A Deweyan Perspective on Knowledge Producing Schools: Re-creative technologies for communities of inquirers

Sandra Beth Schneider

Dissertation submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

Doctor of Philosophy
In
Education Curriculum and Instruction

Committee Chair, Dr. James Garrison
Dr. Richard T. Graham
Dr. John Burton
Dr. Rebecca Scheckler

14 November 2006
Blacksburg, Virginia

Keywords: John Dewey, public social inquiry, Information Technologies, spatial pedagogy, democratic communities

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ABSTRACT

This dissertation is an investigation into Knowledge Producing Schools (KPS). KPS is a socio-cultural change effort that reforms that traditional structures of schooling and the connections between schools and the communities in which schools are embedded. KPS schools attempts, through New Literacies, to bring out-of-school practices into schools, in an effort to make students' schooling experiences overall and those incorporating technology more relevant. The position of this dissertation supports KPS goals while rejecting the pedagogy of New Literacies. Instead this dissertations builds upon two elements implicit in KPS/New Literacies work, social inquiry and the facilitation of publics. By making these implict KPS elements explicit this dissertation offers a KPS-Dewey hybrid that locates socio-cultral change efforts in public social inquiry contexts that supports and helps create the communal conditions that can facilitates able, active, publics. These able publics work toward community self-management and alternative representation while dealing with daily problems and current matters of concern. Able publics have been a recent concern in the educational literature that calls for the need of educational reform to be resituated as social movements for education equity.

TABLE OF CONTENTS

LIST OF FIGURES

My goal in this dissertation is to make a contribution to extending the realization of John Dewey's theory of participatory democracy in the field of education. I particularly wish to do this in terms of how Dewey's theories of democracy and inquiry envision schools as places that support the necessary structures of and engagement in communal social inquiry. The realization I put forth in this dissertation is that of a Knowledge Producing School and Dewey Lab School hybrid focused on a locally generated communal inquiring approach to teaching and learning.[1] In this hybrid the organization and management of schooling and schooling structures is distributed in communities, residential expertise and schooling locations. By community I mean patterns of producing and organizing over time and space to address various on-going functional needs or schooling assemblages unified by local matters of concern. This discussion of community as assemblage is developed in chapter 4. The enterprise of the hybrid is the development of a self-aware schooling community. The school progressively becomes an independent institution of local inquiry where members share warranted assertions involved in their "inquiring into knowledge, [self-knowledge] and knowing" that is "inquiry into things 'lived' by people."[2] The processes of inquiry are interdependent among and grounded in the community of inquirers, the various communities' conditions and interests, residential expertise, regional histories, and traditional schooling locations. From this seedbed of communal inquiry community and civility is, "emerging, changing and reformulating [as] are characteristics mutually shared between fallibilist stance on knowledge and knowing

[1] Smith, F. (1998). The book of learning and forgetting. Teachers College Press: NewYork.
[2] Boyles, D.R. (2006). Dewey's epistemology: an argument for warranted assertion, knowing, and meaningful classroom practice. In Educational Theory, Vol. 56 Issue 1, pp. 61-2.

and the social realities specifically associated with democratic public spheres, particularly schools."[3]

By doing so, schools may serve to advocate participatory democracy by facilitating the public intelligence used by the community. Public intelligence enables communities to identify themselves as a public and act accordingly: by revealing problems, make those problems visible to the public, and committed to working toward solutions. Public schools are, for Dewey, ideal sites for cultivating democratic citizens. Through democratic experiences forms of social intelligence may emerge.[4] Social or public intelligence is the prime democratic condition; a holistic ecology and systematic dialogue that is a common participatory inquiry, which serves to nurtures the expertise of ordinary people and communities to self-manage their interests and consequences.[5] Schools are potentially one of our most diverse public settings. They are situations that allow cultures to intersect and places where those diverse students, connected to their various communities, can deliberate on shared challenges. Dewey's pedagogical focus is on social inquiry and the embodied, transformative experiences such inquiry affords. Schooling facilitated by a curriculum guided by inquiry into relevant problems makes political life the day-to-day work of schooling.

For Dewey, democratic ends will only emerge from participation in democratic means. Equity, democracy, knowledge construction or inquiries are all collective possessions that must be experiences with others to be known.[6] Educational scholars have

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[3] Boyles, D.R. (2000). Students as knowers: an argument for justificatory social epistemology by way of blind realism. In Social Epistemology, Vol. 14, No. 1, p. 33.
[4] Oakes, J. & Rogers, J. (2006) Learning power: organizing for education and justice. Teaching College Press: New York, p. 36.
[5] Derived from Dewey, J. (1927/ 1991). The public and its problems. Swallow Press: Ohio University Press. Also see, Dewey, J. (1929/1958). Experience and Nature. Dover: New York.
[6] Likewise, the fundamental means of actors' agency is associative action.

recently been revisiting Deweyan public social inquiry seeing possible alternative social movement models for educational and equity reform.[7] For example, how social inquiry could "cultivate a public intelligence of social problems affecting the daily lives of common people," and how inquiry may "promote the organization and commitment necessary" to create and realize reform.[8] The potential public social inquiry affords to individuals and groups cannot be overstated. Self-determining inquiry within a community allows for those who traditionally have been the researched on to be capable of doing their own research thereby providing opportunities to develop alternative representations, access to legitimizing processes of collecting evidence for their interest, making knowledge public, and an ability to see issues specific to the community.[9] Communities then begin to have and own multiple overlapping roles as researching, teaching, and advocating publics. The potential here lies with collective action and inquiry not the common view that if enough individuals make the 'correct' individual decisions our problem can be solved in sustainable ways.

