Introduction: the power of the bricolage: expanding research methods

Joe L. Kincheloe

Kathleen Berry and I are passionate about the power of the bricolage to expand research methods and construct a more rigorous mode of knowledge about education. In an era in Western societies where thick forms of qualitative knowledge production are challenged by neo-positivistic and reductionistic modes of ‘evidence-based research’, this book lays out a complex and textured notion of scholarly rigour that provides an alternative to such approaches to educational inquiry. Our use of the term and concept ‘bricolage’ comes from the work of Denzin and Lincoln (2000), who used the term in the spirit of Claude Lévi-Strauss (1966) and his lengthy discussion of it in The Savage Mind.

The French word bricoleur describes a handyman or handywoman who makes use of the tools available to complete a task. Some connotations of the term involve trickery and cunning and remind me of the chicanery of Hermes, in particular his ambiguity concerning the messages of the gods. If hermeneutics came to connote the ambiguity and slipperiness of textual meaning, then bricolage can also imply the fictive and imaginative elements of the presentation of all formal research. Indeed, as cultural studies of science have indicated, all scientific inquiry is jerryrigged to a degree; science, as we all know by now, is not nearly as clean, simple, and procedural as scientists would have us believe. Maybe this is an admission many in our field would wish to keep in the closet.

In the first decade of the twenty-first century bricolage is typically understood to involve the process of employing these methodological strategies as they are needed in the unfolding context of the research situation. While this interdisciplinary feature is central to any notion of the bricolage, I propose that qualitative researchers go beyond this dynamic. Pushing to a new conceptual terrain, such an eclectic process raises numerous issues that researchers must deal with in order to
maintain theoretical coherence and epistemological innovation. Such multidisciplinarity demands a new level of research self-consciousness and awareness of the numerous contexts in which any researcher is operating. As one labours to expose the various structures that covertly shape our own and other scholars’ research narratives, the bricolage highlights the relationship between a researcher’s ways of seeing and the social location of his or her personal history. Appreciating research as a power-driven act, the researcher-as-bricoleur abandons the quest for some naive concept of realism, focusing instead on the clarification of his or her position in the web of reality and the social locations of other researchers and the ways they shape the production and interpretation of knowledge.

In this context bricoleurs move into the domain of complexity. The bricolage exists out of respect for the complexity of the lived world. Indeed, it is grounded on an epistemology of complexity. One dimension of this complexity can be illustrated by the relationship between research and the domain of social theory. All observations of the world are shaped either consciously or unconsciously by social theory – such theory provides the framework that highlights or erases what might be observed. Theory in a modernist empiricist mode is a way of understanding that operates without variation in every context. Since theory is a cultural and linguistic artefact, its interpretation of the object of its observation is inseparable from the historical dynamics that have shaped it. The task of the bricoleur is to attack this complexity, uncovering the invisible artefacts of power and culture, and documenting the nature of their influence not only on their own scholarship but also on scholarship in general. In this process bricoleurs act upon the concept that theory is not an explanation of the world – it is more an explanation of our relation to the world.

An Active View of Research Methodology

In its hard labours in the domain of complexity the bricolage views research methods actively rather than passively, meaning that we actively construct our research methods from the tools at hand rather than passively receiving the ‘correct’, universally applicable methodologies. Avoiding modes of reasoning that come from certified processes of logical analysis, bricoleurs also steer clear of pre-existing guidelines and checklists developed outside the specific demands of the inquiry at hand. In its embrace of complexity, the bricolage constructs a far more active role for humans both in shaping reality and in creating the research processes and narratives that represent it. Such an active agency rejects deterministic views of social reality that assume the effects of particular
social, political, economic, and educational processes. At the same time and in the same conceptual context this belief in active human agency refuses standardized modes of knowledge production (Dahlbom, 1998; Selle and Selle, 1994; McLeod, 2000; Young and Yarbrough, 1993).

In many ways there is a form of instrumental reason, of rational irrationality in the use of passive, external, monological research methods. In the active bricolage we bring our understanding of the research context together with our previous experience with research methods. Using these knowledges, we tinker in the Lévi-Straussian sense with our research methods in field-based and interpretative contexts. This tinkering is a high-level cognitive process involving construction and reconstruction, contextual diagnosis, negotiation, and readjustment. Bricoleurs understand that researchers’ interaction with the objects of their inquiries is always complicated, mercurial, unpredictable and, of course, complex. Such conditions negate the practice of planning research strategies in advance. In lieu of such rationalization of the process, bricoleurs enter into the research act as methodological negotiators. Always respecting the demands of the task at hand, the bricolage, as conceptualized here, resists its placement in concrete as it promotes its elasticity. Yvonna Lincoln (2001) delineates two types of bricoleurs: those who are committed to research eclecticism, allowing circumstance to shape the methods employed; and those who want to engage in the genealogy/archaeology of the disciplines with some grander purpose in mind. My purpose entails both of Lincoln’s articulations of the role of the bricoleur.

Research method in the bricolage is a concept that receives more respect than in more rationalistic articulations of the term. The rationalistic articulation of method subverts the deconstruction of wide varieties of unanalysed assumptions embedded in passive methods. Bricoleurs in their appreciation of the complexity of the research process view research method as involving far more than procedure. In this mode of analysis bricoleurs come to understand research method as also a technology of justification, meaning a way of defending what we assert we know and the process by which we know it. Thus, the education of researchers demands that everyone take a step back from the process of learning research methods. Such a step back allows us a conceptual distance that produces a critical consciousness. Such a consciousness refuses the passive acceptance of externally imposed research methods that tacitly certify modes justifying knowledges that are decontextualized and reductionistic (Denzin and Lincoln, 2000; McLeod, 2000; Foster, 1997).
There is an impudent dimension to the bricolage that says, ‘Who said research has to be done this way?’ Such impudence is based on a cynicism toward the notion that monological, ordered methods get us to the ‘right place’ in academic research. To say it once more with feeling: we should use the methods that are best suited to answering our questions about a phenomenon. For the bricoleur to use the means at hand, the methods that exist, demands that the researcher be aware of them. Such awareness demands that the bricoleur devote time for rigorous study of what approaches to research are out there and to how they might be applied in relation to other methods. Do not be deceived, this is no easy task that can be accomplished in a doctoral programme or a post-doctoral fellowship (Thomas, 1998). Becoming a bricoleur who is knowledgeable of multiple research methodologies and their use is a lifetime endeavour.

