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From Paradigm Wars to Peaceful Coexistence? A Sociological Perspective on the Qualitative-Quantitative-Divide and Future Directions for Mixed Methods Methodology

Felix Knappertsbusch

Key words: mixed methods; multimethod research; methodological pluralism; reflexivity; sociology of science; science studies

Abstract: Social research today is marked by a contradictory constellation: Even though calls for methodological pluralism are prevalent and the principles of method integration are widely accepted, researchers still largely reproduce the traditional qualitative-quantitative-divide in their methodological boundary making. Actual applications of mixed and multimethod research remain a niche phenomenon. I argue that the reasons for this persistence of methodological schisms are, on the one hand, to be found in the way that pluralistic norms have successfully been integrated into the rhetoric with which proponents of qualitative and quantitative research traditions distinguish their approaches against each other. On the other hand, they also lie in the current mixed-methods-discourse and the related focus on textbook methodology and paradigmatic group identity. To strengthen the impact of mixed methods as a meta-reflexive critique of methodological schisms, methodologists should incorporate empirical studies of qualitative, quantitative, and mixed research practice into their work, and shift their focus more towards the social and cultural factors influencing methodological divisions. I outline what I consider to be core elements of such a *post-methodological* approach to mixed and multimethod methodology.

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"And what is the use of an argument that leaves people unmoved?" (FEYERABEND, 2010 [1975], p.9)

1. Introduction

The current social research landscape is characterized by a peculiar discrepancy: Despite the successful establishment of "multimethod and mixed methods research [MMMR]" (HESSE-BIBER, 2015, p.xxxiii) as a research approach, and despite a heightened general awareness of the problems of methodological fragmentation and the potential benefits of method integration, the dividing lines of past paradigm wars (BRYMAN, 2008) persist, along with their qualitative and quantitative mono-method cultures. While the proportion of MMMR in certain key areas is estimated to be as high as 14% (in education; HUTCHINSON & LOVELL, 2004; NIGLAS, 2004; TRUSCOTT et al., 2010) or even 18% (in health research; O'CATHAIN, MURPHY & NICHOLL, 2007; TWINN, 2003; WISDOM, CAVALERI, ONWUEGBUZIE & GREEN, 2012), mono-method studies are still the standard throughout most of the social research landscape, with MMMR ranging from 5% to 7% (in sociology and psychology respectively; ALISE & TEDDLIE, 2010).¹ [1]

This situation is puzzling, not only for proponents of MMMR approaches, but also with regard to the fact that social researchers generally seem to agree on the dangers of methodological schisms and the potential of MMMR, but rarely cross methodological boundaries in their own work. MMMR in its current state seems to be "an argument that leaves people unmoved" (FEYERABEND, 2010 [1975], p.9) —it lacks causal impact, despite its apparent epistemic force. [2]

This limited impact of the mixed methods "movement" (TEDDLIE & TASHAKKORI, 2020, p.3) is also evident in the gap that exists between the methodological MMMR discourse and integrative research practice, as shown in systematic reviews. A large proportion of researchers employing method-combinations do so without categorizing their work as MMMR (BRYMAN, 2006; O'CATHAIN et al., 2007; TRUSCOTT et al., 2010). Those who do refer to MMMR methodology often seem to use it as a fashionable buzz-word, rather than a sophisticated methodological strategy (O'CATHAIN et al., 2007; SANDELOWSKI, 2003). For example, NIGLAS found that among publications self-categorized as MMMR only 60% actually involve "two types of initial data" (2004, p.20; see also BRYMAN, 2006, pp.103f.). ALISE and TEDDLIE claimed that 45% of MMMR authors in their sample employed "quasi-mixed" designs (2010, p.121), i.e., used

1 Of course, the prevalence of MMMR in published research is a very incomplete operationalization of the complex multi-level structure that is methodological pluralism. Pluralism may appear on the level of whole disciplines or fields, in which the composition of applied research methods may range from very homogenous (e.g., in psychology) to very heterogeneous (e.g., in geography). Then there is the level of research teams or individual researchers, who may apply a diverse set of methods, but not mix methods within individual studies. And then there is the level of the research study or project, in which methods may or may not be combined. Methodological pluralism within a given field may be measured on all of these levels; however, authors of the current systematic review literature almost exclusively focus on the amount of MMMR designs in published research. Another caveat, in addition to this somewhat narrow focus on within-study pluralism, is that most of the *prevalence rates literature* (ALISE & TEDDLIE, 2010) dates back at least ten years.

qualitative and quantitative data, but made little or no analytical efforts to integrate results.² [3]

Against this backdrop, three main questions are investigated in this paper: Why do traditional methods divisions largely prevail, even though most researchers acknowledge the dangers of methodological fragmentation and the potential of method integration? What conclusions can be drawn from this coincidence of pluralism and fragmentation with regard to the quality of current paradigm peace and the state of the mixed methods movement? And what would be needed to increase the impact of MMMR methodologists' critique of methodological schisms beyond their own self-referential community? [4]

In the following sections I will argue that the persistence of the qualitative-quantitative-divide despite the popularity of integrative alternatives is not only a matter of rigid mono-method traditions, but also has to do with the quality of current MMMR discourse. Hence, even though in my assessment of the current qualitative-quantitative-divide I am admittedly partial to the MMMR perspective, I formulate a critique of the way MMMR is conceptualized and promoted as well. Proponents of both sides contribute to a state of *paradigm peace* that contains many of the problematic aspects of *paradigm war*, albeit in an ideologically concealed way. Methodological schisms today are often communicated via a pluralistic rhetoric by means of which general norms of methodological pluralism are integrated and confrontational mono-method traditionalism is kept latent.³ [5]

In my view, one of the reasons why the critical impact of MMMR researchers has "run out of steam" (LATOURE, 2004, p.225) is that method integration is too often discussed with a focus on either the technical procedures for conducting MMMR,

2 These prevalence estimates are connected to the somewhat complex and contested issue of how to categorize multimethod and mixed methods research. It is a complex issue because in it distinctions between different (qualitative and quantitative) methodologies are assumed, which runs the risk of exaggerating and reifying methodological differences, rather than mediating between them (HAMMERSLEY, 2023; SYMONDS & GORARD, 2010). It is a contested issue because competing criteria for what should count as a multimethod and/or mixed methods study exist. For example, some authors insist on the combination of qualitative and quantitative data sources—the distinction of which is problematic in itself (HAMMERSLEY, 2002; SCHOONENBOOM, 2023)—in a single study, while others use the term to also include designs in which the same original data are interpreted with qualitative and quantitative methods (CRESWELL & PLANO CLARK, 2017). Yet other authors refer to *genuinely mixed* approaches, such as *qualitative comparative analysis* or *network analysis*, as mixed methods (GOERTZ & MAHONEY, 2013; HOLLSTEIN & WAGEMANN, 2014). For the sake of terminological clarity, I find it helpful to distinguish between *mixed methods research* as combinations of qualitative and quantitative methods within a single study, and *multimethod research* as the more general category also including combinations of multiple qualitative or quantitative methods (FETTERS & MOLINA-AZORIN, 2017). I also use the terms *integrative research* and *method integration* (KELLE, 2001) to describe multimethod research in general. Since the focus of this article is on the qualitative-quantitative-divide and methodological boundary making, and since researchers combining methods within the confines of a single (qualitative or quantitative) methodological tradition are less likely to contest such boundaries, most of my argument will be made with *mixed methods* in mind. However, I am nonetheless skeptical about any strict criteria for categorizing mixed vs. non-mixed multimethod designs for similar reasons to those mentioned above (KNAPPERTSBUSCH, 2020).