Assisting the development of new and diverse forms of public intelligence can and should be the role of American schooling. To investigate what that role may entail, my dissertation analyzes a current Australian socio-cultural change effort called Knowledge Producing Schools (KPS) as sites for realizing Dewey's ideas of participatory demoracy and public social inquiry. Knowledge Producing Schools reform the traditional structure of

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[7] Rogers, J. & Oakes, J. (2005). John Dewey speaks to Brown: research, democratic social movement strategies, and the struggle for education on equal terms. In Teachers College Record, vol. 107, num. 9, September, pp. 2178-2203; Oakes, J. & Lipton, M. (2002). Struggling for educational equity in diverse communities: school reform as social movement. In Journal of Educational Change 3(3-4); Ayon, J. (2005). Radical Possibilities. Routledge: New York.

[8] Oakes, J. & Rogers, J. (2006). Learning Power: organizing for education and justice. Teachers College Press: New York, p. 17.

[9] See, Smith, L.T. (1999). Decolonizing Methodology: Research and Indigenous Peoples. Zed Books: London.

schooling and attempts to bring out-of-school practices and community expertise into schooling events. In writing this dissertation I am interested in addressing those interested in pre-service teachers preparation, and in-service teachers development as well as the needs and acquisitions of the community at large. I am also interested in developing research and teaching publics that are not separated from each other or the self-determined interests and needs of the communities involved.

The position of this work supports the goals of Knowledge Producing Schools while discussing some pedagoical limitiations. In response, this dissertation builds upon two elements I see as implicit in the work making up the Knowledge Producing Schools effort, social inquiry and the role of social inquiry in the facilitation of publics. By making these implict elements explicit this work offers a Deweyan version of Knowledge Producing Schools that locates socio-cultural change efforts into public social inquiry contexts that supports and helps create the communal conditions that may facilitates able, active, publics. These enabled publics work toward community self-management and alternative representations while dealing with daily problems and current matters of concern. Enabled publics have been a recent concern in the educational literature that calls for the need of educational reform to be resituated as social movements for education equity. The need is for "political education that translate[s] ideas and knowledge into emotion, interest and volition. For this to occur, ideas must be linked to the practical situations – the everyday troubles of the mass of the population."[10] Thus, the call is for an

[10] Oakes, J. & Rogers, J. (2006). Learning Power: organizing for education and justice. Teachers College Press: New York, p. 38.

embodied social pedagogy of "practical knowledge coupled with joint activity in problems of everyday experiences."[11]

Literacy

A major theme in my analysis of Knowledge Producing Schools is that Deweyan public social inquiry refocuses discussion of literacy away from atomistically isolated literate individuals to communal contexts of distributed functional literacy. For example, I see social intelligence, an aspect of the formation of publics, as communal functional literacy. Communities' establish particular patterns and ways of producing and organizing events for individuals and groups interests and actions. Patterns and ways of producing and organizing are acquired through communal participation in custom, traditions, meanings, identities and norms. To successfully participate is to be functionally literate in and for the community.

In Scriber and Cole's The Psychology of Literacy, the authors describe, in a larger socio-cultural discussion of practice, literacy as a "socially organized practice."[12] In this discussion the authors illustrate a two-part sub-functional "literacy" embedded in the larger biological and social function of on-going activity. There is in this two-part sub-functional literacy (1) the gelled practice, and (2) the application of the gelled practice in an immediate context.

The gelled practice, or knowledge and skill, is the "recurrent, goal-directed sequence of activity using particular technology and particular systems of knowledge."[13] This gelled practice is reminiscent to me of existential or symbolic operation, techniques, and rote procedures. Prefabricated structures and ways of doing things, such as algebra,

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[11] Ibid. p. 39.
[12] Scribner, S. & Cole, M. (1981) The Psychology of Literacy. Harvard University Press: Cambridge, p. 236.
[13] Ibid. p. 236.

which are used in intentional and sometimes plastic ways to solve problems in immediate contexts of use. Literacies as gelled practice are like artifacts "aspects of the material world that [have] been modified over the history of its incorporation into goal-directed human action."[14] Jean Lave's observation of the use of math in day-to-day activity, such as shopping, is an example.[15] These "recurrent, goal-direct sequences," are not just bounded to immediate contexts in which these literacies are recursively needed but also take specific form and shape in response to the conditions of particular local concrete use.