Indeed, the bricoleur is aware of deep social structures and the complex ways they play out in everyday life, the importance of social, cultural, and historical analysis, the ways discursive practices influence both what goes on in the research process and the consciousness of the researcher, the complex dimensions of what we mean when we talk about ‘understanding’. In this context the bricoleur becomes a sailor on troubled waters, navigating a course that traces the journey between the scientific and the moral, the relationship between the quantitative and the qualitative, and the nature of social, cultural, psychological, and educational insight. All of these travels help bricoleurs overcome the limitations of monological reductionism while taking into account the new vistas opened by the multilogical. Such victories provide an entrée into the diverse community of inquirers – an inclusive group that comes from academia and beyond. Such individuals critique, support, and inform each other by drawing upon the diversity of their backgrounds and concerns. In this process they expose and discuss each other’s assumptions, the contexts that have shaped them, and their strengths and limitations in the exploration(s) at hand. The participants in this community, from a wide range of race, class, gender, sexual, ethnic, and religious groups, enter into their deliberations with humility and solidarity.

As previously mentioned, Norman Denzin and Yvonna Lincoln’s work on the bricolage has profoundly influenced numerous researchers from a plethora of disciplines. Concerned with the limitations of monological approaches to knowledge production, we all subscribe to the ‘practical reason’ of the bricolage that operates in concrete settings to connect theory, technique, and experiential knowledges. Here the theoretical
domain is connected to the lived world and new forms of cognition and research are enacted. This improvisational enactment of the bricolage, buoyed by the insights of Francisco Varela and Humberto Maturana’s Santiago theory of enactivism, moves research to a new level. This is the place where the multiple inputs and forces facing the researcher in the immediacy of her work are acknowledged and embraced. The bricoleur does not allow these complexities to be dismissed by the excluding, reducing impulses of monological methodology (Fischer, 1998; Weinsein, 1995; Maturana and Varela, 1987; Varela, 1999; Geeland and Taylor, 2000). Such a refusal is in itself an act of subversion.

The subversive bricolage accepts that human experience is marked by uncertainties and that order is not always easily established. ‘Order in the court’ has little authority when the monological judge is resting in his quarters. Indeed, the rationalistic and reductionistic quest for order refuses in its arrogance to listen to the cacophony of lived experience, the coexistence of diverse meanings and interpretations. The concept of understanding in the complex world viewed by bricoleurs is unpredictable. Much to the consternation of many, there exists no final, transhistorical, non-ideological meaning that bricoleurs strive to achieve. As bricoleurs create rather than find meaning in enacted reality, they explore alternate meanings offered by others in similar circumstances. As if this were not enough, they work to account for historical and social contingencies that always operate to undermine the universal pronouncement of the meaning of a particular phenomenon. When researchers fail to discern the unique ways that historical and social context make for special circumstances, they often provide a reductionistic form of knowledge that impoverishes our understanding of everything connected to it – the process of research included (Burbules and Beck, 1999; Marijuan, 1994; Cary, 2004).

The monological quest for order so desired by many social, political, psychological, and educational researchers is grounded on the Cartesian belief that all phenomena should be broken down into their constitute parts to facilitate inquiry. The analysis of the world in this context becomes fragmented and disconnected. Everything is studied separately for the purposes of rigour. The goal of integrating knowledges from diverse domains and understanding the interconnections shaping, for example, the biological and the cognitive, is irrelevant in the paradigm of order and fragmentation. The meaning that comes from interrelationship is lost and questions concerning the purpose of research and its insight into the human condition are put aside in an orgy of correlation and triangulated description. Information is sterilized and insight into what may be worth exploring is abandoned (Simpson and Jackson, 2001). Ways of making use of particular knowledge are viewed as irrelevant and creative engagement with conceptual insights is characterized as
frivolous. Empirical knowledge in the quest for order is an end in itself. Once it has been validated it needs no further investigation or interpretation. While empirical research is obviously necessary, its process of production constitutes only one step of a larger and more rigorous process of inquiry. The bricolage subverts the finality of the empirical act.

Bricoleurs make the point that empirical research, all research for that matter, is inscribed at every level by human beings. The assumptions and purposes of the researcher always find their way into a research act, and they always make a difference in what knowledge is produced. Even in the most prescribed forms of empirical quantitative inquiry the researcher’s preferences and assumptions shape the outcome of the research. Do I choose factor analysis or regression analysis to study the relationship of a student’s SAT score to college success? The path I choose profoundly affects what I find. What about the skills and knowledges included on the SAT? Are they simply neutral phenomena free from inscriptions of culture and power? How I answer such a question shapes how my research proceeds.

Such inscriptions and the complexity they produce remind bricoleurs of the multiple processes in play when knowledge is produced and validation is considered. They understand that the research process is subjective and that instead of repressing this subjectivity they attempt to understand its role in shaping inquiry. All of these elements come together to help bricoleurs think about their principles of selection of one or another research perspective. Such decisions can be made more thoughtfully when a researcher understands the preferences and assumptions inscribed on all modes of inquiry and all individuals who engage in research. Thus, an important aspect of the work of the bricoleur involves coming to understand the social construction of self, the influence of selfhood on perception, and the influence of perception on the nature of inquiry (Richardson and Woolfolk, 1994; Pickering, 1999; Allen, 2000).

