designs and modes of inquiry whose goal seeks a common ground among different perspectives onto the social world (see: Morse; Maxwell, Chmiel, & Roger, this volume). Still others seek to tame this new territory by reinstitutionalizing knowledge borders through promoting MMR guidelines that, while initially offering support to novice researchers may, for example, have the unintended consequence of impeding the innovation and openness of exploration within and between the mixed methods and other research communities (see Cheek, this volume). Like any new knowledge-building terrain, the history of research methods already bears witness to the tendency of researchers to colonize new ground; there is a precedential pattern of "taming" the turbulence through research structure formalization in order to legitimate specific brands of methodologies and methods for extracting knowledge (see Platt, 1996).

Further transforming the MMR landscape is the advent of a new set of research actors who bring with them a range of funding resources tied to carrying out very specific research agendas. These actors comprise a range of policymakers and government funding agencies whose focus and mandate are very applied and problem specific. Some of these highly practitioner-based agendas often deemphasize theoretical frameworks, favoring instead an empirically oriented results-based management modeling approach that measures a program's performance against a set of quantitative indicators that ask the question: Did the

intervention work or not work? These new actors often privilege evidence-based practices and a quantitatively driven logic model of research design that others in the MMR community believe undermines the legitimacy and role that other less "measurement-oriented" perspectives and outcomes support (for a critique, see, e.g., Giddings, 2006; Natsios, 2010; Best, 2014, pp. 164-208).

There are, however, additional challenges that those crossing the MMR terrain may likely encounter that come out of my lived experiences in coediting this Handbook that engaged me with the wide range of MMR scholarship contained within the Handbook. Some of these challenges also come from reflecting on my own values/attitudes and in dialogue with a diverse range of members within and outside the MMR community. I draw these ideas as well from the range of MMR projects and experiences I have intensely engaged with, as well the insights I have gained in writing a mixed methods textbook (Hesse-Biber, 2010a), -editing mixed methods special issues and articles (e.g., Hesse-Biber, 2010b, 2013; Hesse-Biber & Johnson, 2013; Mertens & Hesse-Biber, 2013). I also draw on my experience as a teacher of MMR and listening deeply to my research methods students' experiences in learning about it. In addition, I am cognizant of the fact that there is much I do not know, and I am mindful of the importance of those whose voices in the MMR still remain silent and subjugated. So the challenges listed in this chapter are to be viewed as a working list that can be added to and revised. These challenges are not the only ones you may encounter on your MMR journey, and they are not meant to be untempered assertions but points of dialoguing around the collective MMR journey experience.

Challenge 1: Negotiating Mixed Methods Research Chasms

Epistemic Tensions at the Border

The past few decades have witnessed the beginnings of an emergent discussion of the role of theory in mixed methods research, but much of the early discussion centered on whether or not various theoretical perspectives/paradigms or ways of thinking could in fact be mixed. Could a quantitative researcher practice mixed

methods? Could a qualitative researcher? How? These were the early presuppositional tensions often depicted as "paradigm wars" (see Tashakkori & Teddlie, 1998, 2003) that arose among mixed methods practitioners.

Some researchers, termed purists, found it difficult or impossible to cross these philosophical and methods boundaries, seeing these two methods as independent and unmixable philosophically (Guba, 1987; Smith & Heshusius, 1986; Guba & Lincoln, 1989). A purist approach to mixing methods might stress the need for researchers to choose either qualitative or quantitative methodologies. The purists are entirely skeptical of attempts to cross the divide between the two methodologies and see mixed methods as incompatible with a strongly formulated sense of epistemological perspective.

For the purist, a researcher mixing the two would be avoiding questioning the nature of knowledge claims and the way humans can come to know the world around them. Purist researchers privilege one side of the divide or the other but do not perceive the utility or logic of an untheorized study that freely combines different research approaches. Purists are not adverse to mixed methods research but, in its praxis, are fully aware of the tight link between methodology and method. For example, a qualitatively driven approach to mixed methods research will be clear on the dominance of the qualitative framework and, while open to incorporating a quantitative method, the goal of this method is to enhance the understanding of what is essentially a qualitatively driven mixed methods project. Unlike a purist, a pragmatic approach would ask, "What is needed to answer the research question?" In answering this question, a pragmatist does not look to his or her epistemological perspective for guidance but instead seeks the best method or methods for answering the question. A pragmatist engages the subject of inquiry from all possible angles while using all available tools to fully answer the question.

The original "philosophical perspective" of "pragmatism" derived from the work of Charles S. Peirce, William James, George H. Mead, and John Dewey. Philosophical

pragmatism centers on the research question and advocates using a range of methods that best meet its needs and research purpose. David Morgan's (2013) work on "pragmatic inquiry" saw its praxis as one of taking actions and experiencing their results. He notes: "Inquiry occurs when you confront situations that fall outside your existing knowledge and then take action to extend your knowledge so you know how to proceed when you encounter similar situations" (p. 7). What is produced in this type of knowledge-building model are "warranted beliefs" about specific actions and their consequences (Morgan, 2013, p. 7). Such a philosophical pragmatic approach was seen for some mixed methods scholars as an important "middle ground" perspective (Johnson & Onwuegbuzie, 2004; Biesta, 2010; Onwuegbuzie, 2012).

The dialectical approach (Greene & Caracelli, 1997; Greene & Hall, 2010; Greene, this volume; Johnson,& Stefurak, 2013) creates a spiraling conversation between the epistemological paradigms and the methods themselves. Within these spirals, researchers interrogate both sides of the research to articulate and explore the gains and losses of both methods and the outcome of their mixing. The research design builds in moments when the two methods speak to one another, traversing but not breaking down epistemological perspectives that hold qualitative and quantitative methodologies apart from one another.

These epistemic border crossing conundrums arose early on in the mixed methods research field during which the tension between the methods and the processes of mixing them came to the surface. Those within the mixed methods community could begin to envision how interpretive and constructionist frameworks that inform qualitative research might also inform the types of quantitative measures used. The positivist and postpositivist perspectives that relied on quantitative methodologies aim to draw out generalizations could see the importance of qualitative designs that often served to inform the context of their quantitative results by grounding them in lived experience.

These early foundational concerns and tensions seemed to soften to the extent that some in the MMR community even declared that the paradigm wars were over (see Tashakkori & Teddlie, 2003; Bryman, 2006b; Morgan, 2007). This declaration encouraged some researchers within the MMR community to envision, for example, how interpretive and constructionist frameworks that inform qualitative research might also inform the types of quantitative measures they were currently using in their own research. Some positivist and postpositivist methodologists began to acknowledge the importance of qualitative designs in informing the context of their quantitative results by grounding them in lived experience.