The second sub-functional part has already been alluded to; it is "applying this knowledge for specific purposes in specific contexts of use."[16] Knowledge applied in ecological subsystems or contexts, such as public intelligence, in which no actor is the center. This is the actual use of operations, techniques, and rote procedures to mediate and solve day-to-day problems regardless of if that problem is in the context of academic research, policy negotiations, lead in your water or breastfeeding your child.[17] It is this second sub-functional part – what I will call inquiry – that tends to be overshadowed by the first part, what I refer to as operations which are the "specific [seemingly transcontextual] characteristics of specific practice."[18] Literacy, regardless of how socio-cultural, verges on cognitivist when transcontextual "cultural characteristics" are

[14] Cole, M. (1996). Cultural Psychology. The Belknap Press of Harvard University Press: Cambridge, p. 117.
[15] Lave, J. (1988) Cognition in practice. Cambridge University Press: Cambridge.
[16] Cole, M. (1996). Cultural Psychology. The Belknap Press of Harvard University Press: Cambridge, p. 117.
[17] Ibid. p. 109. Cole relies on Dewey to discuss how tools, including language, mediate humans' ability to cope with the world and as such develop indirect, tool mediated, action and intelligence (cultural-historical thinking) to function and survive. We are our tools – both by habits and predisposition, including identity, in use and the development of social intelligence.
[18] Scribner, S. & Cole, M. (1981). The Psychology of Literacy. Harvard University Press: Cambridge, p. 237.

associated to the individual learning, fluency or performance of bracketed off 'characteristics of specific practice' that are guided by consciousness.[19]

It is the second sub-functional part, inquiry, the taking up of means in specific ways to solve particular problems that has significant consequences for identity and action. Knowledge, skill, and tool-use are deeply embodied and as such our literacies or habits, identities and predispositions in regards to knowledge, skills, and tool-use are deeply connected to communities and community experiences, which are constitutive of our identity. The use of knowledge, skills and tool-use requires embodied cultural capital, i.e. habits and predispositions.

Bourdieu states clearly that the same laws of transmission for embodied cultural capital, such as for example demeanor, extend to material and symbolic cultural. On using means or doing things in particular, intentional ways to serve specific interest Bourdieu writes:

> To possess the machines, he only needs economic capital; to appropriate them and use them in accordance with their specific purpose (defined by the cultural capital of scientific or technical type, incorporated in them) he must have access to embodied cultural capital, either in person or by proxy.[20]

The point I wish to introduce here for later development in chapter 3 of my dissertation, is that the appropriation, and I would add redirection, of tools and techniques, both symbolic and material, requires communal participation in using [producing and organizing] those means to achieve locally relevant, and communally concrete ends i.e. social inquiry that serves concrete matters of concern. This is the contextualization of pedagogy. Jennie

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[19] O'Loughlin, M. (2006). Embodiment and Education: exploring creatural existence. Springer: Netherlands, p. 69.

[20] Bourdieu, P (1986). The forms of capital. In: Richardson, J. (Ed.) Handbook of theory and research for the sociology of education. New York: Greenwood Press p. 247 (emphasis mine).

Oakes has explicitly focused our attention on that participation by using John Dewey's work in regard to public social inquiry and how this inquiry may facilitate communities to act as publics.[21] My interest is in looking at Knowledge Producing Schools as a specific socio-cultural pedagogical effort that may help us on our way to understanding what it means to create authentic experiences through inquiry and schooling-community collaborative structures to cultivate participatory democracy for educational reforms.

More on Knowledge Producing Schools

Knowledge Producing Schools started as a grassroots initiative in Australia through the leadership of Chris Bigum of students, teachers, and principals in Queensland.[22] Bigum is on the Faculty of Education and Creative Arts in Central Queensland University. He heads up the efforts to secure funding, research, publications and policy that support this effort to change the nature of schooling, providing a central hub for various concerns with schooling which became know as Knowledge Producing Schools.

Currently, there are three principal Knowledge Producing School sites, all primary schools; two are in Queensland, Warraburra State School, and Happy Valley State School, one school is in Victoria, Southvale School.[23] The goals, issues and concerns identified by KPS scholars and educators emerged from discussions with teachers out in the field of what needed to change in the nature of schools and schooling. For purposes of this dissertation 'KPS scholars' denotes Chris Bigum, who organized the Knowledge

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[21] See, Rogers, J. & Oakes, J. (2005). "John Dewey speaks to Brown: research, democratic social movement strategies, and the struggle for education on equal terms." In Teachers College Record, vol. 107, num. 9, September, pp. 2178-2203. Also see, Oakes, J. & Lipton, M. (2002). "Struggling for educational equity in diverse communities: school reform as social movement." In Journal of Educational Change, Vol. 3, Number 3-4, December, pp. 383-406.

[22] Lankshear, C., Knobel, M. (2003). "Planning pedagogy for I-mode from flogging to blogging via wi-fi," presented at IFTE (International Federation for the Teaching of English) conference, Melbourne, 7 July http://www.geocities.com/c.lankshear/ifte2003.html.