3 As I will describe in more detail in Section 2, I use the concept of ideology specifically in this rhetorical sense, i.e., not to question anybody's individual motives or psychological disposition, but to describe a discursive pattern of reconciling *ideological dilemmas* in normative argumentation (BILLIG, 1988).

such as design-typologies, or promoting MMMR as a kind of methodological creed, a "third research paradigm" and distinctive methodological worldview (TEDDLIE & TASHAKKORI, 2020, p.3). Advocates of both these *textbook* and *paradigmatic* modes of MMMR methodology have played an important role in establishing MMMR as a specialty area, yet at the same time, they are at odds with what I understand to be the meta-reflexive core idea of MMMR. According to this idea, MMMR methodologists should not only be concerned with the development of alternative methods procedures or the promotion of a distinct methodological belief set, but with the critique of the boundary making between methods communities. [6]

My intention is to strengthen the case for such a reflexive methodology in which the specificity and potentials of different (qualitative and quantitative) research approaches are acknowledged, while the dangers of an unmediated pluralism between them are also considered, including the problematic role MMMR methodologists may themselves play in the perpetuation of such fragmented paradigm peace. To be sure, what is problematic about a fragmented social research landscape is not the existence of specialization per se, and the alternative surely cannot be the disintegration of existing methods traditions or the introduction of one unified super-methodology. However, through the live-and-let-live of an unmediated pluralism, i.e., one that is not complemented by exchange and constructive mutual criticism between specialties, the cooperative pursuit of intersubjective knowledge is likely to be impeded. Critics caution that the qualitative-quantitative-divide has been used to present a distorted, oversimplified picture of the problems of social research practice (HAMMERSLEY, 2002; MAXWELL, 2011), and that through the *de facto* separation of qualitative and quantitative paradigms the potential for constructive mutual criticism has been diminished (BAUR & KNOBLAUCH, 2018; KELLE, 2007). [7]

Even though these schisms are usually described and debated in methodological terms, they are also driven by social and cultural influences which cannot be reduced to questions of methodological rationality. In my view, the meta-reflexive dimension of MMMR methodology is intimately connected to a sociological analysis of these contingent organizational, political, and cultural factors in the (re-)production of methodological schisms. Therefore, to reinvigorate the critical impact of MMMR it will have to be moved beyond its *textbook* and *paradigmatic* modes, to include an empirical analysis of qualitative, quantitative, and mixed research applications in social science practice—not in order to debunk methodology in favor of sociological description, but to strengthen it. [8]

I will develop my argument by first giving an example of the peculiar tension between calls for methodological pluralism and the persistence of methodological fragmentation in social research today (Section 2). I will then switch over to the current MMMR discourse and the understanding of methodology visible in its *textbook* and *paradigmatic* tendencies (Section 3). Next, I will introduce the concept of methodology as justification rhetoric to broaden the scope of MMMR methodology from a sociology of science perspective (Section 4). I conclude the

article with an outline of what I call a *post-methodological* approach to MMMR (Section 5) and a discussion of its implications (Section 6). [9]

2. The Current State of Methodological Pluralism in Social Research

Asking why traditional methods divisions are reproduced despite widespread acceptance of methodological pluralism and method integration may seem like an overestimation of the importance of MMMR approaches to some readers. After all, there are plausible reasons why one should expect social research methods to be highly differentiated and, to a certain extent, fragmented. Firstly, diversification of approaches is a normal and healthy process in modern social science. The "task uncertainty" (WHITLEY, 2000, p.119) of social research along with the complexity of its subject matter make pluralism a rational form of work organization. Furthermore, controversy between rival approaches and their proponents is an integral part of scientific communication, given its principle of "organized skepticism" (MERTON, 1973, p.277). Secondly, there are some rather banal psychological and organizational reasons why multimethod designs remain the exception rather than the norm: There may be a tendency for the social sciences as a whole to be pluralistic, but no single research team has the resources to do it all, and the limited cognitive capacities of individual researchers—however gifted they may be—, along with the path dependencies of academic careers, make it very likely for them to become specialists (PAYNE, WILLIAMS & CHAMBERLAIN, 2004, p.154). Moreover, high quality research needs specialists, and the "narrowing of the range of expertise" (KUHN, 1990, p.8) associated with specialization may be "the necessary price of increasingly powerful cognitive tools" (ibid.). And one must also keep in mind that in some cases "a monomethod study will serve the inquiry purpose just as well or even better than a mixed methods study" (GREENE, 2007, p.98). [10]

However, at the same time, the fragmentation of social research into quasi-incommensurable methodological camps is often criticized as a sign of "pre-paradigmatic" immaturity (KUHN, 2012 [1962], pp.162ff.) or crisis (KELLE, 2007, pp.10ff.). Even if one considers the multi-paradigmatic state of the social sciences normal and mature, an unmediated pluralism, i.e., one that is not complemented by ongoing exchange and constructive criticism between specialists, can be an impediment to the pursuit of intersubjective knowledge that is at the heart of modern scientific practice (KORNMESSER & SCHURZ, 2014). Peaceful coexistence of separate methods approaches, though probably preferable to the "destructive rivalry" of "paradigm war," may still be a problematic state of affairs, because it implies mutual ignorance, or forms of "pseudo-cooperation," instead of critical discourse (p.35). [11]

Additional concern about this form of fragmented pluralism may be raised by the current development of (social) science's role in society at large. The hegemony of academic knowledge production is challenged by the rapidly growing capacity for data-collection and analysis in private sector companies and other agents of "knowing capitalism" (SAVAGE, 2016, p.187). With scientists' increasing orientation towards the interests of non-academic stakeholders, discussed under

the labels of "mode 2" science and "academic capitalism," questions are raised about scientific autonomy (BRESNEN & BURRELL, 2013, p.28; SCHUETZE, 2007, p.435), while scientific truth claims are undermined by populist disinformation and so-called alternative facts (LATOURE, 2004; MAU & VILLA, 2018). It seems reasonable to assume that a hardening of internal disputes and a weakening of critical discourse will be an impediment to dealing with these external challenges to scientific knowledge production.⁴ [12]