However, over time, some mixed methods researchers (e.g., Freshwater & Fisher, this volume) started to raise serious concerns about these types of epistemic border crossings. Pragmatism has grown into a leading framework for mixed methods researchers (Johnson & Gray, 2010; Creswell & Plano-Clark, 2011). Some scholars felt that the current, more popular version of pragmatism had turned into a practical pragmatism that boiled down to a "what works" approach able to sidestep these hard "epistemological issues" in the "philosophical pragmatic" approach Dewey and colleagues were engaged with early on (see Mutch, 2009). This delinking of pragmatism from its philosophical roots, then, freed up and encouraged a type of "methodological eclecticism" (Mutch, 2009; see also Yanchar & Williams, 2006, p. 3). Making the decision to follow a practical pragmatism framework provided an opportunity for those researchers not versed in a range of theoretical perspectives to engage with a mixed methods praxis without worrying about the concerns of the arguments launched by those taking a purist approach, However, such a framing of pragmatism, notes Clarke (2012), misrepresents its early foundational meaning. Clarke notes:

> In the US there has long been what I see as a misuse of the term pragmatic largely to equal expedience based in the logics of homo economicus, with some form of capitalism as the only reasonable path. In sharp contrast, pragmatist a la Dewey and others referred to what would work, be feasible given the conditions of the situation. As such it is more closely akin to Foucault's "conditions of possibility" (Foucault, 1975), elucidating what needs to be taken into account to answer his question, "What is to be done?" (Foucault, 1991, 84). (p. 405)

Jennifer Greene (2008) has also voiced important theoretical issues with regard to what she perceived as the unreflective theorizing and practices stemming from using a more practical pragmatic approach. She urged those researchers specifically deploying pragmatism to consider a series of specific questions in their praxis: how do the assumptions and stances of pragmatism influence inquiry decisions? For example, where do the consequentialist, actionable assumptions about social knowledge that are advanced in most pragmatic philosophies show up in practice? What does knowledge that integrates knowing and acting look like and how is it validated? (p. 13).

Crossing Disciplinary Borders

The very architecture of research inquiry is morphing. Research projects once housed in "disciplines" are now breaking out of their disciplinary borders. The fields of MMR have a prominent place in the de-disciplining process given their potential to address complex analytical and interpretative issues, multiple methodologies, and a range of data to bear in answering complex questions (see Part III, Contextualizing Multi and Mixed Methods Research Within and Across Disciplines in Applied Settings, in this volume)

This de-disciplining process in turn impacts how MMR is practiced. Increasingly "team-based" projects involving several researchers from across disciplines may become the norm. Several chapters in this Handbook underscore the importance of looking beyond our own disciplines so that we might expand our disciplinary visions in order to re-revision (see Szostak, this volume). As the chapters in our Handbook attest, engaging in MMR inquiry often means working at disciplinary margins, collaborating between disciplines, and bridging the qualitative–quantitative divide.

Engaging with a MMR approach also means crossing communications chasms, and doing so may raise a number of new research challenges: How do researchers from

different praxis and theoretical spaces converse across conceptual divides? How do the results of different research components communicate with one another? How is meaning created across these at times deep divides? (see, e.g., O'Cathain, Murphy, Nicholl, & Jon, 2008). Some project members may include the stakeholders funding the project and raises yet another set of conundrums: Do policymakers funding the project support the research design, conceptualization, and goals? (For an analysis of funding for mixed methods, see Wisdom & Fetters, this volume.)

To what extent do team members entering a turbulent MMR landscape come with the range of tools they might need in for their journey? There may also exist a "tool chasm," as well as "skills chasm." So, for example, researchers may need to decide on the extent to which they need to re-skill and learn how to use a different set of tools and/or bring along a diverse research team equipped to handle highly specialized tools that certain research may require (See: Hesse-Biber & Leavy, 2008). Beyond tools and new skills sets, do researchers have a set of methodological lenses they can call on to assess a given situation from a range of angles? What in fact is the "proper mix" of lenses across the variety of considerations that go into a project that is needed—both for a given individual and the team they comprise? (See Sandelowski, 2014.)

One important overall consideration in planning an expedition across the MMR landscape (and it may also play a significant role in determining the composition of any given research team) is the extent to which a researcher advocates for a specialized set of team members who spend many years honing a given set of theoretical lenses, methods, and analytical skills. There may be a need for team members who are specialists and those who excel at building and crossing bridges between specialties.

This conundrum around desirable skill sets raises important pedagogical issues and writing dilemmas that may have profound implications for how to train the next generation of backpackers who will traverse this terrain (see, e.g., Frels, Newman, &

Newman, this volume; Bazeley, this volume). To what extent should MMR courses and workshops move toward integration or specialization? Perhaps what is need is MMR training that runs along a continuum of knowledge-production skills and theoretical lenses. Some researchers may reside at either one end or the other, while many will seek to move toward a position that begins to address both a range of skills and a variety of lenses. This means, then, a pedagogy of learning that is open in its praxis and not limited o narrow definitions and skill sets.

Several other considerations are worth knowing about before leaving this specific challenge. One insight that merits consideration is that not all research questions require a MMR design—a monomethod and lens may be all that is required (Ahmed & Sil, 2012). There is a truism running around in the mixed methods literature that centers on the idea that two different methods can add value to a MMR project. In addition, any weaknesses resulting from using one method is said to be offset by using another method. Sandelowski (2012) tackles this "weakness" logic and suggests that it is "hardly ever questioned" (p. 235). Ahmed and Sil assert that buying into this type of methods logic misses an important opportunity for researchers to focus on the issue regarding how different monomethods brought into the same empirical inquiry space offer potential for a dialogic process to take hold, thereby expanding the capacity of MMR for "cross-cultural communication" (p. 948).

The authors of this Handbook are cognizant that centering on the dialogic process in MMR praxis focuses on the mixing process and advocate finding strategies for listening across differences in methods practices and definitional concepts, as well as being open to actively communicating with the goal of understanding possibilities of joint contributions toward a more complex understanding. These are the skills that need to be developed within the MMR community that just a reliance on the positive of two negatives can provide (see especially all chapters in Part III, this volume).

The following are some strategies that might be useful for MMR that entail working at the borders of multiple disciplines and whose work requires negotiating innovative ideas from multiple disciplinary sites. Klein's (1990) research into the personality characteristics associated with interdisciplinary perspectives suggests that they are high on "reliability, flexibility, patience, resilience, sensitivity to others, risk-taking, a thick skin, and a preference for diversity and new social roles" (p. 182). Becoming an interdisciplinarian requires good communication skills and teamwork among colleagues from different disciplines and, within the classroom setting, between faculty and students. Klein notes that the wider the gap between disciplines and the number of disciplines involved may create wider communication gaps (p. 183).

Challenge 2: Navigating the Definitional Terrain Borders of Multi and Mixed Methods Research

The practice of MMR research is not new. Multi and mixed methods was used starting with the earliest of social research inquiries. Early on, studies of poverty within families dates back to the 1800s in Europe by Frederic Le Play (1855), Charles Booth (1892–1897), as well as Bohm Rowntree (1901). Hall and Preissle (this volume) note that the discipline of anthropology is one where "methods and methodologies have always been mixed and multiple." They note that "collecting, surveying, and a variety of analytical examinations of material thus acquired—qualitative, quantitative, and mixed—have . . . been integral to what fieldworkers and ethnographers do. Recording in photograph and film and counting linguistic and material items date to the 19th-century practices" (Hall & Preissle, this volume). While not labeled as "mixed methods," then, researchers across disciplines used both qualitative and quantitative approaches and techniques that included demographic analysis of survey data, participant observations, and social mapping techniques and also deployed multiple perspectives—a positivist as well as an interpretative approach. For example, the Chicago School of Sociology, founded in the 1920s, while focusing on urban ethnography, also collected quantitative data

from a positivist approach. Robert Park, a core member of the Chicago School, together with R. D. McKenzie and Ernest Burgess (1925), used mixed methods designs to the study of inner-city urban life. Thomas and Znaniecki's (1918–1920) research on The Polish Peasant in Europe and America examined the lived experiences of migrants to America (especially the city of Chicago) and Europe during industrialization. These researchers used a variety of MMR from interviews, diaries, and letters, as well as official documents. However, what is new is the movement is the formalization of the definition and practices of MMR.