[23] Bigum, C "Knowledge Producing Schools" Faculty of Education, Deakin University, Geelong, Victoria, Australia: http://www.deakin.edu.au/education/lit/kps/index.html.

Producing Schools effort, creating a research and pedagogy effort, and the theoretical work of Colin Lankshear and Michele Knobel, which served to further define Knowledge Producing Schools pedagogy. These three scholars make up the main conceptual position of Knowledge Producing Schools relevant to this dissertation and so I focus on their work.

These Knowledge Producing Schools scholars have a number of related concerns. For one thing, they worry that schooling is out of synch with the real world and as a result is not providing students with the knowledge and skills needed to function in society at large as a result of such changes as globalization.[24] Related to this concern is what KPS scholars see as a central issue in the role and use of technology in education. The culture of education tends to think of technology, especially Information Communication Technology (ICT), as inevitable, good, and always effective for schooling. Furthermore, they are concerned that students' experiences with technology in the classroom are largely ineffective because their classroom experiences with technology are not relevant to the out-of-school uses and knowledge demands of technology.

In the same vein, KPS scholars' state that technology in education continues to be ineffective and lack relevancy to out-of-school life because it is constrained i.e. domesticated to the conditions and stipulations of curriculum, standards of learning, and the traditional view of the classroom. Lankshear and Knobel describe these constraints, as the limitations of Justified True Belief (JTB), the dominant view of knowledge in the West.[25] These constraints produce a relationship to knowledge, which is passive and

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[24] Bigum, (2003). "Rethinking schools and community: the knowledge producing school," Faculty of Education, Deakin University, Geelong, Victoria, Australia at http://www.deakin.edu.au/~cbigum/plants/rethinkschlcomm.html.

[25] See, Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham. The KPS criticism and response to Justified True Belief is developed in chapter 1.

procedural, or in other words gears educational experiences toward individualized knowledge consumption.[26] The conditions and stipulations of curriculum include teachers' curriculum and instructional models embedded within curriculum theory. [27] The work discussed and extended in this dissertation, the development of New Literacies and restructuring of schools and schooling, are efforts to overcome the limits of JTB. Knowledge Producing Schools is not a pedagogy applied to current schooling; rather, it is an effort to change the nature and role of schooling for students and the communities in which schools are embedded. These efforts solidified into two main goals for Knowledge Producing Schools (1) that schooling must be geared toward the individual and communal production of knowledge and (2) to do so properly the use of technology in education must be relevant to out-of-school uses and knowledge demands of technology.

These two main goals guide the interlocking questions that are the catalyst to KPS scholars' research and pedagogy. First, how might learning be more about the production of knowledge versus passive consumption of knowledge? The second question is how do we make the classroom use of Information Communication Technology relevant and connected to out-of-school life? What is most compelling is how much these questions change the structure of schooling and the role of schools. It is very important not to make sense of Knowledge Producing Schools as just another 'new' pedagogy, but to see how the emphasis on knowledge production recalibrates the spatial composition of schooling. KPS scholars' concern with the epistemology of Justified True Belief [see, chapter 1] reminds us that pedagogy and curriculum is guided and constituted by how knowing is defined and

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[26] Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham.

[27] Bigum, C. (2002). "Design sensibilities, schools, and the new computing and communication technologies" in Silicon Literacies: communication, innovation and education in the electronic age. Edited by Snyder, Ilana, Routledge: London.

conceptualized. To further introduce what KPS scholars' research and pedagogy represents and how these efforts restructure schooling activities, situating schools as serving communities, lets first look briefly at how KPS scholars envision what it means to know.

Scholars' who champion KPS views of knowing are informed by socio-cultural views of literacy and literacy in out-of-school settings.[28] These scholars endorse a practice oriented theory of knowledge (epistemology). Knowledge production from this perspective is seen as residing within webs of social practice i.e. as relational.[29] Seeing knowledge and capabilities as relational means several things. We have a tendency to make sense of and conflate complex systems, such as capabilities, into assumed internal states, such as abilities.[30] A performance, ability or capability may appear substantive i.e. a noun, but if opened up we would see sets of process relations i.e., a verb. These relations are embodied and are embedded in sets of social performances, and are also the spatial-temporal relationships and materials of the community's; separated none can function to perform the action, but together the action is constituted. Meaning comes from doing; in other words, capabilities can be seen as assemblages.[31] Schooling assemblages are addressed in chapters 4 and 5. What we usually conceptualize as internal, innate abilities and perceptions are in fact deep corporeal inscriptions "performed into existence."[32] Performance is seen more in light of apprenticeship-like practice that is larger than face-to-face events; meaning our

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[28] See, Hull, G. & Schultz, K. (2001). Literacy and learning out of school: a review of theory and research. Review of Educational Research, Vol. 71, no. 4, pp. 575-611.

[29] Bigum, C. (2003). "Rethinking schools and community: the knowledge producing school," Faculty of Education, Deakin University, Geelong, Victoria, Australia at http://www.deakin.edu.au/~cbigum/plants/rethinkschlcomm.html.