Such concerns about a fragmented social research methodology are not specific to the MMMR community, but in fact common across social science generally. Even though disputes about pluralism and fragmentation in social research methodology have gotten more confrontational in some areas, the parties involved seem to agree on pluralism as a constitutive feature of social research. The controversy, though often clearly bearing the marks of the old qualitative-quantitative-divide, is increasingly framed as a dispute about whose approach is more pluralistic. [13]

This form of paradigm-debate is exemplified by the recent discussions around the foundation of the *Akademie für Soziologie* [Academy of Sociology] (AS), a relatively new professional organization in German sociology. After its successful establishment in 2017 a lively dispute ensued between the AS and representatives of the *Deutsche Gesellschaft für Soziologie* [German Sociological Association] (DGS), which had previously been unrivaled as the professional association representing German academic sociology in general. Though not explicitly framed as a secession of *quantitative* researchers from a *qualitative* mainstream, the clash between the *analytical-empirical sociology* represented by the AS and the *continental* sociology of the DGS was in many respects a reprise of topics and distinctions from previous qualitative-quantitative-debates (RÖMER, 2019; SCHMITZ, SCHMIDT-WELLENBURG, WITTE & KEIL, 2019). This qualitative-quantitative fault-line was evident in the methodological preferences of most participants, with experts in interpretive methods such as Stefan HIRSCHAUER, Thomas SCHEFFER, and Jörg STRÜBING on the side of the DGS, and quantitative specialists such as Hartmut ESSER, Thomas HINZ, and Holger LENGFELDT representing the AS. It was also evident in the methodological statements made by the two parties: DGS representatives stressed the importance of "Verstehen" (STRÜBING, 2017, n.p.) as opposed to a methodology of causal explanation supposedly modeled after the natural sciences, and described the AS as the "reservation of an unabashed, self-satisfied positivism" (RUDOLFI, 2017, n.p.).⁵ The AS members highlighted the importance of "precise analytical theorizing," "replicable" empirical evidence, and

4 There are of course also countervailing developments in the advance of *citizen science* (DELFANTI, 2010; FIELDING, 2014), *participatory*, and *transdisciplinary* research (BERNSTEIN, 2015; KNAPP, REID, FERNÁNDEZ-GIMÉNEZ, KLEIN & GALVIN, 2019). Interestingly, there seems to be a special affinity towards the inclusion of non-professional researchers in some branches of MMMR methodology (FIELDING & CISNEROS-PUEBLA, 2009; IVANKOVA & WINGO, 2018). However, to explore such participatory approaches and their potential contribution to overcoming rigid methodological boundary making is beyond the scope of this paper.

5 Most of the English language quotes from AS and DGS representatives in this section are my own translation from German.

a "cumulative growth of knowledge" (AKADEMIE FÜR SOZIOLOGIE, 2019, p.1), and—at least implicitly—questioned the scientific merit of their opponents' work if it failed to meet these criteria (ESSER, 2018). [14]

But this controversy was not framed as a debate between adherents of qualitative and quantitative paradigms. Instead, both sides were eager to stress the multi-paradigmatic inclusiveness of their own positions, and point the separatist or exclusionist blame at their opponent. AS representatives claimed that their program of "empirical-analytical realism" provided a "broad, connecting framework for the whole diversity of sociology" (AKADEMIE FÜR SOZIOLOGIE, 2019, p.2). To be sure, DGS representatives rejected this claim, arguing that it was based "on a—false—generalization of a particular epistemological and methodological program" (DEUTSCHE GESELLSCHAFT FÜR SOZIOLOGIE, 2018, n.p.), and maintained that "the DGS alone is the professional organization that represents sociology in its full plurality and breadth" (ibid.). [15]

Of course, one of the main reasons for establishing the AS had been that their representatives felt analytical-empirical sociology was *not* adequately represented within the DGS. A core criticism was that the pluralism practiced within the DGS lacked a systematic connection of approaches and results, included diversity as an end in itself, and was thus incompatible with the systematic empirical research represented by the AS (GERDON, 2018). In their view, the arbitrariness of this pluralism led to a weakening of sociology's explanatory power, and consequently its disciplinary identity and impact on other scientific and non-scientific fields. Naturally, DGS representatives directed a very similar criticism right back at their opponents, arguing that the AS members' narrow focus on methodological individualism, causal explanation and standardized empirical methods made true pluralism impossible. In their view, the AS representatives' reductionist notion of sociology, and their aspirations to create a more immediate impact in other fields, implied a weakening of sociology's disciplinary identity (RUDOLFI, 2017). [16]

Thus, somewhat ironically, what used to be framed as a clash of qualitative vs. quantitative paradigms is now described as a clash of different pluralisms. The fault-lines of the old paradigm conflict remain, but they are expressed in a pluralistic rhetoric. The opponents equally highlight the importance and possibility of a combination of qualitative and quantitative approaches, but they mutually charge each other with making such exchange and cooperation impossible. In fact, both sides present their respective organizations' efforts as attempts to bridge the gap between qualitative and quantitative traditions: From the perspective of Hartmut ESSER, the AS was founded with the aim to "refute the underlying notion—on both sides!—of an incompatibility of hermeneutical, interpretive, and causal, explanatory, analytic-empirical sociology" (2018, p.133). And Stefan HIRSCHAUER argued that the current "so-called methods dispute in our discipline [...] consists of insurmountable barriers of communication between bilinguals and monolinguals" (2021, p.53)—implying, of course, that the problem of monolingualism predominantly lies with the AS' members. [17]

It seems the current social research landscape is still characterized by the methodological schisms of the qualitative-quantitative-divide, but they are masked by a pluralistic rhetoric. Despite their expressed commitment to mutually constructive criticism and exchange, the actors involved continue to find ways to avoid any real contact, while blaming the opponent for the disciplinary fragmentation. In this sense, methodological pluralism and method integration have become rhetorical devices in a paradigmatic discourse—with the result that in effect fragmentation is furthered.⁶ [18]

But this ideological constellation, as I will argue in the following section, is not only an essential aspect of the qualitative-quantitative-divide today, but also the main entry point for MMR methodology and the critical function it provides. If ideology involves ambivalent normative orientations, as Michael BILLIG has suggested, ideological discourse does not reflect a rigid cognitive schema, but "can also provide the dilemmatic elements which enable deliberation to occur," and thus "also harbors the potential for change" (1988, p.33). In this sense, MMR is part of the deliberation of methodological differences. MMR methodologists take part in the qualitative-quantitative-dispute by offering a meta-reflection of the tension between pluralism and fragmentation already included in it. However, MMR authors currently tend to disregard this meta-reflexive role and focus instead on the formulation of textbook-procedures, or the consolidation of the social identity of a "third research paradigm" (TEDDLIE & TASHAKKORI, 2020, p.3). [19]