The MMR landscape has undergone a dramatic transformation within the past three decades. The early 1990s saw the rise of a formalizing of mixing methods research moving its praxis toward that of a "bounded" entity—a formalized separate research practice. The formalized naming of what was once a subjugated practice among most researchers was now heralded as a "third methodological movement" (Tashakkori & Teddlie, 2003). In fact, this movement toward formalization has been well underway in mixed methods research as a field over the past few decades and serves to solidify specific theoretical and research design practices whose goals are to enhance scientific knowledge (see, e.g., Tashakkori & Teddlie, 1998, 2003; Johnson & Onwuegbuzie, 2004; Leech & Onwuegbuzie, 2006; Creswell & Plano Clark, 2007). Others seek to promote mixed methods scientific practice through identifying specific mixed methods designs that promote rigor and can move the field closer to that of a scientific enterprise (see chapters in this volume by Creswell; Morse; Collins; Crasnow; and Yin).

The definitional and praxis borders of MMR continues to be contested (see: Guest, 2013) within and outside the community, but what most approaches to mixed methods have in common is the mixing of at least one qualitative and one quantitative method in the same research project or set of related projects (e.g., in a longitudinal study). Some definitions of mixed methods expand to include the intentional mixing of approaches or methodological traditions as well as analytical techniques. In addition, some definitions of mixed methods go on to state that such a

mixing can provide a "fuller," more "synergistic," "better" understanding than using just one approach/method. Some researchers employ a variety of terms, like integrating, linking, connecting and dialoguing (for a comparison of definitions, see, e.g., Johnson & Onwuegbuzie, 2004; Greene 2007; Johnson, Onwuegbuzie, & Turner, 2007; Creswell & Plano Clark, 2011, p. 5). Creswell and Plano Clark (2007, 2011), for example, differentiate multimethod studies from mixed methods studies by noting that the former are studies in which multiple types of qualitative or quantitative data are collected in a single research project. Johnson and Onwuegbuzie argue for extending this definition and assert that mixed methods research should comprise not only the combining qualitative and quantitative methods but also its approaches, concepts, as well as a specific language of praxis into one research study.

The MMR landscape also contains a set of research actors whose goals are multiple and diverse, with some seeking new knowledge and understanding with the goal of social justice and social change (Mertens, 2007; Cram; Freshwater, & Fisher, this volume); others seek to generate new paradigmatic frames of knowledge-building that can facilitate new research designs and modes of inquiry (see: Denscombe, 2008; Morse' Maxwell, Chmiel, & Roger, this volume; Hunter & Brewer, this volume). Still others seek to tame this new territory by reinstitutionalizing knowledge borders through promoting MMR guidelines that, while initially offering support to novice researchers may, for example, have the unintended consequence of impeding the innovation and openness of exploration within and between the mixed methods and other research communities (see Cheek, this volume). Like any new knowledge-building terrain, the history of research methods already bears witness to the tendency of researchers to colonize new ground; there is a precedential pattern of "taming" the turbulence through research structure formalization in order to legitimate specific brands of methodologies and methods for extracting knowledge (Platt, 1996).

Multimethod research differentiates itself from mixed methods in that its definitional borders do not require having at least one quantitative/qualitative method in any given research project. A multimethod strategy does not necessarily require the mixing or integration of methods. Brewer and Hunter (1989, 2006, this volume) note that multimethod research is deployed "to attack a research problem with an arsenal of methods that have non overlapping weaknesses in addition to their complementary strengths" (1989, p. 17). An early example of a multimethod approach can be found in Campbell and Fiske's (1959) work on measurement validation of psychological traits using a multitrait-multimethod matrix approach. An assumption contained in a multimethod approach is that more methods are better. For example, Hunter and Brewer (2006) go on to note in their monograph on multimethod: "each new set of data increases our confidence that the research results reflect reality rather than methodological error" (p. 4). Hunter and Brewer (2006) suggest that using multimethod can also assist in sorting out "divergent findings" by noting: "They signal the need to analyze a research problem further and to be cautious in interpreting the significance of any one set of data" (p. 4).

Following these moves to solidify the definitional boundaries of MMR, there was a similar movement within the field to formalize mixed methods research practice by suggesting a specific set of research designs with their own notation systems and accompanying sets of template design practices. This action ushered in textbooks and articles on the "how-to's" of mixed methods praxis for novice researchers wanting to learn the specific guidelines for good practices (see, e.g., Leech & Onwuegbuzie, 2006; Creswell & Plano Clark, 2007, 2011).

Fueling the movement toward institutionalizing mixed methods research practice was a set of newly formed "best practices" guidelines. The document, published and sanctioned by a major government funding agency, the Office of Behavioural and Social Sciences Research of the National Institutes of Health (2011), was titled Best Practices for Mixed Methods Research in the Health Sciences and sought to formally

identify a set of best practices for doing mixed methods (see other such standards: Bryman, Becker, & Sempik, 2008; Heyvaert, Hannes, Maes, & Onghena, 2013).

Why Are Definitions and Frameworks Important for the Mixed Methods Research Inquiry Process?

How we define and frame mixed methods research practice has implications for the overall legitimacy and acceptance of what one is doing and how it is received by others within a given research community. Those who possess the power to define concepts within a community of practice can control and socially construct what becomes "real." The creation of borders—both symbolic and material—is critical for the survival, nurturing, and maintaining of any community.
However, if these borders promote strict border divisions that become too tightly controlled, they can begin to contain and exclude different ways of knowing. For example, in their review of the state of mixed methods research in the field of education, Hall and Preissle (this volume) caution against the use of preconceived mixed methods designs that take into account the "complexities of education policy and local educational contexts," one that promotes a process they term "reflective integration" (Hall & Preissle, this volume).

The editors and authors of this handbook are cognizant of the importance of pushing against borderlines, as Trinh T. Minh-ha notes, in order to seek a place "where one never stops, wailing on the edges, incurring constantly the risk of falling off one side or the other side of the limit while undoing, redoing, modifying this limit" (Minh-ha, 1991, p. 218). Julianne Cheek, in her chapter in this volume notes, "Without dialogue across . . . differences, any move of the field of mixed methods research toward best practice guidelines may well be premature and have the effect, intended or otherwise, of homogenizing or even shutting down dialogue about what "best" is in relation to mixed methods research." Pushing borders is a critical part of navigating the mixed methods research terrain.

As we leave this challenge, it is also important to recognize those other mixed methods research scholars and researchers within the MMR contemporary community that do not especially agree with framing mixed methods research as a new form of research inquiry. Instead, they see mixed methods research as "less as a new mode of inquiry than as a new way of recognizing and speaking about the methodological and design mixes constituting all empirical inquiry" (Sandelowski, 2014, pp. 6–7).