Forging the Tools of Subversion: Context, Discourse, and Power in the Bricolage

When it comes to the analysis of the construction of self or the nature of texts, bricoleurs are aware of the discursive practices in which self or text is embedded and the context in which self or text operates. Whether one is attempting to make sense of a novelist, an interviewee, or a historical manuscript, discourse and context are central dimensions of the interpretative act. Contrary to the pronouncements of some analysts, the contingent orientation to research created by the bricoleur’s attention to discursive and contextual dimensions of knowledge production does not
make one anti-empiricist or anti-quantitative. Instead, such concerns make the bricoleur more attentive to the various dynamics that shape what is called empirical knowledge. In this context such a researcher is less willing to make a final statement of truth or meaning based on the empirical investigations in which she has engaged. The bricoleur knows that empirical data viewed from another perspective or questioned by one from a different background can elicit fundamentally different interpretations.

Discourse cannot be removed from power relations and the struggle to create particular meanings and legitimate specific voices. Dominant discourses shape the research process emerging as technologies of power that regulate which knowledges are validated and which ones are relegated to the junk heap of history. Bricoleurs watch carefully as power operates to privilege the data coming from particular academic or political economic locales. The insidious way this process operates is testimony to the axiom that power works best when it is not recognized as power. Power creeps in on little cats’ feet to accomplish its regulation and discipline of various individuals and groups. Perceiving the world as we do through a shared culture and language, we tend to see phenomena as those with the most power to shape our consciousnesses want us to. Of course, we resist such a process, but often we are not even aware that it is operating. Indeed, it works best when everything seems normal and comfortable.

Power’s construction of subjectivity and validation of particular forms of data takes advantage of the comfort of the everyday. The production of meaning contrary to traditional rationalistic notions is more tied to affective and emotional investments than previously realized. I want to see myself as a ‘man of science’, some researchers assert. As such a man I will produce hard, objective data that are becoming of such a respectable man. In such cases what forces are at work in shaping the perspective this researcher takes toward social phenomena – rational deliberations or affective impulses? Bricoleurs maintain that such insights are important aspects of the research process and help us understand why particular interpretative and analytic perspectives are chosen both by themselves and by other researchers. With these ideas in mind, bricoleurs ask, ‘What is a fact?’ Such a question takes on new layers of complexity and nuance when we think about the numerous contextual, discursive, and power dynamics at work at every level of the processes that produce facts.

What exactly is it that is produced as a product of this often bizarre and multidimensional process? Bricoleurs understand the multiple ways that a fact may be defined. They understand that it can be viewed from many perspectives that grant it not only diverse meanings but also different ontological statuses. From an ontological perspective, what is the nature of a fact? How does a fact operate in the world? And importantly, in this
context the bricoleur recognizes that given different contexts, discourses, and power relations, what a researcher labels a fact could have been something fundamentally different. In this context a bricoleur can project what alternative facts could have been produced given the reality of different contexts, discourses, and power relationships in the knowledge-production process (Bruner, 1996; Giroux, 1997; Hoban and Erickson, 1998; Capra, 1996). Such an intellectual ability, I believe, is a characteristic of rigorous scholarship.

Specifying the Importance of Philosophical Research in the Bricolage

Researchers concerned with rigour appreciate the importance of ‘philosophical research’ to the bricolage. I use the phrase philosophical research to denote the use of various philosophical tools to help clarify the process of inquiry and provide insight into the assumptions on which it conceptually rests. In this section I want to focus on this dimension, in the process specifying a few of the benefits such a form of inquiry might bring to this project. Informed by philosophical research, bricoleurs become smarter, more self-reflective about their own role and the role of researchers in general in the knowledge- and reality-creating process. An appreciation of complexity, of course, demands such insights, as it insists on an understanding that conceptual categories are human constructions and posits that such categorization exerts a profound impact on modes of perception and human action itself. Little work has been undertaken on philosophy as research, not to mention its role in a research bricolage. The following offers a few ideas about how bricoleurs might begin to think about these dynamics in light of our previous contentions about the complexity of the bricolage.

The mode of philosophical consciousness advocated here helps bricoleurs bracket their own subjectivity as researchers in ways that force the intersection of notions such as researcher ‘invention’ and researcher ‘discovery’. The bricolage makes use of philosophical research into the boundary between the social world and the narrative representation of it. Such explorations provide profound and often unrecognized knowledge about what exactly is produced when researchers describe the social world. Rigour, I assert, is impossible without such knowledge and discernment. Exploring this complex, ever shifting boundary between the social world and the narrative representation of it, philosophically informed bricoleurs begin to document the specific influences of life history, lived context, race, class, gender and sexuality on researchers and the knowledge they produce (Zammito, 1996; McLeod, 2000; Denzin and Lincoln, 2000).
These aspects of philosophical research help the bricoleur to highlight the ethical, epistemological, ontological, and political features of the research process and the knowledge it produces. Such tasks might be described as a form of research concerned with conceptual clarification. For example, what does it mean to exist in history? To live and operate as a social and historical subject? How do researchers begin the process of exploring such dynamics? How do the ways researchers conceptualize these features shape the research process and the knowledge it produces? How do social-theoretical choices and assumptions affect these issues? All of these questions point to the role of science as first and foremost a cultural activity. Abstract and objective procedural and methodological protocols come to be viewed as the socially constructed entities that they are. Thus, bricoleurs are freed from reductionistic conventions in ways that facilitate their moves not to an anything-goes model of research but to a genuinely rigorous, informed multiperspectival way of exploring the lived world (Bridges, 1997; Foster, 1997; Morawski, 1997).