[30] See, Martin, E. (1995). Flexible Bodies. Beacon Press.

[31] Assemblages are networks of human and nonhuman actors.

[32] Rowan, L. & Bigum, C. "Actor network theory and the study of online learning: new perspectives on quality," at http://www.deakin.edu.au/`cbigum/plants/171.html. Faculty of Education, Deakin University, Geelong, Victoria, Australia, p 6. I am very interested in the connections between ANT, KPS efforts, and a Deweyan perspective of learning and believe there is much to yield from the connections between these three bodies of work.

ways of being in the world are defined, enrolled, and assembled in the social networks of the larger community. Performance seen as embedded in social networks connects the efforts of schooling to communities and groups of experts. This in turn necessitates authentic schooling experiences creating deep interdependencies between schools, communities, families, and industry. [33] The KPS scholar's view of knowing guides their pedagogy to be very focused on authenticity: out-of-school literacy and deep connections between schools and the communities and local expertise those schools are embedded.

Expertise and specialist communities usually reside in, and are at the service of, the community at large, and if learning is to be geared toward knowledge production and real-life expertise then learning must be calibrated to what experts practice.[34] Developed by KPS scholars are digital epistemology and what they call New Literacies to bracket off relevant out-of-school literacy that is coupled with schooling activities. "New" is used to describe those literacies that are chronologically new, unprecedented due to new technology, and those literacies new to being conceptualized as literacies.[35]

Authenticity requires that the school connections to community expertise and that schooling experiences involve community projects that have real value and consequence to that community.[36] With KPS a different role emerges for the school that of the public common. Knowledge Producing Schools develop and maintain relationships with the various communities served by not only using community expertise to develop relevant community project, but by also documenting the expertise residing in the community. By

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[33] Bigum references Jean Lave in developing his ideas of community, learning, and expertise.
[34] Lankshear, C. KPS papers, Deakin University: Geelong, Victoria, Australia http://www.deakin.edu.au/education/lit/KPS/pedagogy.html.
[35] Lankshear, C. & Knobel, M. (2000). Mapping postmodern literacies: A preliminary chart, in The Journal of Literacy and Technology, Vol. 1, num. 1, Fall 2000.
[36] Center on Organization and Restructuring of Schools (CORS) (1996). "Authentic pedagogy boosts student achievement," Vol. 8, No. 3. http://www.wcer.wisc.edu/publications/wcer_Highlights/Vol.8_No.3_Fall_1996/Authentic_Pedagogy.html.

producing, accumulating, disseminating and analyzing relevant knowledge for the community, KPS become a hub or alternative apparatus and serve as an important source to facilitate the production of what the community knows about itself and the world at large.[37] Bigum states that new technologies, socio-cultural literacies, and stronger connections between schools and communities might offer

> The possibility . . . to move from a discontinuous involvement in research activities to one in which schools see research as one of the things they are good at and through which they can contribute to their local community. Coupled with this changed view, schools could see themselves as a logical location for the production, accumulation, and dissemination of information about the local community.[38]

By becoming a public common school for the community wherein it is embedded, Knowledge Producing Schools can serve to nurture local community by facilitating the means and experiences necessary for communication, inquiry, and deliberation. Communal and individual self-knowledge is referred to by Bigum as developing a point of view and is seen as an extremely important component in enabling individuals and the communities in which they reside to negotiate the consequences, decisions, and benefits of globalization and other social-political-technical influences they may encounter which affect their day-to-day lives.[39]

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[37] How KPS scholars envision KPS schools serving individual and communal POV can be thought of as alternative, local, subjectively infused "machinery of knowledge."

[38] Bigum, C. (2002). "Design sensibilities, schools, and the new computing and communication technologies" in Silicon Literacies: communication, innovation and education in the electronic age. Edited by Snyder, Ilana, Routledge, London, p. 139. KPS can be seen as a sibling to John Willinsky's Public Knowledge Projects (PKP): http://www.pkpubc.ca/about/index.html.

[39] Bigum, C. "Rethinking schools and community: the knowledge producing school," Faculty of Education, Deakin University, Geelong, Victoria, Australia at http://www.deakin.edu.au/~cbigum/plants/rethinkschlcomm.html, p. 5.

"Point of view" is commonly used to describe particular perspectives and worldviews of individuals and discursive groups.[40] In Knowledge Producing Schools, Bigum extends point of view to describe how it is used. The communal moral imperative, intelligent reassembling of the information, inquiry, and expertise that local community relies on to understand and act upon the world. The relationships between the people and groups that make up a local community produce a point of view in which to offset the depersonalized power relations which give them little or no agency to negotiate the consequence that affect their day-to-day lives. This is why Bigum states that Knowledge Producing Schools are "all about relationships."[41]

The movement in the synergy between Knowledge Producing Schools as public commons and communal point of view as produced by the community; moves away from a reliance on technocratic expertise, which sees the citizen as secondary to the projects of governments and corporations and toward an active deployment of the techniques of inquiry that communities develop and use. Point of view, as KPS scholars discuss it, is implicitly an application of public intelligence to solve social problems. Bigum's discussion of point of view implicitly describes communities' self-understanding as public(s) through collective inquiry, moral imperative, and pooled resources. In Knowledge Producing Schools there are aspects of producing public(s) and supporting the evolution of public(s) in nondeterministic ways by means of supported inquiry and Information Communication Technology. These aspects residing within the Knowledge Producing Schools effort necessitate collective and individual inquiry. These aspects are

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[40] Bourdieu, et al. (1993.) The weight of the world: social suffering in contemporary society. Stanford University Press: Stanford, California.