Challenge 3: Negotiating Data Collection, Analysis, and Interpretative Borders

A challenge that continues to plague the field of mixed methods research for many decades is the thorny issue of what to do with data gathered across qualitative and quantitative divides. How can a qualitative researcher, for example, assess the importance and meaning of the quantitative data collected? What should be the overall goal in the analysis of different data types? Should they be integrated? How? Should they be separate analyses? Why? (See Brannen & O'Connell, this volume; Onwuegbuzie & Hitchcock, this volume; see also Bazeley, 2006, 2009).

One important factor in the analysis and interpretation stage in a mixed methods design is an awareness of a researcher's own standpoint or methodological positioning. Giddings and Grant (2007), for example, have noted that without this type of reflexivity, one of the two methods may be included in a superficial way (p. 58). This is especially important when those conducting the research come from different disciplines that are often rooted in particular research methodologies, which each have their particular assumptions about the social world, their favored methods, and analytical techniques.

What is clear from the research into barriers to integration is that there is a skills gap among those conducting mixed methods research that may require the addition of new analytical options for assessing how different data forms can connect to one

another. These analytical options are still emerging among those members who are traversing this landscape.

It behooves researchers who are traversing this landscape, then, to think about deploying emerging new analytical tools and perspectives and to also perhaps reflect on how their analytical lenses will or will not be applicable once these data have been collected and represented (see, e.g., Pearce, this volume; Leeman, Voils, & Sandelowski, this volume). Emergent technologies can also play an integral part in our analytical understandings of these diverse data forms.

The good news is that there is an emergence of new paths along the mixed methods research analytical terrain as demonstrated by the development of a range of emergent analytical mixed methods research frameworks for integrating both qualitative and quantitative data (see Brannen & O'Connell, this volume; Onwuegbuzie & Hitchcock, this volume). These analytical developments open up new analytical ground for moving mixed methods research beyond a parallel analytical approach (Zhang & Creswell, 2013). One such example is that of data transformation (i.e., the process of qualitizing and quantitizing; see, e.g., Sandelowski, Volis, & Knafi, 2009). In addition, computer-assisted data analysis programs now include a mixed methods component to facilitate complex analyses of mixed methods data (Bazeley, 2003).

Important in fostering a robust mixed methods analytical and interpretative process as well is the development of a profound appreciation for the potential contributions a given methodological perspective can bring to a mixed methods project. A respect for methodological, methods, analytical, and interpretative difference is a critical ingredient to mixed methods praxis. As is all too well known within the mixed methods community, many mixed methods projects still remain "unmixed," with little interaction between the two methods (Bryman, 2006b, 2007; Yin, 2006). In effect, we are still witnessing the publication of parallel quantitative and quantitative components. (For a discussion of these issues, see Bazeley, 2006;

Bryman, 2006a,, 2007; O'Cathain, Murphy, & Nicholl, 2007, 2009; O'Cathlain & Drabble, this volume).

Engaging with this type of MMR thinking will also require researchers to come out of their methods and theoretical comfort zones. This is often a process in which the research becomes both an insider and an outsider, taking on multiple standpoints and negotiating different researcher identities simultaneously. This is aptly expressed and worth repeating here, Trinh T. Minh-ha's (1992) concept of "multiple subjectivities," in which researchers are encouraged to push on their own specific disciplinary "borderline" and be willing to risk, as she notes, "falling off one side, or the other side of the limit, while undoing, redoing, modifying this limit (p. 218). The next and perhaps most hidden of challenges is power related: Who will decide the research methods procedures for traversing this new analytical and interpretive terrain? Who decides what the best practices for application of our new tools/technologies will be? Who decides what works? What is credible knowledge building?

Challenge 4. Acquiring Deep Awareness of the Politics of Knowledge. Dealing with Border Patrols: Securing the Terrain of Knowledge-Building and its Politics

Border work involves both acquiring new knowledge and action, and therefore a characteristic of this work is that it is a process that contains the flow of power and privilege. Foucault (1976) notes that making knowledge claims goes hand in hand with power claims. Working at and across a range of research borders also raises important questions concerning the epistemological basis of knowledge-building. Under what conditions are boundaries of knowledge constructed? Linda Tuhiwai Smith (1999) in her work, Decolonizing Methodologies, suggests that "research is not an innocent or distant academic exercise but an activity that has something at stake and that occurs in a set of political and social conditions" (p. 5).

There is a political dimension to knowledge-building. In his classic work, The Structure of Scientific Revolutions, Kuhn (1962) suggests scientific practice at any given moment is marked by particular paradigm, or way of knowing. He posits that our knowledge-building capacity is filtered through the particular model or paradigm(s) currently housed in a particular field. These paradigmatic ways of knowing are theoretically derived worldviews, and they provide the conceptual frameworks by which we construct and understand social reality. A paradigm allows us to observe only certain aspects of the MMR landscape (what is there and what is not) and what it is we should be focusing on. Kuhn argues that "facts" are paradigm specific, meaning that those "facts" differ according to the lens we live and work within. One critical factor in sustaining any given paradigm is how successful it competes for followers and its ability to continue to solve complex puzzles. However, paradigms are embedded in the substructure of a given scientific community and its social institutions. These scientific practices become "normalized" over time, and are often sustained by nonrational factors and subjective phenomena. Those whose work resides inside the dominant paradigm also receive institutional supports that recognize their scholarship, and their work appears in those prestigious journals and grant agencies within their respective fields that often support the dominant paradigm's approach. So the power to ask questions that matter is often held by those powerful reigning paradigmatic groups who hold the power to define what passes as knowledge, what questions are formulated, and ultimately those models or paradigms that serve to formulate explanations of reality.

Freshwater and Fisher (this volume) argue that the mixed methods research community is also impacted by the politics of knowledge-building that Kuhn addresses. They stress that mixed methods research's social justice mission may be at risk given the growing "reconfiguration "of how knowledge has been built." More specifically, they focus on what they see as a pulling back on "independent scholarship in the face of growing demands for the production of knowledge suited to market-driven economies." They note the growing movement of neoliberal

economic and political structures leading a "decline of the collegial system based on academic and intellectual authority toward management hierarchies." As evidence, they point to the growing power of the "regulatory audit" as reflected in the UK government's mandate to apply quantitative impact measures of accountability within universities. They go on to note: "This constitutes a move from an era of Mode 1 knowledge production (knowledge that is disciplined -based and instigated by the researcher) to one of Mode 2 knowledge production (problem based and interdisciplinary)" (Freshwater & Fisher, this volume; see also Nowotny, Scott, & Gibbons, 2001; Denzin, 2009).

The early 2000s witnessed the beginnings of a discussion of theoretical bias in mixed methods research. There was a concern among some mixed methods researchers that the current practice of mixed methods leaned toward a "postpositivist" theoretical stance especially in those disciplines that favored evidence-based practices, with qualitatively driven approaches absent and the use/misuse of qualitative methods without their theoretical underpinnings (Howe, 2004; Denzin & Lincoln, 2005; Giddings, 2006; Denzin, 2010). For example, Giddings voiced concern that much of the mixed methods research up to that point stemmed from positivistic methodology—what she calls, "positivism dressed in drag," with the qualitative component of the mixed methods project placed in a very secondary role.