6 This ideological mode of communicating methodological schisms bears a certain resemblance with rhetorical patterns in "differentialist" expressions of modern ethnocentrism and prejudice, in which racist communication has to function "under conditions of an official antiracism" (MARTIN, 2013, p.60). Expressions of prejudice usually do not contain an outright rejection of egalitarian norms, but rather a distorted, strategic acknowledgement of them, including strategies of hedging and "prolepsis," or depicting one's own in-group as a victim of discrimination (WETHERELL, 2012, p.169). With this comparison I do not mean to liken qualitative or quantitative research traditions to ethnocentric bigotry, but to highlight the central role of "discursive move[s] that acknowledge[s] but deflect[s] potential criticism" in current methodological disputes (ibid.). Also, I want to stress that my use of the concept of ideology is genuinely sociological and, more specifically, rhetorical in nature. By describing certain modes of discourse as ideological I neither mean to accuse individual actors of dubious motives or suggest any cognitive deficiencies, nor do I reserve a position of moral superiority or principal epistemic advantage for myself as a critic of ideology. On the contrary, any sound critique of ideology should include the notion that ideological phenomena are based on *sociological ambivalence* (MERTON & BARBER, 1976) which is embedded in the social structure and normative discourses of a society in general, and thus affects the critic of ideology as much as any other member of that society (BOLTANSKI, 2011; KNAPPERTSBUSCH, 2021). It is precisely this ambivalence which makes up the particular complexity of ideological phenomena, including the methodological challenges that arise from the critics' participant role.

3. The Meta-Reflexive Idea of MMMR Methodology vs. its Current Textbook and Paradigmatic Interpretations

As I have argued above, methodological controversies in the social sciences are marked by a peculiar ideological configuration: The dispute between qualitative and quantitative approaches is performed as a controversy between different models of pluralism. Methodological schisms persist, but they are communicated in a latent fashion. However, this situation cannot be attributed solely to the inflexibility of the representatives of qualitative and quantitative paradigms. Proponents of MMMR methodology also have played their part in perpetuating the current state of methodological schisms. They have moved away from what I understand to be its meta-reflexive core idea, and instead assumed a focus on textbook methodology and the promotion of MMMR as a distinct paradigm. By emphasizing the technical aspects of research design and the paradigm status of MMMR they have contributed to the success of MMMR as a methodological specialty, but—ironically—one that is of little relevance to adherents of qualitative and quantitative traditions. [20]

At the center of my argument is the assumption that MMMR methodology is built around a meta-reflexive core idea. In my view, MMMR methodology should first and foremost be about a critique of the practical *application* of existing methods and the way they are interrelated, not a critique of qualitative or quantitative approaches *per se*. Its main focus is the issue of methodological schisms, a pathology of methodological deliberation if you will (HABERMAS, 1984), not the proposal of an alternative methodology. Thus, I conceive of MMMR primarily as a "metaparadigm," similar to the way JOHNSON (2017, p.156) or KORNMESSER and SCHURZ (2014, p.36) used this term. MMMR is seen as "a way to listen to multiple paradigms" (JOHNSON, 2017, p.156) in fields where a plurality of paradigmatic approaches has become the norm, and the ongoing, systematic comparison and interrelation of these approaches becomes institutionalized.⁷ MMMR is mainly conceived here as a way to engage with difference in a dialogical, meta-reflexive way, and in this sense my perspective is also similar to the dialectical approach to mixed methods proposed by Jennifer GREENE (2007).⁸ [21]

By proposing a meta-reflexive core idea for MMMR I do not mean to create an origin myth claiming that MMMR methodologists originally all followed this line of thinking. The MMMR literature has been multivocal on the paradigm issue since its beginnings (CARACELLI & GREENE, 1997), and it is not my intention to exclude any of the different paradigm-stances. Instead, I stress the meta-reflexive

7 Thus, the idea of a meta-paradigm, as I understand it, paradoxically contains the notion that there are no consistent paradigms in social research—at least not in any strong, prescriptive sense. Thereby the dialectical idea that methodological paradigms only exist in an ongoing process of their own deconstruction is highlighted. MMMR is not a paradigm in the same sense as qualitative and quantitative approaches are, because it includes a critique of the way the paradigm notion is used (HAMMERSLEY, 2002; KNAPPERTSBUSCH, 2020; MAXWELL, 2011).

8 It seems important to point out that this meta-reflexive, dialogical approach to MMMR was already discussed much earlier, e.g., by FIELDING and FIELDING (1987) or REICHARDT and COOK (1979).

idea to distinguish my understanding of MMMR from what I call *textbook* and *paradigmatic* tendencies in MMMR methodology.⁹ [22]

By the term *textbook MMMR* I mean to describe a focus on the more technical, applied side of method integration. Its proponents address the (potential) mixed methods researcher by describing standard processes and procedures of MMMR in a didactical fashion. They rely on methodological arguments for method integration, such as enhancing the validity of inferences, or broadening the scope of a project (GREENE, 2007). Some of the main topics of a textbook focus in MMMR methodology are taxonomies of design-types (CRESWELL & PLANO CLARK 2017; TEDDLIE & TASHAKKORI, 2020), procedures of integrated data analysis (BAZELEY, 2018; ONWUEGBUZIE & HITCHCOCK, 2015), and templates for integrating and displaying MMMR results (GUETTERMAN, FETTERS & CRESWELL, 2015). [23]

By *paradigmatic MMMR* I mean to describe a focus on the more abstract, philosophical foundations of what is assumed to be a consistent methodological world view, including researchers' epistemological and axiological beliefs. Its proponents assume the existence of distinct and internally consistent paradigms in social research (MAXWELL, 2011), while promoting MMMR as a "third research paradigm" (JOHNSON & ONWUEGBUZIE, 2004, p.14) or a "third research community" (TEDDLIE & TASHAKKORI, 2020, p.3). This often includes the internal differentiation of sub-genres, including *pragmatist* (JOHNSON & ONWUEGBUZIE, 2004), *transformative* (MERTENS, 2010), and even *qualitative* (HOWE, 2004; MASON, 2006) MMMR paradigms. [24]