[41] Bigum, C. "Rethinking schools and community: the knowledge producing school," Faculty of Education, Deakin University, Geelong, Victoria, Australia at http://www.deakin.edu.au/~cbigum/plants/rethinkschlcomm.html, pp. 3-5.

the key foundations on which the extensions to Knowledge Producing Schools I propose in this work address.

Directions in discussions

The Knowledge Producing Schools restructuring of school and schooling in community point of view and New Literacies are guided by a concept of knowing as the embodied, and culturally inherited intelligence of a community. Introduced here and expanded in the following five chapters, especially chapters 2 and 3, knowing resides distributed in customs, traditions, techniques, norms and subject-matter of and among communities and is embodied and inscribed in individuals who participate or have participated in those communities. This means that our corporeal habits and predispositions frame our ways of being in the world, and these embodied, distributed perceptions bypass consciousness becoming our prefigurations to conscious action and judgment. Thus, while agreeing with KPS scholars concerns, restructuring of schools as public commons, and their critique of the epistemology of Justified True Belief, my concern is that KPS scholars' response to Justified True Belief lacks an important attention to embodiment and emotion.

The passive spectator that KPS scholars rightly contend is cultivated by the dominance of the epistemology of Justified True Belief in education is not, I argue, 'corrected' by pedagogy of individuals possessing, using and calling up New Literacies. Individuals possessing New Literacies is an abstracting in and of itself and cannot explicitly facilitate the transformative active experiences, selves, and communal meanings that deep co-creation can. Leaving the details to chapters 1 and 2, some main concerns I have is that individuals with New Literacies tends to create an artificial distance between

actors, and actors and their actions. I state that distance is artificial because isolated atomistic individuals do not self-generate perspectives, meanings, values, and identities.[42] We socially create, emotionally experience, and acquire, thing like, perceptions in our personal-communal co-designations and significant meanings that we co-create with others in the world. If our pedagogical gaze is to be a socio-cultural one with goals to facilitate and encourage specific self-determined relationships and practices, then we do not devolve into pedagogical impositions and individualism.[43] The locus resides in self-determined, local associative action, co-creation, and the habits of the body, the focus of chapters 4 and 5.

My intention is to create a deeper connection between participating in a literacy practice and the formations of identity constituted in those existential and affective experiences. A related concern is to show how our identities, emotions and experiences guide our actions. This is especially relevant in thinking about how communities may act on their own behalf, as in Chris Bigum's discussion of a community's point of view, action that I feel is better seen as a community's engagement in the acts of a public.

The task of the first three chapters of this work is to show that Knowledge Producing Schools implies and requires a pedagogy of public social inquiry that in turn can facilitate the ability for publics to see themselves, and to illustrate how the non-dualistic continuity of social-nature or biological-cultural in the Deweyan view of knowing is relevant to KPS goals. My purpose is to create a Deweyan recreation of the idea of Knowledge Producing Schools, a KPS-Dewey hybrid, by emphasizing his ideas of "the Public." A community cannot absolutely know what consequences are particular to them

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[42] See, O'Loughlin, M. (2006). Embodiment and education: exploring creatural existence. Springer: Netherlands, pp. 35-45.
[43] De Certeau, M. (1984). The practice of everyday life. University of California Press: Berkeley.

without an autobiographical self-knowledge and an ability to deliberate, that is, imaginatively and actually investigate consequences involved in carrying out specific courses of action; this is one of the many roles of Bigum's communal point of view. My position regarding actualizing the goals of Knowledge Producing Schools is that it is not specified tool use with an emphasis on individual learners, as we will see in New Literacies, that must be facilitated and developed but a community-oriented, socially creative, and public inquiry.

Chapter 1 presents and discusses the pedagogy of Knowledge Producing Schools. This chapter first offers an analysis of Knowledge Producing Schools' case studies as communities of inquiries to show that inquiry is implicit in and necessary to KPS scholars' pedagogical goals.[44] After looking at these concrete examples of Knowledge Producing Schools' projects in the case studies discussed, I present KPS scholars' criticism of and response to Justified True Belief. KPS scholars' offer an alternative epistemology for education called Digital Epistemology and present a way of incorporating relevant out-of-school literacy into schooling experiences in the form of individualized New Literacies.