She notes:

> A design is set in place, a protocol followed. In the main, the questions are descriptive, traditional positivist research language is used with a dusting of words from other paradigms, and the designs come up with structured descriptive results. Integration is at a descriptive level. A qualitative aspect of the study is often "fitted in." The thinking is clearly positivist and pragmatic. The message often received by a naïve researcher, however, is that mixed methods combines and shares "thinking" at the paradigm level. (p. 200)

According to Giddings (2006), the idea that mixed methods now combines the best of both qualitative and quantitative approaches is a "new guise," for what is primarily positivism (p. 200). Giddings expressed her uneasiness with what she saw

as an "add and stir" qualitative component into a general positivistic mixed methods approach (p. 202). Giddings' article launched a heated debate about the role of qualitative methods and approaches in MMR that continues into the contemporary period. Other mixed methods scholars (see, e.g., Creswell, Shope, Plano Clark, & Greene, 2006; Mason, 2006) took specific issue with this viewpoint, citing the empirical mixed methods research, especially in the health sciences, that gave specific priority to qualitative research in mixed methods designs.

Yet the debate on the dominance of specific mixed methods research designs continues today with a focus on examining the extent to which specific disciplinary locations and funding preferences can shape the specific contours of a given mixed methods research design (see: Freshwater & Fisher, this volume). In addition, the increasing shift to an "audit model" of accountability in knowledge-building and the growth of mixed methods research whose goal is to perhaps "tame" the turbulence of mixed methods praxis keeps the importance of examining the sociopolitical context of mixed methods research knowledge-building a challenge that will remain and one that is critical to continue to address.

The crossing of borders in mixed methods research potentially offers a powerful antidote to dominant paradigmatic viewpoints. To interface with an interdisciplinary perspective is transformative and acknowledges, as Namaste (1992) notes regarding the political dimension of knowledge-building:
To engage in interdisciplinary work is a practice that seeks to recognize and transform the current (un)reality of disciplinary boundaries. It understands the ways in which knowledge is currently carved up within academe, yet seeks to deconstruct the production of truths, the operations of power, and the assumptions about knowledge which are implicit in that apparatus. It implicitly—and sometimes explicitly—asks 'Who's doing the carving?' and ' In whose interest?' . . . In this context, interdisciplinary work can be understood as a politics of intervention, and as theoretically and politically necessary. (p. 58)

As evidenced by this handbook and the expanding horizon of mixed methods research literature overall, many researchers are staking their claims to new forms of knowledge-building. In addition, new and future claims to, and ways of claiming, power are emerging that promise to increase the turbulence within and across the mixed methods research landscape as a whole.

Challenge 5: Practicing Reflexivity

Conducting research across disciplinary borders also highlights how important it is researchers to reflect on their own standpoint within the research process. Hesse-Biber and Piatelli (2012) note the importance of "holistic reflexivity" (2012) by noting, "Reflexivity is a holistic process that takes place along all stages of the research process—from the formulation of the research problem, to the shifting standpoint of the researcher and participants, through interpretation and writing" (p. 560).

Raey (201) notes that as one traverses this turbulent landscape, notes there will been a need for "continuous interrogation" of self and other as reflexivity consists of "complex and constantly shifting processes which require constant monitoring and re-evaluation" (p. 637). A researchers' values and attitudes are important parts of the reflection process—what values do researchers bring to their work? In addition, reflexivity is a process that moves beyond individual reflection and is also a communal process that requires attentiveness to how the structural, political, and cultural environments of the researcher, the participants, and the nature of the study affect the research process and product. Reflexivity at this level fosters sharing, engaged relationships and participatory knowledge building practices, hence, producing less hierarchical and more ethical, socially relevant research. (Hesse-Biber & Piatelli, 2012, p. 560)

The practice of reflexivity holds promise of bringing subjugated knowledges to the surface and thus can awareness that "all knowledge is affected by the social conditions under which it is produced and that it is grounded in both the social location and the social biography of the observer and the observed" (Mann & Kelley,

1997, p. 392). A methodology that incorporates reflexivity can, if done well, lead to the "development of critical consciousness of both researcher and participants, improvement of the lives of those involved in the research process, and transformation of fundamental societal structures and relationships" (Maguire, 1987, p. 29; see also Hertz, 1997).

Reflexivity then, helps to break down the idea that research is the "view from nowhere." Reflecting on the many ways our own agendas impact the research process at all points in our research—from the selection of the research problem to the selection of method and the ways in which we analyze and interpret our findings—is crucial for creating authenticity in the research process.

Challenge 6: Border Tensions of Differences: Difference Matters, Social Justice Matters, and Axiology Matters

MMR is not just about mixing and combining methods. Tools must be clearly linked to epistemologies, political stances, methodologies, theoretical perspectives, and axiologies/values engagement. Difference itself is contextual and undergoing change; some differences are highlighted or rendered invisible depending on the social context. Hesse-Biber and Yaiser's (2004) work on difference notes, for example, that status characteristics such as social class, age, ethnicity, and sexuality can be prominent in some interactions and rendered unimportant in others. Gorelick (1996) suggests that in studying difference it is critical to consider the relational qualities of difference that allow the researcher to move beyond describing difference to "an analysis of the forces producing those differences and relationships and the dynamic structure of which they are a changing part (p. 41). Here the epiphany is simply the revelation that difference operates differently in various contexts.

A further epiphany on difference is that until the community of scholars working the turbulent landscape has a range of scholars who hail from a range of differences—

more Black, Asian, and Latino minority faculty, women from working-class and poor backgrounds, disabled and lesbian, transgendered and gay researchers—the conundrum of how to represent the "other" may continue to be stifled. Even when there is a growing recognition that difference matters, one needs to ponder the implications of "speaking for the other" (see Spivak, 1988; Alcoff, 1991–1992) when those individuals doing the researching are predominantly White, middle class, able bodied, heterosexual, and hailing from the developed world. So an important difference epiphany is the need to advocate for the inclusion of difference within and among those who conduct research on this turbulent terrain and the inclusion of difference in our research endeavors (see, e.g., chapters in this volume by Cram & Mertens; Hankivksy & Grace; and Hesse-Biber & Griffin).

Challenge 7: Navigating Technological Borders

The MMR terrain is increasingly mediated by emergent technologies (see Hesse-Biber, 2011). The rise of emergent technologies—including multimedia Web 2.0, mobile and geospatial technologies, and the rise of multiplatform software—is transforming how MMR researchers use and deploy traditional tools and is also expanding the range of knowledge-building tools (see: Horrigna 2007; Internet World Wide Statistics, 2010).

These new technologies also change the medium through which communications are sent and received. This Handbook recognizes that technology is a medium (technology "delivers" information) of communication that has an independent impact on its users in its own right regardless of its content. It is important to consider how new technologies and modes of communication (such as online surveys and ethnographies) impact MMR praxis (see Hesse-Biber & Griffin, 2013; James & Busher, 2010).

Some research about how technology is deployed in MMR demonstrates that by varying modes in timing (synchronous/asynchronous), direction

(unidirectional/bidirectional), and public/private forums it can impact the meaning and interpretations of the message being delivered. These new technologies "are a transformative force that will challenge received knowledge, generate original empirical insights, and catalyze new theories" (Hackett, 2011, p. 26).
Technological tools are constantly evolving and pushing the boundaries with regard to the organization of the research process in that they introduce new modes of data collection and provide the researcher with new ways to mine data and generate new data forms. They also bring new challenges into the research arena by adding different levels of communication, such as the digital and virtual (see chapters in this volume by Salmons; Hine; Remijn, Stembert, Mulder, & Choenni; and Fielding & Fielding).