To avoid any misunderstandings: Both textbook and paradigmatic perspectives on MMMR have been crucial to its popularization and institutionalization, and they continue to be an important and valuable contribution to the field. Yet, the way in which these foci are applied in the MMMR literature today can be at odds with the meta-reflexive core idea outlined above: While in textbook accounts MMMR is treated as a distinct methodology, a set of more or less formalized procedures and guidelines, in the paradigmatic perspective MMMR is promoted as a distinct research program, a trademark alternative to qualitative and quantitative paradigms. But defining MMMR as a distinct methodology (in the sense of a research procedure like e.g., survey methodology or experimental designs) seems too narrow a concept, since in most cases it is practiced as a constellation of methodologies or procedures rather than a methodology in itself. And by defining MMMR as a paradigm (in the sense of a coherent set of beliefs, shared by a community of researchers), too much emphasis is put on distinguishing it from qualitative and quantitative paradigms, thus running the risk of reinforcing the sort of strict boundary making MMMR methodologists originally set out to overcome. [25]

9 I want to stress that I do not necessarily attribute these tendencies to specific authors, although I try to point out examples where possible. Also, the terms *textbook* and *paradigmatic* MMMR are not meant to describe separate or even opposite phenomena—after all, some of the most influential textbook accounts of MMMR promote it as a distinct paradigm. These current tendencies in how MMMR is presented and discussed, may also occur together as part of the same effort to establish MMMR as a distinct research approach.

Admittedly, I am somewhat simplifying the issue for the sake of argument here. There are of course specific methods and methodologies that can be used to integrate qualitative and quantitative procedures (such as *qualitative content analysis*; BURZAN 2016; KANSTEINER & KÖNIG 2020; SCHREIER 2012), as well as techniques that have been described as *genuinely mixed* (such as *network analysis* or *qualitative comparative analysis*; FIELDING & SCHREIER, 2001; HOLLSTEIN & WAGEMANN, 2014) or *merged* (GOBO, 2023), and in that sense MMMR can be a distinct *method or methodology*. But these procedures only make up a rather small part of MMMR. Certainly, reducing MMMR methodology to such *genuinely mixed* procedures would also mean excluding a large and arguably more important chunk of the literature—not to mention that *merged* approaches are often introduced as an alternative to mixed methods, rather than a part of it. Also, *methodology* is a rather fuzzy concept used to refer to methods procedures and design types in a more technical sense (as in e.g., *survey methodology*), as well as to theoretical deliberation on the logical and epistemological groundwork of empirical research. Thus, a model for MMMR such as my meta-reflexive concept could well be described as a *methodology* or even a *method*. However, this use of the terminology in my view seems less instructive than the one I propose, since the fact that most MMMR studies are constellations of previously existing methods or methodologies (e.g., *survey methodology* and *narrative interviews*), and as such are better categorized as a matter of method *application* and methodological *reflexivity*, not a method or methodology in itself, would be concealed rather than specified through it. Even though the systematic combination of qualitative and quantitative methods in order to offset their strengths and weaknesses can be described as an alternative methodology, what's new and specific about the MMMR approach in my view is not really the methodological idea that such combination is possible and promising, but rather actually going ahead and implementing it, exploring the possibilities, and overcoming rigid methodological boundaries in the process.¹⁰ [26]

The assumption that MMMR can be formalized and taught like a particular method, or promoted as a kind of alternative methodological creed, has come to overshadow the idea that MMMR methodology—or at least one core aspect of it—is about the social issue of methodological schisms. Textbook accounts of MMMR are received by a considerable audience, but their popularity seems largely independent from the persistence of the qualitative-quantitative-divide in social research practice. And through the establishment of a new MMMR sub-specialty in which traditional paradigm conflicts are resolved by introducing a third paradigm, the issue of methodological schisms seems to be bypassed, rather

¹⁰ A similar terminological fuzziness of course applies to the paradigm concept. A meta-reflexive position like mine could possibly be labeled a *paradigm* in the sense of a methodological belief set and research community. But there are reasonable doubts as to the extent with which research practice is actually guided by coherent epistemic beliefs (BRYMAN, 2006; MAXWELL, 2011), which seems to be mirrored by the limited coherence between integrative research practice and the MMMR methodological literature, as described in the introduction to this paper. Hence, the methodological advantage of using the paradigm label for what I am proposing here seems doubtful to me. This is even more true with regard to the community-meaning of the term. To define MMMR methodology via particular research communities (e.g., the one around the *Journal of Mixed Methods Research*, or around *qualitative comparative analysis* methodology) seems like a questionable reductionism as well.

than worked through. Thus, to a certain degree, current MMMR functions as a part of the ideological constellation of today's methodological schisms: Virtually everybody agrees on the core principles of pluralist methodology, but actual research practice is largely unaffected by it, and the old qualitative-quantitative fault-lines are still prominent in methodological disputes, albeit with a more pluralist rhetoric. Establishing MMMR as a third design option with its own procedures and techniques has made it a successful methodological niche, but one that is well integrated into a fragmented social research landscape. [27]

Again, I do not mean to downplay the productivity and methodological sophistication of current MMMR methodology, which in many respects is a great accomplishment and a remarkable success story. And maybe establishing a successful methodological niche is all one can realistically ask for. Yet, at the same time, it seems important to note that this niche status is at odds with the intention of promoting a more impactful, mediated pluralism in social research, beyond the live-and-let-live of methodological niches. To put it in slightly hyperbolic terms: To a certain extent, current methodological schisms, and current MMMR, are both expressions of the same inconsequential pluralism. To better understand this ideological constellation, it is helpful to take a closer look at the ambiguities of methodological discourse, especially its social and cultural functions. [28]

4. The Ambiguity of Methodology

In what could be called the received view of methodology, it is conceived of as an underlying program for empirical research procedures, a guideline followed by researchers in an intentional manner. In such "idealistic" accounts of methodology (FEYERABEND, 2010 [1975], p.232), its content is usually conceptualized in a rationalistic way: Methodology is assumed to be grounded in logical and epistemological principles that determine how to correctly construct theory and draw inferences from empirical observations. When asked about their design choices, most researchers will give methodological reasons in this sense. [29]

However, through the sociological and historical turns in the philosophy of science most prominently associated with the work of Thomas KUHN and Paul FEYERABEND, a very different perspective on methodology and its role in research practice was introduced. Reversing the rationalistic model of the *received view*, these sociologists and historians of science saw research practice as driven not by logical and epistemological principles, but by contingent social norms and cultural routines. The methodological question "how is valid knowledge of the world possible" became the sociological question "how do researchers manage to create the appearance of fact like knowledge" (FUCHS, 1992, p.21). Viewed from this angle, methodology appears not as the organizing principle and logical foundation of scientific knowledge production, but as a result and ex-post rationalization of a contingent social practice. Where philosophers of science worked to refine and explicate the epistemological foundations of research from an *internal* perspective, striving to assist researchers in the

rationalistic justification of truth claims, the new sociologists of science reconstructed the functions of methodological justification from an *external* perspective (p.3) much more akin to the sociology of knowledge or the critique of ideology. [30]