My concern with New Literacies is that though KPS scholars emphasis discursive construction they largely ignore the role of the body and its emotions in meaning, action and perception. KPS scholars' reliance on individuals with New Literacies decouples desired forms of embodied habits and predispositions from the communal participation, experiences, co-designations, and conditions that constitute those forms. I present my

[44] Lankshear & Knobel (2003). New Literacies: changing knowledge and classroom learning. Open university press: Buckingham, pp 131, 180; Also see, Lankshear & Knobel (2003). "Implications of new literacies for writing research," Keynote address presented to the Literacies and writing SIG AERA, Chicago, April 21.

concerns with the lack of attention to embodiment and emotion in the use of individualized New Literacies, and provide a friendly critique and Deweyan reconstruction.

In chapter 2, I turn my attention to the body. I illustrate how the role of the body and its emotions in meaning, action and perception is relevant to Knowledge Producing Schools goals. KPS scholars' acknowledge that our participation in our culture inscribes our bodies- they focus on literacy as discursive – but their pedagogy is not informed by what it means to have bodies readily brought to yield to inscription.

If we are emphasizing concrete social practices and how the participation in these practices influence identities and performances of learners then we must have a pedagogy informed by exactly how participation in social practices continually serves to form selves, and collective identities or predispositions and social fields. To reinforce the connections between participating in literacy practices and the formation of identity and action as guided and constituted by the embodied and emotional experiences of those literacy practices chapter 2 investigates how these experiences are distributed and co-created with other human and non-human actors. Where chapter 1 shows the limitation of individualized New Literacies, chapter 2 develops a basis for communal literacies by looking into the conditions that constitutes embodied knowing.

Chapter 2 first offers a brief introductory comparison to KPS and Deweyan reconstruction to show that a practice theory orientation to knowledge necessitates a distributed view of knowing. A distributed embodied view of knowing focuses our gaze on the communal life we co-create. The making of meaning and objects and the individuals, values, interests and desires that emerge from the common are developed in a discussion of Dewey's biological and social matrices of inquiry. Specifically relevant to pedagogy is

how the values, interests, perceptions and desires experienced in communal life are the embodied particularities of individuals and how these embodied particularities tend to produce and organize events. This chapter will look into the processes of forming predispositions as embodied biological habits, and how these predispositions form action within John Dewey's thinking about the creation of significant meanings, his theory of inquiry and warranted assertability.

Associative action and the construction of knowledge require the making of something, i.e. some object, common. This means, as chapter 2 develops, that not only are knowing and being distributed but that there is a self-similarity from the limited community of two or more intentional centers of action in associative action to family, group, community, and publics. Chapter 3 extends the discussions in chapter 2 to include the significance of public intelligence as grounded in communities' embodied social meaning making and the ramifications of this for KPS scholars' goals.

The first task of chapter 3 is to show that the goal of Knowledge Producing Schools implies and necessitates a facilitation of communities' ability to act as publics. This chapter first revisits some of the key components of Knowledge Producing Schools in regards to changes in the structure of traditional schooling and the connections between schools and the communities in which schools are embedded. The idea of "publics," I will propose, are implicit in and necessary to these Knowledge Producing Schools components in regards to the fulfillment of their goals. The chapter revisits a reoccurring theme in this work. The concern of individualism developed in my critique of New Literacies in chapter 1 is revisited to further develop the Deweyan view of individuality. Narrow individualism tends to co-opt the potential characteristics of associative action in community and place

them, mythically, within individuals.[45] The Deweyan view of individuality does not exclude the individual or the various participatory communities.

Chapters 1-3 puts forth why we must look to a communal unit of analysis for Knowledge Producing Schooling experiences to place knowledge construction within associative action. Chapters 4 and 5 expand on the first three chapters and inquiries into how we might go about developing and researching pedagogy not centered on the individual. For example, in thinking about the ideological changes Oakes implies as necessary for social change i.e.; changes in individual and collective identity in regards to both specific actions and the relationships between communities, what does it mean to contextualize pedagogy?[46]

Chapter 4 draws together and further develops the ideas introduced in the preceding chapters in preparation for connecting the pedagogy and theory of Knowledge Producing Schools to that of Dewey's lab school, which is discussed in chapter 5. Chapter 4 begins by summarizing and expanding the main themes in the first three chapters that are relevant to locating the tenets of socio-cultural literacy in pedagogy and curriculum. In this chapter I expand on Dewey's embodied knowing and emergent intentionality from chapter 2, as it relates to the idea of "assemblages." Introduced in chapter 4 is how assemblages, i. e., "distinctive patterns of human association," make legible issues of relation, location, and geographies that are relevant to social meaning and action.[47] My question is if an act is