New borders are crossed between the "real" and "virtual" with attendant obstacles (the research teams may be scattered at distant physical locations and come together virtually only as, in effect, disembodied beings). These new technologies are forming their own research structures, often outside of traditional academic settings and funded by for-profit entities. The MMR community is witnessing a shift from a "one data set" study structure toward multiple data sets aggregated from a range of structural levels (micro/meso/macro) emanating from a variety of sources (online/offline/mobile/hybrid). Adding to the complexity of these new data forms, the increasing streaming of these data in real time means that they are more and more characterized by their longitudinal quality. When so many methods for data collection and analysis are required, one of the challenges for mixed methods researchers is to reconceptualize the very definition of mixed methods research as something more than just the use of one qualitative and one quantitative data collection method.

We know that varying modes in timing (synchronous/asynchronous), direction (unidirectional/bidirectional), and public/private forums can impact meaning and interpretations of the message being delivered. These new technologies "are a transformative force that will challenge received knowledge, generate original

empirical insights, and catalyze new theories" (Hackett, 2011, p. 26; see also: Eagle, 2011).

However, there is a downside to the introduction of new technologies into MMR practice. For example, ethical boundaries can become uncertain as private and public information becomes blurred, such as when highly personal information available publicly over the Internet is collected and deployed in a MMR study. What are the ethical procedures surrounding the issues in securing "informed consent" when a research project goes online? Some basic concepts that form the bedrock of ethics practices such as insuring the confidentiality of research participants can easily be comprised in a cyber-world (Gunkel, 2011; Hesse-Biber, 2011; Hesse-Biber & Griffin, 2013, also see Salmon, this volume).

The exponential growth of "big data," arising from the collection of large volumes of user-generated and streaming digital data from networking sites such as Twitter and Facebook, may also place pressures on mixed methods researchers to transform traditional modes of collecting and analyzing data generated from these sites. These technological developments may also morph MMR practices as these emergent mixed and multimethods data and analytical forms challenge researchers to reconceptualize their basic methods concepts and even methodological perspectives. In turn, mixed methods researchers can offer insights to big data analytical techniques by providing ways to integrate big data at multiple levels of inquiry and bring a range of qualitatively driven insights to big data through the asking of complex questions and the potential for providing a more in-depth complex understanding of the social worlds of the digital and real (see Hesse-Biber & Johnson, 2013).

These are only some of the major regions of turbulence in the MMR research landscape. There are others researchers will experience on their journey across the MMR landscape as well as many factors that may determine the type of experience they have. The experience will depend in large part on researcher standpoint—the values and attitudes that make up one's view of the social research landscape,; the

skills, research experience, and tools one brings; who, if anyone, comes along; and what they bring with them.

Navigating Multi and Mixed Methods Research Tensions Together: Getting Ready the Journey

Mapping the mixed methods terrain (see Creswell, 2010) can serve to provide some important preliminary guidance especially for novice researchers seeking to conduct mixed methods research. However, I do not necessarily recommend becoming too reliant on any specific mixed methods research map as a guide. While maps may seem innocuous, says cartographer D. Dorling (1997), they need to be used with caution:

> For all the power they contain, maps are just pieces of paper or merely ephemeral pixels on a computer screen. It is people who order, draw, purchase, use, and learn from maps. And it is people who will improve them—not necessarily by making them more accurate or objective but, for a start, by being more honest about how and why they are made and by teaching more carefully about how to read them. We can all be more open about why we make particular choices to map certain things, certain people, and certain places. We can all think more carefully than we have done in the past about these things. We can also all look at other maps with a slightly more open and inquisitive mind and ask why the map shows what it shows, rather than try merely to understand how best the relationship between land and people can be painted onto paper. (p. 279)

How much one relies on any map is also dependent on the type of research questions (explanatory and/or exploratory) addressed. Wagner's (1993) distinction with regard to types of research questions is a useful heuristic idea in gauging the degree of reliance on any specific map. He notes that some research questions have the goal of filling in the "blank spots" in a field of inquiry that is already mapped, such that the question relies on the nuances of already mapped out questions and significant findings. These mapped inquiry terrains, however, still need to be interrogated, but the degrees of freedom in inquiry are more constrained. However, if we all stick to this type of inquiry (the trails mapped by others), we may never

uncover those blind spots along the way—those areas of inquiry we fail to see or address or even know that we do not know about (Wagner, 1993).

In addition, it might be important to consider that by sticking too closely to a map that already contains precarved inquiry trails that lie on often shifting terrain may significantly prevent one from seeking out new ground and insights that may lie within MMR landscape but remain subjugated. Before using any inquiry map, it might be important to ask some questions, such as: Whose viewpoint was taken into account in the mapping process? What does the map exclude? Will following a specific map and its research trails reproduce someone else's reality, research experience, interests, and agenda? Who benefits from following a specific trail or set of trails? What are the ethical conundrums in any mapping design? (See:Preissle, Glover-Kudon, Rohan, Boehm, & DeGroff, this volume.) How can we unearth the ethical substructure of the MMR terrain that still remains subjugated?

So if not a given map, then what? One might begin by making the decision to not be overly reliant on any one map but also taking what one thinks is critical information from a given set of mappings of the terrain by those who have journeyed before, but also making the commitment to being open to charting new ground.
By privileging the charting of your own journey, you empower yourself to venture out of your own theoretical and methods routines as you venture onto the MMR landscape, with the wisdom and skills you have already garnered but bent also on blazing a new set of trails as well. Your final mapping post-journey can be recorded for you and other future travelers to compare and contrast. You can think of mapping as an iterative process, something not fixed but morphing, by being open to the collective wisdom of the whole. Thus mapping as a collective and interactive process can be of value to the MMR community; it can be continually open to innovation and can serve to encourage others to forge new trails and even revisit more established trails with a critical perspective, committed to recording their mapping results for others to compare and learn from.

You might also think about bringing a backpack along on your journey, one that allows mobility and agility while also providing storage space for the range of technological tools, as well as material and nonmaterial resources they many deem essential to their MMR journey. These are insights that can serve to guide, empower, and sustain a MMR journey as a decision-making guide as you traverse the MMR terrain. There exist a range and type of backpacks that can also be tailored to a given researcher's specific needs. Some backpacks allow for attaching customized accessories—those specialized tools and items—those one may require in an emergency or to use to tackle unexpected turbulence along the way.

The border challenges I have thus far elaborated in this Introduction were the insights I found useful to have in my own backpack. Some of the border challenges I present are analytical epiphanies while others are more skills based; still some others are more researcher identity-based epiphanies. I also had to discard some things on my journey as a way to shed the weight of my backpack that was slowing me down. Some of these things included former ways of doing things—those ideas and skills that kept me from stepping out of my own theory-methods comfort zone.

I end this Handbook Introduction with a range of insights gathered from some of our Handbook authors who agreed to share with all of you the range of things and insights they might take with them on their MMR journey. I asked Handbook authors to dialogue with me around the following question: What would you put in your MMR backpack as you traversed the MMR terrain? Handbook authors' insights, ideas, and extraordinary wisdom are something you might also want to also consider as you begin your own MMR journey. The voices of Handbook authors reveal a range of lived experiences as fellow travelers along the MMR terrain.