What bricoleurs are exploring in this philosophical mode of inquiry is the nature and effects of the social construction of knowledge, understanding, and human subjectivity. Realizing the dramatic limitations of so-called objectivist assumptions about the knowledge-production process, bricoleurs struggle to specify the ways perspectives are shaped by social, cultural, political, ideological, discursive, and disciplinary forces. Understanding the specifics of this construction process helps multiperspectival researchers choose and develop the methodological, theoretical and interpretative tools they need to address the depictions of the world that emerge from it. In the context of the philosophical inquiry as conceptual clarification, the bricoleur understands that the objectivist view of knowledge assumes that meaning in the world exists separately from an individual’s experience. In such an objectivist context the research act simply involves identifying external objective reality and reflecting it in the research narrative. Such reductionism and its concurrent distortion is exactly what the bricolage seeks to avoid (Varenne, 1996; McLeod, 2000; Cronin, 1997).

The philosophical dimension of the bricolage helps researchers understand the ways that meanings in the research process are often imposed by a monologic that undermines recognition of the multiple forces at work in the meaning-making process. In the multi-methodological dimension of the bricolage, embracing philosophical research allows bricoleurs to gain insights into the assumptions that shape the inquiry process – assumptions often neglected in more monological forms of research. Indeed, these philosophical insights should be an important aspect of any curriculum designed to educate rigorous researchers. What are the assumptions behind the organization of research data into meaningful knowledge? What narrative strategies
are used in this process? Are they employed consciously? Philosophical forms of research systematically ask such questions of the research process. Research reports delivered without such narrative understandings are naive and unworthy of being labelled rigorous. In reductionistic, monological forms of research and curricula for preparing researchers such philosophical issues are rarely addressed.

Bricoleurs aware of these philosophical dimensions of the research act maintain that there is no dividing line between the empirical and the philosophical. In the bricolage the two domains blend into one another in a way that enhances the insights of the researcher. When this happens the bricoleur is able to differentiate between a philosophic argument and an empirical assertion based on controlled observation. Such differentiation is necessary in the effort to produce and critique knowledge. Much too often empirical scientific proof is offered for what is a hermeneutic argument. Such empirical proof in such a case is superfluous to the hermeneutic process involved. In addition, it illustrates an epistemological confusion where one form of knowledge production and validation is confused for another, leading to misunderstandings and illogical argumentation.

Many scholars of biology and cognition, for example, make a powerful argument for a philosophically grounded form of interdisciplinary research in order to address previously neglected levels of complexity. In this context the tendency of Cartesian–Newtonian biology to isolate its object of study from the larger cosmological context in which it operated, undermined the researcher's ability to study relationships essential to a more textured understanding of the phenomenon in question. Cosmological questions such as how this part helps us understand the functioning of the whole were deemed irrelevant in such monological, decontextualized modes of research. Monological research has no need to integrate diverse knowledges or to ask larger cosmological questions about how they all fit together. So much of the world cannot be explained in terms of its constituent parts. Bricoleurs are interested in the nature of the relationships between parts. Such studies are out of necessity interdisciplinary as they uncover diverse perspectives on the whole (Bridges, 1997; O'Sullivan, 1999; Kincheloe, et al., 1999b).

Philosophical Inquiry in the Bricolage: Constructivism and Historicity

As bricoleurs gain insight into the social construction of knowledge, understanding, and human subjectivity, they gain a consciousness of their own and others’ historicity. What many researchers have referred to as the crisis of historicity is really nothing more than the development
of this consciousness, this understanding of the historical, social, cultural, ideological, and discursive construction of science and the research it produces. In this context bricoleurs understand that the effort to distinguish between different social realities and different interpretations of researchers is more difficult than originally assumed. With such an understanding in mind, bricoleurs always have to deal with levels of complexity ignored by less informed researchers. As bricoleurs negotiate their way between the constructed and discovered dimensions of knowledge work, they come to appreciate the blurred line between the historical and historiographical.

Naivety is the result of dismissing these issues of constructivism and historicity. Philosophical inquiry in the bricolage moves us away from this lack of sophistication and rigour, as researchers gain insight into the existential grounds on which diverse approaches to research evolve. Such inquiry helps bricoleurs appreciate the principles and sources that fuel the production of knowledge by both self and others – a facility necessary for good research and good scholarship in general. Indeed, bricoleurs employ philosophical inquiry to explore the logic and psychology of the development of research strategies and their use in the larger effort to produce knowledge. Such logics and psychologies can only be appreciated in historical context, in terms of their historicity. The historicization of research allows bricoleurs to ask questions of knowledge production that have previously gone unasked and, thus, to gain insight into previously invisible processes shaping the ways we come to describe and act in the world. In this way the work of the bricoleur becomes thicker, more insightful, more savvy, and more rigorous (Zammito, 1996; McCarthy, 1997; Bridges, 1997).

The understanding of constructivism and historicity in relation to research cannot be separated from the interpretative dimension of the bricolage and its grounding in hermeneutics. In this context a notion of critical hermeneutics is employed by the bricoleur to understand the historical and social ways that power operates to shape meaning and its lived consequences. Critical hermeneutics alerts us to the ways power helps construct the social, cultural, and economic conditions under which meaning is made and research processes are constructed. Not all parties or all advocates of particular marginalized lived experiences are allowed to sit at the table of official meaning-making. The bricoleur’s awareness of constructivism and historicity helps her point out these omissions and their effects on the knowledge-production processes.