As I will argue in more detail in the following paragraphs, I am convinced that improving the methodology of MMMR could benefit greatly from closely combining these internal and external perspectives, instead of playing them off against each other. Just as contingent and rational factors are intertwined in any individual researcher's scientific work and career development, these factors need to be acknowledged as interrelated components of scientific practice as a whole in order to gain a better understanding of social research methodology in its situated application. [31]

There are many variations over the externalist line of argument in the diverse field of sociology of science and science studies (LEAHEY, 2008; PICKERING, 1992). For the purposes of this paper, I want to highlight two conceptualizations of methodology in which its ideological functions are described. Firstly, there is the function of "textbooks" in the reproduction of "normal science," as discussed by Thomas KUHN (2012 [1962], p.136). This is where I borrow the term *textbook MMMR* from. Textbooks, according to KUHN, are a means to maintain and stabilize established research paradigms through academic socialization and training. However, the reproductive function of textbooks is based on the fact that their accounts are "systematically misleading" (ibid.) from a historical perspective: They are used to conceal the cultural and social origins of a respective paradigm, and to "write history backwards" (p.137), depicting a given field as "developing linearly towards its present vantage" (ibid.) while hiding the arbitrariness of some of its developing steps and the contingency of its research procedures. In much the same way as *post hoc* research reports are biased towards successful results, and thus may be used to present an exaggerated view of the cumulative growth of scientific knowledge overall, methodological textbook accounts can be used to facilitate a one-sided notion of empirical research as guided by a system of rules and procedures, based on logical and epistemological necessity. [32]

Secondly, there is the more radical notion of *methodology as justification rhetoric*. Here, methodological discourse appears as a form of instrumental communication through which extra-scientific reasons and motives are legitimized as scientifically rational (ASHMORE, MYERS & POTTER, 2001; PICKERING, 1992). In his account of textbook science KUHN highlighted the concealment of revolutionary breaches in the history of research fields, but still retained the notion of scientific rationality as a part of "normal science" (KUHN, 2012 [1962], p.24). In a radicalized version of this line of thinking, methodology is primarily seen not as an expression of rationality, but rationalization, a rhetorical pathway through which contingent or external motives and influences, such as normative standpoints, group interests, and individual intuition are introduced into the sphere of scientific rationality, while simultaneously masking their non-rational nature (HUNTER, 1990). [33]

Researchers are usually aware of these external influences and may openly describe them in informal accounts of their work, as sociologists in the area of discourse analysis and laboratory studies have shown (GILBERT & MULKAY, 1984; KNORR-CETINA, 1981). However, in the official accounts of research publications, they are translated into a methodological language in which the contingent, arbitrary, and accidental aspects are concealed. Different rhetorical techniques are applied in such transformations of results from the "piecemeal and *ad hoc* projections of laboratory utterance" to the "edited, polished coherence of written discourse" (KNORR-CETINA, 1981, p.94). They allow researchers to switch between what GILBERT and MULKAY (1984, p.40) called "empiricist" and "contingent" repertoires. These techniques are used to stabilize the balancing act of rational internal reasoning and contingent external factors, while at the same time retaining a predominantly rationalistic outward image. [34]

There is of course a problem with the relativism implied by such a radical ideological conception of methodology: If scientific knowledge production is governed by social and cultural factors just as any other kind of knowledge, how can we distinguish science from mere opinion, pseudo-science, or myth? And if there are no grounds on which to distinguish scientific rationality from other cultural thinking-styles, how can the externalist critique of scientific rationality itself have any *scientific* merit? [35]

I will not go into the depths of the "demarcation problem" here, which have been discussed at length elsewhere (FEYERABEND, 2018 [1983], p.376; LAUDAN, 1983; WENDEL, 2013). Instead of seeking a definite, methodological solution to this problem, I propose to view it as an *essential tension* in modern science, which is suspended and continuously processed in research practice—similar to that between tradition and innovation, as described by KUHN (1977).¹¹ For my current purposes, it is sufficient to state that in many instances in which scientific knowledge is produced and received, there is a recursive interrelation between knowing and believing the truth of a scientific claim (HUNTER, 1990), and that this interweaving of the "epistemic" and "causal" forces of an argument cannot be fully disentangled (FEYERABEND, 2010 [1975], p.9). [36]

Hence, there is no singular methodological model by which scientific reasoning can be clearly demarcated from other, more mundane forms of knowledge production (KROHN & KÜPPERS, 1989). But that does not mean that methodology cannot have an important function as a guiding principle. Scientific research heavily depends on the formalization of guidelines and techniques for purposes of systematic inquiry, teaching, and rational (self-)evaluation. But it is just as important to acknowledge the ideological functions of methodology as justification rhetoric. Awareness of this ambiguity of methodology can be a powerful heuristic for investigating research practice—not with the goal of debunking research methodology as mere ideology, but improving it (LEAHEY,

¹¹ It seems important to stress that neither FEYERABEND nor KUHN wanted to promote any sort of relativism or "naive anarchism" (FEYERABEND, 2010 [1975], p.241). FEYERABEND explicitly rejected the idea of applying "anything goes" (pp.16, 241f.) as a methodological principle, and KUHN disapproved of the relativistic "excesses of post-modernist movements like the strong program" (1990, p.4).

2008). As I will argue below, such reflexivity may also help methodologists to overcome the limitations of textbook and paradigmatic foci in MMMR. [37]

5. Implications for a Post-Methodological MMMR

The strengthening of a sociology of science perspective within MMMR methodology could be labeled a *post-methodological* approach. By *post-methodological* I do not simply mean *leaving methodology behind*. Much in the same way as *post-modernism* does not imply a new intellectual beginning after modernity, but a continuation and radicalization of it (WELSCH, 1994), I use the term *post-methodological* to describe a continuation and radicalization of methodology. It is the attempt to improve methodology through a sociology of social research. This methodological model is similar to the *epistemic reflexivity* proposed by Pierre BOURDIEU (MATON, 2003). In it the epistemic potential of social research is connected not only to researchers' reflexivity towards their own research practice, but to a "sociology of sociology" aimed at analyzing the social and cultural conditions of scientific knowledge production (BOURDIEU, CHAMBOREDON & PASSERON, 1991 [1968], p.74). [38]

A post-methodological perspective on MMMR is guided by the assumption that in order to function as a critique of methodological schisms MMMR methodologists need to avoid both the reductionism of *textbook* methodology, and the self-referential closure of a *paradigmatic* approach. While proponents of the former largely ignore social and cultural influences on research practice, those of the latter embrace these aspects too readily, turning the paradigm concept into a political instrument for building a particular research culture. A post-methodological perspective can be used to mediate between those two extremes. [39]