I invite you to visit our Handbook website for each authors' entire comments. The type of entry an author or coauthor contributed was variable—from one sentence to many paragraphs. In looking over the entries I have received, thus far, several themes emerged. Some advice was practical and material, focusing on very

specific material resources they would bring with them on their journey; still others provided a range of cognitive and socioemotional insights and cautionary tales from their prior experiences along the trail. Still others provided uplifting words of wisdom they felt might sustain and uplift a weary MMR traveler.

Handbook Authors' Thematic Backpack Insights

Developing Open-Mindedness.

Having an open mind was a theme that resonated with our authors. The overall meanings of this theme centered on being open to allow for the possibility of dialogue. Jennifer Greene sought to promote a "renewed respectful listening" to the range of voices and perspectives within the MMR community. Sylvia Rogers wholeheartedly endorses this idea by noting, " As a new scholar, one of the most important things that I pull out of my backpack frequently is patience and listening. Insights do not always pop up immediately in front of me, it takes patience and listening skills to engage with the data and understand what the data are telling me. Amy Griffin suggests two important elements that facilitate being open-minded, namely "patience and compromise." She notes further, "Research and policy both take time, especially when conversing across disciplines and potential areas of focus. This can be a long and sometimes frustrating process; however, by continuing to listen, reflect, ask questions, and [have a] willingness to work together, one's research will be more meaningful and beneficial to the greater community."

Listening to one's data is another aspect of being open-minded. Leonard Jason and Isadore Newman both stress this point in different ways. Leonard Jason notes that "Linear thinking based on statistics and methods, must catch up with what we see and hear, but which are still rarely documented by our research." Isadore Newman notes that all research requires "phenomenological judgment." He goes on to note that even when a researcher relies on statistical significance testing, qualitative judgment enters into just what this means.

Being open to differences in perspective is also a dimension of open-mindedness. Rachel Shaw suggests inviting those holding different perspectives along on our MMR journey such that "Together we can make the journey across the choppy seas of epistemological and technical challenges to reach our destination and become a world leading mixed methods research team!" Roslyn Cameron in fact argues for a "methodological melting pot" and specifically advocates for the inclusion of multidisciplinary team-based research. She further suggests that the characteristics of a multidisciplinary team-based research are critical to harnessing the potential for open-mindedness required in a MMR project by noting. "There is something interesting about those who actively seek engagement in multidisciplinary teams and the level of openness in considering a mixed methods approach. This is very much like the level of openness to travel abroad, to leave comfort zones, take risks and to see and experience other traditions and cultural practices and to begin to see everyday activities through the perspectives of others."

Nigel Fielding and Jane Fielding also remind us that communicating across MMR divdes also includes cultural divides and point to the importance of taking along a perspective on mixed methods that also includes alternative meanings, by noting: "The message here, perhaps, is that equivalence of meaning is important, and cultural translation is not trivial, even in things that seem straightforward. Mixing methods intrinsically involves working across cultures, notably the differing cultures of quantitative and qualitative research, but increasingly drawing in ideas, concepts and techniques from other fields altogether. Taking a mixed methods approach seriously forces researchers to be more explicit. That is a virtue."

Acquiring Collaboration, Balance and Team-based Research Environments

Another important ingredient to obtain "dialogue" among MMR communities is the concept of "balancing" and being in "collaboration" with different points of view that may often require working within a team-based environment.

Julianne Cheek notes that "In every debate or discussion about any aspect of mixed method research, it is important that all points of view and facets of that discussion are able to be heard and balanced against each other in order to be evaluated on their merits." Creating a level discourse field is critical to dialoguing across different MMR perspective. Pat Bazeley notes that collaboration with other MMR in and of itself has the potential to foster "insights and stimulation."

These sentiments are echoed by Janet Salmons, who notes the importance of "balance and scope" in any MMR project. Using her own experience as a qualitative researcher she appreciates the importance of learning "how to integrate quantitative methods and findings to balance the results of qualitative inquiry and to increase the scope of the study.: Rick Szostak is in support of the importance of honoring different perspectives and notes, "We are trained as scholars to argue for one theoretical position but should appreciate that there is usually value in multiple perspectives. We should seek to integrate the best of differing insights rather than seeking all-out victory for one."

Taking these multiple insights together suggests that the road to dialogue does not lie with a framing of our research goals to mean that of "winning" or defending our research position but rather taking the route toward maximizing the potential of discovering a range of ideas and thinking collectively to discover new possibilities and alternatives.

Yet the ingredients needed to promote dialogue across divergent communities may require additional strategies. Donna Mertens suggests that we need to explore the range of sites for dialogue beyond coming together across the qualitative–quantitative divide. She notes, "We are not limited to quant and qual, but we can look at the variety of ways of knowing and gathering and making visible knowledge that comes in many different forms—dance, music, poetry, art, and statistics"
Yes, you may say, but wait, there are those important socioemotional factors, those that cannot easily be measured, but nonetheless are also critical to the dialogic

process." Judith Preissle reminds us of the importance of fostering the qualities of friendship, trust, and companionship that she herself has learned in her "other" job that entails the rescuing of animals in her community. It is these qualities that are also critical in building on "the quality of commitment among partners." " By the way, if you have an RV, even better: , suggests Amy DeGroff, who states, "I like to think of my having an RV with all of you traveling along with me on our MMR journey."

Nigel and Jane Fielding note that at its heart "doing mixed methods research is an endeavour that tends towards teamwork" by noting that "while there are gifted people who combine a quantitative and a qualitative instinct in the same head" this does not always happen. Elizabeth Rohan suggests that one important key ingredient in effective team-based research is to "create a vibrant research climate that makes dialogue possible." While taking a team-based approach to mixed methods research, it is important, to think carefully about the selection of the particular makeup of one's MMR team. She notes, "I pay particular attention to choosing my colleagues for the journey. While they don't fit inside my backpack, my teammates help me carry a large backpack, filled with the skills we each bring to the research endeavor. Each of us carries the backpack for a while, depending on whose skills are most needed for a particular task, but, in the end, the load is ours to bear together. Side by side, we share the exertion and the sense of purpose needed to reach the destination."

Stevan Weine's insights regarding balance and collaboration take us beyond the research community context; he notes, "Researchers conducting MMR should engage collaboratively with families, communities, and organizations through participatory research and capacity building. The process of working with communities is as or more important than the outcomes."

The next set of insights center on the question regarding: What are the traits that are crucial for dialoguing? Our Handbook authors also weighed in on this issue, and

a number of our authors were quick to point out the importance of taking a flexible approach to knowledge-building across the MMR terrain.

Nurturing Flexibility That Allows for Innovation and Creativity.

Rebecca O'Connell and Julia Brannen, for example, note the importance of flexibility as an important trait to nurture as they cross the MMR turbulent landscape. They note how important it is for researchers to acquire "plenty of ingenuity, creativity, and flexibility. In our backpack we would carry the proviso that there is no one successful method for integrating mixed method research, given the different means by which different types of data are produced."

Fiona Cram suggests that the keys to successfully dialoguing with others is to cultivate "a 'relaxed and responsive flexibility.' By this I mean that we have enough skills and tools/methods and relaxed attitude in our backpack to be responsive to the feedback and requests of our participant communities." Cram goes on to note, "It's interesting that we're always looking for the mix of methods that will let our communities 'hold the pen' and so we have to be relaxed, responsive, and flexible when they chose to hold that pen in a different way than we initially intended. Our communities also want to know how we see mixed methods being mixed, and for what purpose."