In this context critical hermeneutics facilitates bricoleurs’ attempts to identify socially oppressive forms of meaning-making and research processes. Bricoleurs understand that constructivism and historicity can be relatively unhelpful concepts without a recognition of this critical dimension of power and its effects. As Peter McLaren (2001) points out in
his response to my conception of the bricolage, merely focusing on the production of meanings may not lead to ‘resisting and transforming the existing conditions of exploitation’ (p. 702). I take his admonition seriously and assert that in the critical hermeneutical dimension of the bricolage the act of understanding power and its effects is merely one part – albeit an inseparable part – of counter-hegemonic action. Critical hermeneutics understands that meaning does not ‘just happen’ – we don’t see bumper stickers proclaiming ‘meaning happens’. Instead, meaning is imposed on the world and if researchers are not aware of such dynamics they will unconsciously join in this imposition. Joining in the imposition is disguised by the assertion that meaning exists in the world independently of and unconnected to the subjectivities of researchers and other ‘knowers’. All objectivist researchers do, they innocently and reductionistically maintain, is discover this independent meaning and report it to their audience.

Power in this construction of knowledge, it is argued, plays no role in the process. Bricoleurs employing critical notions of historicity and constructivism know better. The objective knowledge and the validated research processes used by reductionists are always socially negotiated in a power-saturated context. Assertions that knowledge is permanent and universal are undermined and the stability of meaning is subverted. Forces of domination will often reject such historically conscious and power-literate insights, as such awarenesses undermine the unchallenged knowledge assertions of power wielders. Critical hermeneutics, bricoleurs come to understand, can be quite dangerous when deployed in the sacred temples of knowledge production. It is no surprise that this form of philosophical inquiry is typically excluded from the canon of official research (Cronin, 1997; Lutz et al., 1997). Again in reference to McLaren’s (2001) concerns, the criticality of the bricolage is dedicated to engaging political action in a variety of social, political, economic, and academic venues.

**Epistemic Analysis in the Bricolage: Extending Philosophical Research**

If epistemology involves the exploration of how researchers come to know about the phenomena they study, how this knowledge is structured, and the grounds on which these knowledge claims are tendered, then epistemological understandings are central to the rigour of the bricolage. In multiple-method/interdisciplinary research these epistemological understandings become even more important, as different orientations assume different views of knowledge. In this context researchers learn from comparative epistemological insights, developing
a profound understanding of knowledge theory and production in the process. The development of such epistemological insight is yet another dimension of the philosophical inquiry of the bricolage.

Aided by these epistemological understandings, bricoleurs are better equipped to perform subtle forms of knowledge work. As philosophical inquirers working in the epistemological domain, bricoleurs ask informed questions, develop complex concepts, construct alternate modes of reasoning, and provide unprecedented interpretations of the data they generate. All of these dimensions of research involve making sophisticated epistemological decisions and are inseparable from the larger task of producing high-quality research. With these epistemological insights in mind, bricoleurs are empowered to draw upon their conceptual and methodological toolkits depending on the nature of the research context and the phenomenon in question. They are emancipated from the tyranny of pre-specified, intractable research procedures (Foster, 1997; Selfe and Selle, 1994; Willinsky, 2001).

Mainstream research traditions have been reluctant to admit philosophical inquiry and its associated epistemological analysis into the pantheon of acceptable research methods. Bricoleurs embrace philosophical research for a number of reasons, one of the most fundamental involving its notion that at its most basic articulation research involves asking and answering an unanswered question. Obviously, philosophical inquiry meets this criterion, as it seeks out answers to the most compelling questions of human life and the purposes of research:

- What is the nature of being? In this ontological domain bricoleurs examine the nature of human being (subjectivity) and its relation to knowledge production, but also the nature of the object of study. In the case of the latter, bricoleurs ask whether we study the object as a thing-in-itself or as a part of larger processes and relationships.
- What is the nature of living a good life? In this ethical domain bricoleurs question the ways their research contribute to the social good. How does this work influence the lives of the researcher, the community, the world?
- What knowledge is of most worth? Epistemological questions are profoundly important to the bricoleur. This question demands modes of judgement that move bricoleurs to think about the value of their research projects. What researchers are producing knowledge of worth? What researchers are not producing knowledge of worth? How do we make such a distinction?
- What is knowledge? This epistemological question demands that researchers clearly understand the different ways that different paradigms define knowledge and its production. The awareness that comes from understanding these competing versions provides
bricoleurs with a more profound understanding of the forces that tacitly shape all knowledge claims.

- What does it mean to know something? This question forces bricoleurs to seek out the insights of cognitive theory in relation to their epistemological questions. The cognitive insights gained from, for example, the Santiago school of enactivism and its notions of knowledge-in-action and the power of relationships inform epistemology in compelling ways. Such a synergy is yet another example of the benefits of the multiperspectivalism of the bricolage.

- How do we distinguish between worthy and unworthy knowledge? This question moves bricoleurs into the complex domain of validity. Here they can engage in the contemporary conversation about making judgements about research quality. Are the terms external and internal validity helpful in this context? What does knowledge produced about one context have to tell us about another context? Our philosophical grounding helps us formulate questions about the worth of research that might have never occurred to those without such insights. In this context bricoleurs, with their philosophical grounding, engage seriously with the purposes of research. In this process they invent concepts such as catalytic validity, ironic validity, paralogical validity, rhizomatic validity, voluptuous validity (Lather, 1991, 1993), hermeneutic validity, cognitive validity, and pragmatic validity (Kincheloe, 2004).

- What is rigour in the research process? Here bricoleurs take the opportunity to move beyond traditional definitions of rigour as the degree of fidelity to the unquestioned steps in the research process and the degree to which the research accurately reflects ‘true reality’. In this context they study the socially constructed nature of what passes as rigour in research. In doing so, they move a step closer to the complexity of the act of knowledge production. Such proximity helps them redefine rigour in a way that involves developing numerous ways of recognizing and working with this complexity.

If answering such questions is not an act of research, then bricoleurs are not sure what research involves.