This mediating position can be described in terms of a "paradox of critique" (BONACKER, 2000, p.30). According to this notion, social scientists can neither take an exclusively internal position, nor a strong external position when criticizing social phenomena (CELIKATES, 2018). In the first case, the critics remain too intensely bound to the context-specific norms and meaning-making of the criticized actors, and thus fail to develop an alternative normative or cognitive orientation. In the latter case, they apply strong normative and cognitive criteria, thereby clearly opposing the criticized practices, but their criteria remain incomprehensible, unacceptable, or simply irrelevant to the criticized actors. In both cases, the critics become uncritical. They either fail to put forward a distinguishable alternative and remain merely internal, or they fail to make their alternative criteria relevant to the criticized actors by means other than paternalistic authority, and thus remain merely external. [40]

In a way, textbook MMMR represents the weakness of an internal critique, because its proponents formulate criteria which are intelligible and agreeable to many adherents of mono-method traditions but fail to create significant motivation to adopt alternative research practices. Paradigmatic MMMR, on the other hand, represents the overly strong position of an external critique, in that MMMR is

asserted as a distinctive methodological program, but remains an outside specialty, largely irrelevant to qualitative and quantitative traditions. To maintain the critical momentum in a post-methodological perspective on MMR, the strengths and weaknesses of both internal and external positions have to be counterbalanced. [41]

To support this balancing act, I propose to relocate the tension between methodological rationality and the socio-cultural foundations of science in the practices of social researchers themselves. This means that methodologists will have to shift their attention from logical and epistemological contemplation towards the empirical investigation of research practices. Instead of seeking a definite solution to the issues of methodological pluralism, either in terms of methodological rationality, or by promoting a localized, self-referential research culture, MMR methodologists should focus more on the way researchers reconcile rationalistic and contingent factors in their everyday operations. By observing the local, temporary solutions of the demarcation problem that scientists create when integrating internal and external modes of reasoning in their work, researchers working from a post-methodological perspective could help to build a better, empirically founded understanding of qualitative and quantitative methods application. Such a sociologically informed understanding of research practice, even though it does not immediately entail prescriptive methodological norms, may ultimately feed back into the reflexivity of research practitioners. In that way, MMR methodologists, as critics of methodological schisms, may work towards a renegotiation of established methodological boundary making, and facilitate a form of "methodological perspective taking" (KNAPPERTSBUSCH, 2020, p.469), helping individual researchers to make better informed but also innovative choices in the design and implementation of their work. [42]

I see MMR as constitutively sociological in this sense: It should include a continuous empirical analysis of how social research methods are applied in actual research practice, and a *cartography of controversies* (LATOURET, 2006) with the aim of analyzing the methodological discourse in which researchers justify their work. Of course, in following such a post-methodological approach, one must be wary of naturalistic fallacies: There is a reason why philosophers of science have generally avoided descriptions of actual research practice, and instead focused on the logical and epistemological preconditions of justification. Descriptions of practice, however detailed and insightful they may be, do not entail prescriptive methodological norms. Just because research procedures are common, they are not necessarily right. Thus, when criticizing the "idealism" of a rationalistic methodology, one must also avoid the "naturalism" of deriving standards of reasoning from customary epistemological practices (FEYERABEND, 2010 [1975], p.232). [43]

However, in avoiding a naturalistic focus on research practice one should likewise not forget the shortcomings of an idealized rationalistic methodology. However well-defined formal methodological guidelines and procedures may be, they still have to be applied in research practice and therefore involve a degree of

"systematic ambiguity" (WINCH, 2003 [1958], p.25). And this systematic ambiguity of method application is where the contingent socio-cultural influences of scientific practice come to bear. The practical meaning of any methodological rule depends on its integration into a "complex and in places quite opaque practice or tradition" (FEYERABEND, 2010 [1975], p.233). Hence "no formula will help to solve this problem; we must always come to a point at which we have to give an account of the application of the formula" (WINCH, 2003 [1958], p.24). And because such practical application of methodological formulas is precisely the core subject of MMMR methodology—at least according to my meta-reflexive understanding of it—, it will not do to settle for *either* a prescriptive focus on methodological reason *or* a description of social practice.

"What is called 'reason' and 'practice' are [...] two different types of practice, the difference being that the one clearly exhibits some simple and easily producible formal aspects, thus making us forget the complex and hardly understood properties that guarantee the simplicity and producibility, while the other drowns the formal aspects under a great variety of accidental properties. But complex and implicit reason is still reason, and a practice with simple formal features hovering above a pervasive but unnoticed background of linguistic habits is still a practice" (FEYERABEND, 2010 [1975], p.234). [44]

The goal of pursuing a meta-reflexive MMMR methodology would thus be to understand "reason and practice" not as "two different kinds of entities but parts of a single dialectical process" (p.233). In this perspective, the process of social research is driven by rational guidelines founded in logical and epistemological reasoning *as well as* the recognition that such formulas cannot be relied upon to determine the practice of social research completely. Improving methodology by such a post-methodological MMMR means describing the limits of methodology, showing its systematic ambiguities in research applications, and facilitating awareness of the diversity of methodological approaches. [45]

I propose three desiderata for developing a post-methodological perspective in MMMR. First, and somewhat trivially, MMMR methodology will need to become more empirical. In sociology of science generally, there is still a dearth of empirical research on the social sciences and social research methods specifically (CAMIC, GROSS & LAMONT, 2011; LEAHEY, 2008). In the area of MMMR, there is some research on the prevalence and quality of integrated research approaches. But the *prevalence rates literature* (ALISE & TEDDLIE, 2010), which reached its peak around 2010 (HOWELL SMITH & SHANAHAN BAZIS, 2021), is becoming more and more outdated. Moreover, researchers in this area have predominantly focused on systematic reviews of published MMMR, neglecting the actual research practice behind the "reconstructed logic" of official methodological accounts (KAPLAN, 2017 [1964], p.3). This seems all the more problematic, since existing studies in which research practice is investigated beyond explicit methodological rationales clearly point to the significant impact of various social and cultural factors (BRYMAN, 2007; O'CATHAIN, NICHOLL & MURPHY, 2009; WOIWODE & FROESE, 2021). [46]

Secondly, researchers in post-methodological MMMR would have to take into account the ambiguity of methodology, in the sense that they should connect the analysis of methodological justification with the observation of actual research practice. Empirical data on research practice will be most informative if it is structured in such a way that researchers are able to juxtapose official methodological rationales with informal, narrative accounts of scientific practice or, where possible, even direct observations of research processes. This approach mirrors the notion that science can neither be conceived in purely rationalistic terms, nor exclusively from a culturalist perspective. In a meta-reflexive MMMR methodology, a combination of methodological rationalism with sociological relativism would be sought. The goal would be to highlight the culturally contingent determinants of scientific practice not in order to reject, but to improve methodological rationality. [47]