Nollaig Frost wants to gain expertise in a wide range of "methods and designs as possible so that I am prepared to take the research in directions it calls for rather than those I had planned for, if necessary." But for Frost, one key ingredient in doing so is to acquire humility. She expands on this by stating, "In my quest to know more about topics I recognize that my toolbox can include the skills of others as well as my own."

Yet developing some socio-emotional and cognitive skills may not be enough to engage with the qualitative–quantitative divide. Rebecca Glover-Kudon brings us

back to the issue of also being prepared with the necessary level of methods skills required for the journey across the MMR turbulent terrain. She notes, "Serious expeditions need to be well-equipped. I came to mixed-methods as an evaluation practitioner, tasked with informing a wide range of programmatic and/or policy decisions in a public health context. Armed with both sets of tools, quantitative and qualitative, I feel I can respond more nimbly to the research questions at hand, rather than be limited to a particular toolbox."

In order to engage in this type of cognitive thinking, John Hitchcock notes the need to foster a question-driven approach to MMR: "It may be better to think of research as a singular enterprise that is driven by questions rather than a compendium of methodologies that can appear to be incompatible. More often than not, I think a mixed methods approach will help me find the fullest answers, but I let the questions (and too often a budget) dictate design."

Uncovering the Hidden Philosophical, Ethical, and Social Justice and Social Change Dimensions of MMR Inquiry Frameworks

One of the most ephemeral of issues with regard to MMR is a consideration of the foundational substructure within which MMR is housed. While this may appear to be a very esoteric issue for some MMR members, I would argue that it is a critical issue to engage with and a critical element in our journey toward dialoguing with the range of differences that comprise the MMR turbulent landscape. The remarks of Sharon Crasnow highlight the importance of bringing attention to the assumptions any researcher is buying into with regard to such questions as the nature of the social world by noting, "Philosophical tools need something to be applied to and without looking at how methods are actually used in particular research projects in the social sciences; there is no philosophy of social science." Robert Yin questions some basic issues regarding MMR generalizations: "I am not even aware that anyone is working on filling these lacunae, which call for codifying how to fairly and effectively operationalize key procedures central to all of quantitative and

qualitative research—that is: how to test rival explanations, or how to establish that triangulation has occurred, or how to claim relevant generalizations when not following the statistical sample-to-population generalization procedure. My contribution to the Handbook suggests that these are truly lacunae that MMR needs to exercise leadership in filling."

Margarete Sandelowski's comments speak to the importance of fostering a social justice/social change framework (along with others who address this issue in the Handbook such as Donna Mertens, Fiona Cram, and others) in the work that MMR engages with. In doing so, Sandelowski's remarks remind us of the importance of reflecting on our own set of values and biases that we bring the MMR enterprise.: "Keep your eye on the prize; we conduct mixed-methods research not for the sake merely of conducting it but rather for the knowledge we produce to have positive impact in the world. Substance should never be sacrificed for methodolatry."
Jori Hall follows up by stressing the importance of MMR engagement with ethical practices. She asserts, "Although there are many items in my backpack, I consistently find myself searching for one: 'an ethical mindset.' . . . In practice, an ethical mindset is imperative particularly as it relates to researchers' examining how mixed methods designs interact with the local context and the participants therein."

Acquiring an Understanding of the Importance of Reflexivity

A number of our Handbook authors mentioned the importance of bringing a reflexive perspective onto MMR research. Judith Preissle notes, "My knapsack, of course, has whatever is conducive to napping; rest and reflection are crucial for problem solving." Albert Hunter advises researchers to bring a "multimethod backpack [that] when unpacked is seen to contain the defining diverse elements that make up science itself. And, these should be applied reflexively to 'multimethods' as well."

Udo Kelle suggests that " What is needed in my opinion is a methodological debate which is a continuous and ongoing reflection of concrete research practice. The other point refers to the relation between research topic, research question, method, and (substantive) theory. We should always remind ourselves and our research and doctoral students that the choice of the right method (whether qualitative or quantitative) is influenced by theoretical ideas about the field under investigation. That influence is always present, albeit it is often left implicit (and in that case it should be made explicit)."

Sarah Drabble remarks on how reflexivity centers "on the deeper methodological issues." Mel Mark suggests using a compass that includes "maintaining perspective about why one cares about MMR, which for most people presumably involved the questions they're asking." John Creswell's remarks remind us about the importance of reflexivity in a global context, by noting that the actions, images, and symbols of MMR are important in promoting a "growing global interest in adapting mixed methods for those around the world."

One last, but not by any means final, insight from our Handbook authors is reflective of just what it takes for you, the researcher, to engage with a MMR project, namely, the importance of considering the level of professional research commitment and time to completion of a given MMR project.

Commitment and Engagement

Several of our Handbook authors raised some cautionary points regarding just what it would take for those within and outside the MMR community to engage with a MMR project. Nicola Jones and Paula Pereznieto were emphatic about the importance of researchers, especially those engaged with international development MMR, to dedicate "the time, resources and commitment to provide thorough and hands-on training and mentoring to local research partners who are often more familiar with doing research using structured surveys for quantitative

data collection than using qualitative and participatory methods." Jennifer Wisdom's backpack insights provide an important follow-up to Jones and Pereznieto's concerns by noting the importance of having a project manager to oversee the range of demands required of any MMR project that also seeks external funding. Wisdom shares her wealth of experience in seeking funding for MMR projects. She provides information for those who seek to venture into the world of competitive research funding and offers some important advice:
She notes that: " It is imperative to have a plan for completing the required products within the timelines set by funders or others. Project management techniques have provided to me with a way to structure study activities to maximize both time spent in the joy of absorption while ensuring completion of activities in a timely manner."

As you start your own MMR journey, I hope you might think about what symbolic or materials things you might want to take along with you. I invite you to check out our Handbook's website for more suggestions on backpack items and feel free to add a comment about what items you might add and why.

Closing Thoughts as You Begin Your Journey

Handbook authors push on the boundaries of traditional knowledge-building by venturing out of their methods routine and utilizing their creativity and intellect in the service of answering complex questions that arise from a range of newly emerging theoretical perspectives, as well as responding to immediate problems within their research environment.

Moving across the many borders and challenges that are discussed in this chapter and elaborated on in the Handbook as a whole may also require that multi and mixed methods researchers reframe their approach and methods practices. So, for example, mono-methods and single disciplinary research may give way to "team-based" interdisciplinary projects. Such crossing of research approaches, methods,

and disciplinary divides may provide the potential new synergy for imagining a cacophony of visions in conversation with the goal of addressing complex questions with multifaceted challenges. Having a backpack and not being too reliant on a particular pre-mapped research trail may promote flexibility for multimethod and mixed methods researchers to change their course along their MMR journey.

It is my personal hope that this Handbook will encourage other researchers to begin to create accounts of their own MMR practices and histories. These accounts can help build on the range of MMR perspectives and practices that reside within and across the disciplines and beyond. Engaging in a deep dialogic process that is ongoing and open toward the inclusion of a diverse and multiple perspectives onto the MMR landscape may hold the promise of unleashing the synergistic potential of MMR endeavors.

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