In examining these issues, I have encountered several situations in schools of education where excellent scholars who perform philosophical inquiry have been told by administrators and tenure committees that their work does not constitute ‘real research’. Such scholars have been punished and traumatized by these narrow and uninformed viewpoints. Exploring the dynamics at work in these academic assaults on philosophical researchers, the issue that emerges at the root of the attack is epistemological in nature. The guardians of ‘research purity’ proclaim a
clear distinction between empirical (scientific knowledge production) and philosophical inquiry (unscientific knowledge production). In this context the epistemological and ontological analysis of philosophical inquiry questions this empirical and philosophical bifurcation.

The deep interdisciplinarity of the bricolage transgresses the boundary between the two domains, illustrating in the process their interaction and inseparability. Bricoleurs are not aware of where the empirical ends and the philosophical begins, because such epistemological features are always embedded in one another. Avoiding reductionistic and uninformed notions of research that are monological and exclusive, the bricolage works to embrace and learn from various modes of knowledge production, including philosophical inquiry as well as historical and literary modes of scholarship. Employing the unconscious epistemological criteria of the elitist excluders, historical and literary inquiry would not meet the criteria of real research (Bridges, 1997). Such exclusion masquerades as a form of rigour, confusing narrow-mindedness with high standards.

Moving to the Margins: Alternative Modes of Meaning-making in the Bricolage

In its critical concern for just social change the bricolage seeks insight from the margins of Western societies and the knowledge and ways of knowing of non-Western peoples. Such insight helps bricoleurs reshape and sophisticate social theory, research methods, interpretative strategies, as they discern new topics to be researched. This confrontation with difference so basic to the concept of the bricolage enables researchers to produce new forms of knowledge that inform policy decisions and political action in general. In gaining this insight from the margins bricoleurs display once again the blurred boundary between the hermeneutical search for understanding and the critical concern with social change for social justice. Responding yet again to Peter McLaren’s (2001) important concern: not only are the two orientations not in conflict, they are synergistic (McLaren et al., 1995; DeVault, 1996; Lutz et al., 1997; Soto, 2000; Steinberg, 2001).

To contribute to social transformation, bricoleurs seek to better understand both the forces of domination that affect the lives of individuals from race, class, gender, sexual, ethnic, and religious backgrounds outside dominant culture(s) and the worldviews of such diverse peoples. In this context bricoleurs attempt to remove knowledge production and its benefits from the control of elite groups. Such control consistently operates to reinforce elite privilege while pushing marginalized groups farther away from the centre of dominant power. Rejecting this
normalized state of affairs, bricoleurs commit their knowledge work to helping address the ideological and informational needs of marginalized groups and individuals. As detectives of subjugated insight, bricoleurs eagerly learn from labour struggles, women’s marginalization, the ‘double consciousness’ of the racially oppressed, and insurrections against colonialism (Young and Yarbrough, 1993; Kincheloe and Steinberg, 1993; Kincheloe et al., 1999a).

Thus, the bricolage is dedicated to a form of rigour that is conversant with numerous modes of meaning-making and knowledge production – modes that originate in diverse social locations. These alternative modes of reasoning and researching always consider the relationships, the resonances, and the disjunctions between formal and rationalistic modes of Western epistemology and ontology and different cultural, philosophical, paradigmatic, and subjugated expressions. In these latter expressions bricoleurs often uncover ways of accessing a concept without resorting to a conventional validated set of pre-specified procedures that provide the distance of objectivity. This notion of distance fails to take into account the rigour of the hermeneutical understanding of the way meaning is pre-inscribed in the act of being in the world, the research process, and objects of research. This absence of hermeneutical awareness undermines the researcher’s quest for a thick description and contributes to the production of reduced understandings of the complexity of social life (Selle and Selle, 1994; Paulson, 1995).

The multiple perspectives delivered by the concept of difference provide bricoleurs with many benefits as they weave their way through different research orientations and theoretical dimensions. Confrontation with difference helps us to see anew, to move toward the light of epiphany. A basic dimension of criticality involves a comfort with the existence of alternative ways of analysing and producing knowledge. This is why it is so important for a historian, for example, to develop an understanding of phenomenology and hermeneutics. It is why it is so important for a social researcher from New York City to understand forms of indigenous African knowledge production. The incongruities between such cultural modes of inquiry are quite valuable, for within the tensions of difference rest insights into multiple dimensions of the research act – insights that move us to new levels of understanding of the subjects, purposes, and nature of inquiry (Semali and Kincheloe, 1999; Burbules and Beck, 1999).

Difference in the bricolage pushes us into the hermeneutic circle as we are induced to deal with parts in their diversity in relation to the whole. Difference may involve culture, class, language, discipline, epistemology, cosmology, and so on ad infinitum. Bricoleurs, as Kathleen Berry points out in the last three chapters of this book, use one dimension of these multiple diversities to explore others, to generate questions previously
unimagined. As we examine these multiple perspectives we attend to which ones are validated and which ones have been dismissed. Studying such differences, we begin to understand how dominant power operates to exclude and certify particular forms of knowledge production and why. In the criticality of the bricolage this focus on power and difference always leads us to an awareness of the multiple dimensions of the social. Paulo Freire (1970) referred to this as the need for perceiving social structures and social systems that undermine equal access to resources and power. As bricoleurs answer such questions, we gain new appreciations of the way power tacitly shapes what we know and how we come to know it.