Thirdly, in doing so, researchers in post-methodological MMMR must consider the variety of external factors influencing research practice—and the enormous diversity of theoretical approaches and explanatory concepts previously developed to analyze them. These include the structure of scientific work organization (WHITLEY, 2000), the inter- and transdisciplinary associations relevant to specific fields (HIRSCHAUER, 2021; KROHN & KÜPPERS, 1989, pp.34ff.), the path dependencies of academic careers and the accumulation of material and symbolic capital (SCHMITZ et al., 2019; WIMMER & SCHNEICKERT, 2018), the methodological beliefs of individual researchers (BRYMAN, BECKER & SEMPIK, 2008; SHEEHAN & JOHNSON, 2012; WILLIAMS, SLOAN & BROOKFIELD, 2017), the procedures and norms of research funding (LAUDEL, 2006; SERRANO VELARDE, 2018), and the increasingly standardized structures of scientific project work (NORKUS, BESIO & BAUR, 2016; WHITLEY, GLÄSER & LAUDEL, 2018). Even if one abstains from any holistic aspirations and instead aims for a research-question-driven selection of relevant theoretical constructs and operationalizations, this poses a considerable challenge. [48]

One way of meeting this challenge will be to employ method integration as a design strategy in post-methodological investigations of research practice. Both the parallelism of research practice and justification, and the combination of multiple socio-cultural factors make MMMR a likely design option for empirical research within a meta-reflexive framework. Systematic reviews and content analyses of research publications will certainly remain a mainstay of any sociology of science, given the crucial role of scientific publishing as a system for intersubjective knowledge production, and the allocation of merit in *reputational work organizations* (WHITLEY, 2000). But these content analyses will have to be complemented by more independent and flexible methods of empirical observation, including standardized surveys of researchers' beliefs and attitudes (SHEEHAN & JOHNSON, 2012), qualitative interviewing (BERTHOIN ANTAL & ROGGE, 2020; GUETZKOW, LAMONT & MALLARD, 2004), document analyses of e.g., funding proposals (SERRANO VELARDE, 2018), and methods of participant observation (MARGUIN, 2021) or auto-ethnography (NOY, 2003). In this regard, recent developments in social science information technology, such

as electronic publishing, data sharing repositories, and data analysis software, could provide valuable sources of material yet largely untapped. [49]

6. Conclusion

I started my argument from the observation that the qualitative-quantitative-divide largely persists despite the growing relevance of integrative approaches in social research methodology. I went on to argue that this persistence cannot be explained in terms of methodological rationality alone, since—on an abstract methodological level—researchers on both sides of the divide seem to agree on the necessity of pluralism in social research and the dangers of fragmentation. Indeed, norms of methodological pluralism seem to have been integrated into the rhetoric of current methodological disputes, which means that recourse to pluralism and integration is sometimes used as an ideological instrument of paradigmatic distinction rhetoric. [50]

Because proponents of the MMMR discourse frequently concentrate on the technical, *textbook* side of methodology, and/or the promotion of a *paradigmatic* group identity, they have complemented this ideological constellation of methodological diversity, instead of subjecting it to criticism. They either provided methodological rationales that are agreeable but inconsequential to most researchers, or they strengthened the identity of MMMR as a distinctive methodological creed, effectively reducing it to one methodological niche among others. In both cases, they avoided reference to the social and cultural determinants of scientific practice, as it is common in current of discourses on methodological differentiation. [51]

Rather than incorporate them into their methodological reflexivity as analytical concepts, proponents of method integration have turned the sociological notions of *justification rhetoric* and *research paradigms* into instruments for establishing MMMR as a trademark approach. Where KUHN saw textbook science as a social mechanism through which an already established paradigm is reproduced, MMMR authors use textbook accounts as a means to create a coherent research approach from a rather heterogeneous, scattered number of integrative methods applications (DENSCOMBE, 2008). And where KUHN introduced the paradigm concept to explain the *absence* of "overt disagreements [...] about the nature of legitimate scientific problems and methods" in the natural sciences (2012 [1962], p.42), MMMR authors use the concept to describe the *existence* of methodological differentiation within the social sciences, and to legitimize alternative brands of research approaches along the way. [52]

In contrast, to regain momentum as a meta-reflexive critique of methodological schisms, I proposed to strengthen a sociology of science perspective in MMMR methodology. Again, to avoid any misunderstandings: Both the textbook and paradigmatic strands of MMMR methodology serve highly important purposes—researchers need inspiration, instructive examples, and expert guidance to effectively apply MMMR designs, and even the most meta of criticisms needs to be based on a minimum of professional institutionalization to be heard at all. But

in order to function as a critique of methodological schisms, textbook procedures and paradigmatic identity construction need to be complemented by an empirical investigation of research practices in which explicit methodological rationales are analyzed in juxtaposition with the social and cultural realities of their application. [53]

In this regard, the post-methodological perspective I propose has much in common with *reflexive sociology* (BOURDIEU, 2004 [2001]), and a *reflexive methodology* of social research methods specifically (KNOBLAUCH, 2021). The "empirical theory of science" proposed by Hubert KNOBLAUCH represents a very similar intention "to link the critical approach of the sociology of (scientific) knowledge with the normative approach of the philosophy of science by an empirical reflection on methodology" (2021, p.67). Similar to the critical function of a post-methodological MMR outlined above, such an empirically informed theory of science could be used to draw quasi-normative methodological implications from sociological descriptions indirectly, by making visible the latent norms, routines, and practical knowledge that influence social research procedures. [54]

However, in contrast to this perspective, which is mostly presented as a qualitative approach to social research, I view the combination of methodological rationality and reflection on the socio-cultural contexts of its application as neither qualitative nor quantitative. Instead, it could be viewed as a core element of MMR methodology in the meta-reflexive sense proposed here. Such a repositioning or adaptation would also have implications for the empirical side of reflexive methodology. While in previous applications researchers have mostly focused on qualitative research methods, both as a subject matter and in their own methods applied (KNOBLAUCH, 2018; MRUCK & BREUER, 2003), those applying reflexive MMR methodology would have to systematically compare qualitative, quantitative, and mixed methods practices, in order to generate results that are similarly relevant to all of these communities, and they would also be more likely to exploit the potential of integrative research designs for this task. [55]

Of course, any effort to more closely interconnect normative methodology and empirical sociology of science will require careful dialectical deliberation, regardless of the methods employed. There is no sure-fire way to avoid naturalistic fallacies here. But it would also be careless to neglect that even the most precisely formulated methodological norms and principles gain their practical meaning only in the process of applied research with all its contingent influences—and that there is something to be learned, methodologically, from observing this interplay of abstract norms and routine practice. [56]

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