Examples of Researchers Approaching the Bricolage:

Difference in the Pursuit of a New Rigour

Again, one of the best examples of the use of the bricolage in innovative contemporary scholarship involves Maturana and Varela’s work in the development of enactivist cognitive theory. As it combines the disciplinary perspectives of biology, psychology, theology, philosophy, and socio-cultural insights, enactivism works to address the fragmentation of modernist psychology. Drawing upon the Western philosophical scholarship of Merleau-Ponty and Heidegger and the Eastern Buddhist philosophy of Nagarjuna, enactivism integrates ways of knowing profoundly separated temporally and spatially to create a new synthesis. In the case of enactivism cognitive studies are viewed from the perspectives of other traditions to create new approaches to theorizing and researching the topic as well as a new understanding of the complexity and multi-dimensionality of the cognitive act (Carter, 2004; Pickering, 1999; Thayer-Bacon, 2000). Tara Fenwick (2000) takes this enactivist insight to a higher level of interdisciplinarity as she integrates it with constructivist epistemological, critical theoretical, and psychological discourses. I have attempted a similar strategy in my work in critical thinking (Kincheloe, 2004; Weil and Kincheloe, 2004). Such interdisciplinary work, Fenwick contends, can not only provide new insights but also confront each perspective with new questions. Such questions can lead to dramatic advances at the frontiers where the diverse perspectives intersect.

Another example of the use of bricolage involves James Lovelock and Lynn Margulis’s Gaia theory. Lovelock and Margulis study life in a systemic manner, drawing upon geology, microbiology, atmospheric chemistry, philosophy, sociology and other disciplines of inquiry that operate typically in isolation. Gaia theory questions the dominant Cartesian viewpoint that the aforementioned disciplines are discrete and separate and that geological dynamics alone created the context for the
evolution of life on our planet. Valuing the input of diverse disciplines, Lovelock and Margulis challenged geology’s long-standing claim that plants and animals were secondary entities who serendipitously found geological conditions congenial to their development and evolution. Instead, Lovelock and Margulis’s research indicated that life produces the conditions to enable its own existence. In this context the researchers contended that the surface of the planet, long viewed as the environment in which life developed, is actually a dimension of life. Instead of life merely adapting to an inert physical environment, living things in fact construct the environment with which they interact. Life and its environment feed back on one another, modifying one another in the complexity of the living process. Without the tensions produced by a bricolage of perspectives, such a new view of the nature of life could not have been conceived (Capra, 1996).

One final example of the employment of the bricolage, and one that directly influences our articulation of its meaning here, is, of course, cultural studies. Advocates of cultural studies believe that the study of culture is fragmented among a variety of disciplines – sociology, anthropology, history, literary studies, communications, etc. – to the point that communication between scholars is undermined. This is a fragmentary dynamic that has always adversely affected the work of cultural scholars. Cultural studies as a trans-discipline attempts to overcome this fragmentation by highlighting culture as a living process that shapes the ways we live, view ourselves, and understand the world around us. Scholars of cultural studies argue that by adopting cultural studies’ overtly multidisciplinary approach, researchers can study larger social issues, such as race, class, gender, sexuality, ethnicity, immigration, and pedagogy from unique perspectives and theoretical positions. As students of cultural studies question the dominant ways of seeing that evolve around the normal science of disciplinary thinking, they free themselves from the self-validating redundancies that limit insight and chain them to familiar explanations (Kincheloe, 2001a). Obviously, Kathleen Berry’s and my construction of the bricolage has been influenced by cultural studies’ critique of disciplinarity.

The subversive element of the bricolage takes these examples and uses them in the larger struggle for social justice and the democratization of everyday life. There is no reason, bricoleurs maintain, why scholars should be the only individuals with access to the power of the bricolage. Kathleen Berry and I argue that practitioners such as teachers, social workers, journalists, nurses, business people, and other individuals should become bricoleurs. To make the bricolage the exclusive province of professionals and scholars, however, is to perpetuate the same forms of elitism that have marred and scarred everyday life in Western societies for centuries. Humans are meaning-making life forms and need to be
involved in experiences that help us sophisticate our ability to do so. The bricolage provides a beginning framework for helping all people in all walks of life construct systems of meaning-making. Such systems grant us ways of producing knowledge that help us make sense of our species' past as well as our own personal past. Such knowledge empowers us to construct a more equitable, exciting, just, and intelligent future.

Facing the diversity of knowledges of multiple pasts and possible futures, bricoleurs transcend reductionistic modes of fragmented knowledge production that deny the socially constructed nature of all research. The way we conduct research is not a given, an immutable process that contains no creative dimension. Bricoleurs take seriously our creative responsibility to break the lenses of present ways of viewing the world. Such lenses need to be broken, bricoleurs contend, not because of some Oedipal impulse to kill the father, but because such frames have caused such heartbreak and suffering on the part of those who fall outside the favoured race, class, gender, sexual, religious, and ability-related demographic. The blurred genres of the bricolage highlight the mode of difference that creates new respect for the subjugated and the knowledges they produce. One dimension of the respect for difference promoted here involves forming new relationships – often learning relationships – with these previously dismissed and degraded forms of information and their producers. The new perspectives we gain from our deployment of difference demand new criteria for assessing the value of knowledge and knowledge production. Such criteria reflect the bricoleur's meta-awareness of the notion of value itself – a concept that demands reconceptualization in the new world of complexity encountered in the process of constructing and enacting the bricolage (Geeland and Taylor, 2000; Bruner, 1996).

Indeed, what bricoleurs are concerned with here is nothing less than the quality of the knowledge we produce about the world. In this context they address both the reductionism of uninformed research methods and the quest for new ways of seeing. In the intersection of these concerns they uncover new insights into research and knowledge production, new forms of reason that are directly connected to specific contexts, practical forms of analysis that are informed by social theory and the concreteness of lived situations (Fischer, 1998). Understanding non-Western ways of knowing and the epistemologies of marginalized groups within Western societies, bricoleurs transcend regressive forms of reductionism. They see past reductionistic notions that researchers simply produce facts that correspond to external reality, information that is devoid of specific cultural values. With these understandings as valuable parts of their toolkits, bricoleurs expand the envelope of social research, of what we can understand about the world. They are empowered to produce knowledge that can change the world.
In their move to the margins and transcendence of reductionism, bricoleurs seek to identify what is absent in particular situations – a task ignored by monological, objectivist modes of research. In this context bricoleurs seek to cultivate a higher form of researcher creativity that leads them, like poets, to produce concepts and insights about the social world that previously did not exist. This rigour in the absence can be expressed in numerous ways, including the bricoleur’s ability:

- to imagine things that never were;
- to see the world as it could be;
- to develop alternatives to oppressive existing conditions;
- to discern what is lacking in a way that promotes the will to act;
- to understand that there is far more to the world than what we can see.

As always, bricoleurs are struggling to transcend the traditional observational constraint on social researchers, as they develop new ways and methods of exposing social, cultural, political, psychological, and educational forces not discernible at first glance. Pursuing rigour in the absence, bricoleurs document venues of meaning that transcend the words of interviewees or observations of particular behaviours (Dahlbom, 1998; Dicks and Mason, 1998).

Of course, a central feature of this rigorous effort to identify what is absent involves excavating what has been lost in the naivety of monological disciplinarity. As bricoleurs engaging in the boundary work of deep interdisciplinarity explore what has been dismissed, deleted, and covered up, they bring to the surface the ideological devices that have erased the lived worlds and perspectives of those living at the margins of power. In response to Yvonna Lincoln’s (2001) question about the use value of knowledge produced by the bricolage, I maintain that as researchers employ the methodological, theoretical, interpretative, political, and narrative dimensions of the bricolage, they make a variety of previously repressed features of the social world visible. Because they are describing dimensions of the socio-cultural, political, economic, psychological, and pedagogical cosmos that have never previously existed, bricoleurs are engaging in what might be termed the fictive element of research.

The use of the term ‘fictive’ as previously discussed should not be conflated with ‘unreal’ in this context. Scientific inventors engaged in a similar process when they created design documents for the electric light, the rocket, the computer, or virtual reality. In these examples individuals used a fictive imagination to produce something that did not yet exist. The bricoleur does the same thing in a different ontological and episte-
mological domain. Both the inventor and the bricoleur are future-oriented, as they explore the realm of possibility, a kinetic epistemology of the possible. In the process the sophistication of knowledge work moves to a new cognitive level; the notion of rigour transmigrates to a new dimension. As in a 1950s sci-fi movie, bricoleurs enter the 4D – the fourth dimension of research.

In this way bricoleurs create a space for reassessing the nature of the knowledge that has been created about the social cosmos and the modes of research that have created it. In an era of information saturation and hegemony, this space for reassessing knowledge production and research methods becomes a necessity for democratic survival, the foundation of a pro-democracy movement, and as William Pinar (2001) correctly maintains, the ‘labor of educational scholarship in general’ (p. 698). Overwhelmed by corporate-produced data and befuddled by the complexity of the social issues that face us, individuals without access to the lenses of the bricolage often do not know how to deal with these debilitating conditions (DeVault, 1996; Denzin and Lincoln, 2000; Dahlbom, 1998). As the bricolage provides new insights into the chaos of the contemporary, researchers become better equipped to imagine where we might go and what path we might take to get there through the jungle of information surrounding us. The bricolage is no panacea, but it does allow us new vantage points to survey the epistemological wilderness and the possibilities hidden in its underbrush.

Conclusion: The Bricolage and Human Possibility

Obviously, my concern with the bricolage in social research involves not only improving the quality of research but also enhancing the possibility of being human or human being. Thus, the bricolage not only is a dynamic of research but also operates in the connected domains of cognition and pedagogy. In the epistemological and ontological deliberations of the bricolage we gain insight into new modes of thinking, teaching, and learning. In all of these domains, research included, bricoleurs move from convergent to divergent forms of meaning-making, abandoning the short-sightedness of pre-specified, correct patterns of analysis in favour of more holistic, inclusive, and eclectic models. In this context the ‘present awareness’ of numerous cultural, historical, and philosophical traditions is explored for insights into new ways of thinking, seeing, being, and researching.

Laurel Richardson (2000) picks up on and expands these ideas with her metaphor of the crystal. The bricolage, like a crystal, expands, mutates, and alters while at the same time reflecting and refracting the ‘light’ of the social world. New patterns emerge and new shapes dance on
the pages of the texts produced by the bricoleur – images unanticipated before the process took place. In this new textual domain we trace the emergence of not only creative narratives but also new notions of humanness. Bricoleurs maintain that there is a profound human drama playing out in this context. In their understanding of social complexity they gain a larger perspective on post-Enlightenment Western history. Viewing the last three and a half centuries from a new multidimensional vantage point, bricoleurs understand that Westerners built not only a system of knowledge production but also a world that could have been very different from what came to be. The questions they now ask of that system and that world are dramatic in their implications for the future.

The system of knowledge production, with its epistemological blinders, that developed and expanded across the centuries shackled human agency to the gospel of so-called natural law and scientific procedures. In the name of an ethnocentric notion of scientific progress it attempted to keep individuals ignorant of their potentials and confused cultural difference with deficiency. This procedure-bound science did not do a very good job of addressing questions involving what it means to be human, what it might mean to live in a good and just society, and the worthiness of those who live in cultures and locales different from the West. This is why bricoleurs ascribe such importance to the critical and hermeneutic traditions and their concern with such human questions. Drawing upon these traditions, combining them with forms of paradigmatic and textual analyses, bricoleurs struggle to connect the research act to the emotion and heart of lived human experience (Pryse, 1998; Lutz et al., 1997; Wexler, 2000). Understanding that research which fails to address the ontology of the human existential situation, with all of its pain, suffering, joy and desire, is limited in its worth, bricoleurs search for better ways to connect with and illuminate this domain. In this context much is possible.