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[45] Dewey, J. (1927/ 1991). The public and its problems. Swallow Press: Ohio University Press.
[46] Oakes, J. & Rogers, J. (2006). Learning Power: organizing for education and justice. Teachers College Press: New York, p. 14.
[47] Quote see, Dewey, J. (1929/1958). Experience and Nature. Dover Publications: New York, p. 175. Dewey also uses "assemblages" to specifically describe distributed ways of doing, attitudes, and stabilizing consequences. See pp. 169-75. For example Dewey states, "Because of converse, social give and take, various organic attitudes become an assemblage of persons engaged in converse, conferring with one another, exchanging distinctive experiences, listening to one another, over-hearing unwelcome remarks,

located wherever it has consequences then what does this mean in regard to pedagogy?[48] To develop this discussion in chapter 4, I revisit and expand on geographies of participation introduced in chapter 3, especially in regards to how Dewey's warrant assertibility develops an important pedagogical relationship delivering a geography of participation consistent with his basic socio-cultural tenets that are particularly well suited for achieving the goals of Knowledge Producing Schools (KPS). Chapter 4 also addresses some of the methodological issues related to schooling assemblages.

Chapter 5 offers some of the practical forms or the executions in practice of the pedagogical theory discussed in the previous chapters. In this chapter I highlight some of the main pedagogical components of 'community skills,' and communal resources in what was done at the Dewey lab school at the University of Chicago weaving this into the compatible pedagogical practices of KPS. Both Dewey and KPS scholars' see the restructuring of schooling (i.e., educational reform), as a spatial sensibility, and both put forth specific place-making and forms of organizational structure in their schooling that are focused on student learning and students' identities instead of a primary focus on teaching.

In chapter 5 I have divided community skills, community resources and organizational structure into two forums: making places of use and forms of organization in schooling. In the first discussion, making places of use, I will look into the curricular and community-building issues of an inquiry-focused pedagogy. In forms of organization in schooling I discuss the restructuring and support necessary, especially with school

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accusing and excusing." (p. 170, emphasis added). A person identifies herself or himself with potential acts and deeds that emerge from the collective.

[48] "If it be asked, "where" a transaction is located, the only possible answer . . .it [the act] is located wherever it has consequences." "Mind is spatial." Ibid. pp. 199-200, fn. 3 p. 200.

administration and teachers, to form and sustain an inquiry-focused pedagogy. I end chapter 5, and this dissertation, with a vignette of a possible KPS-Dewey hybrid project.

Chapter 1: The position and goals of the Knowledge Producing Schools effort

Chapter 1 presents and discusses the pedagogy of Knowledge Producing Schools. This chapter first offers an analysis of Knowledge Producing Schools' case studies as communities of inquirers to show that inquiry is implicit in and necessary to KPS scholars' pedagogical goals.[49] After looking at several concrete examples of Knowledge Producing Schools' projects in the case studies discussed, I present KPS scholars' criticism of and response to Justified True Belief. These scholars offer an alternative epistemology for education called Digital Epistemology and present a way of incorporating relevant out-of-school literacy into schooling experiences in the form of individualized New Literacies. I introduce some of my concerns with the lack of attention to embodiment and emotion in the use of individualized New Literacies. A friendly critique and Deweyan reconstruction is provided in the conclusion of chapter 2.

Examples of Knowledge Producing Schools' projects

Knowledge Producing Schools' projects have addressed a spectrum of issues. Most important in distinguishing Knowledge Producing Schools from other efforts is that KPS projects stem from real live, every day problems of students, communities, industry, or government and explicitly work toward developing and maintaining relationships between the school and local community. What I offer here is a brief overview of specific Knowledge Producing Schools' projects; some of these cases will be further developed elsewhere in this dissertation. I select these projects to show a spectrum of projects, which address community problems, the creating of real products for local industry, and students'

[49] Lankshear & Knobel (2003). New Literacies: changing knowledge and classroom learning. Open university press: Buckingham, pp. 131, 180; Also see, Lankshear & Knobel (2003). "Implications of new literacies for writing research," Keynote address presented to the Literacies and writing SIG AERA, Chicago, April 21.

projects to know and change their own schools.

Several Knowledge Producing Schools' projects seek to work toward solutions of local community-school problems. For example, a group of students produced, scripted and filmed a Power Point-based interactive CD-ROM, in response to a school incident. The CD offered advice and scenarios about how student might respond to bullying. The CD was presented at a public meeting with the intention of marketing the CD to other schools.[50]

Another project at a Knowledge Producing School site was having serious problems with cultural intolerance, fighting, aggressive anti-social behavior, arson, self-harm, assault and aggressive parent incidences. Misdemeanors during lunch were so high that teachers reported the school corridors were cluttered from sending offending children into the hall. The school also had the unfortunate distinction of being the school for a child who was the youngest heroin overdose victim in Victoria. The school encompasses 32 different cultures, 88% of the students do not speak English at home, and 50% of the children are recipients of State welfare. The school is classified in the highest need category.

The teachers decided to develop some kind of "values" education. The teachers guided much of there planning using Costa & Kallick (2002) "Habits of Mind." An important issue were decided by the teachers before trying to implement the new Value education. They wanted a grounded model for the Value education initiative in their school. The teachers decided to reject any top-down models of value education that forced the school to fit into a predetermined 'best-practice' model. The value education must be

[50] Bigum, C. (2002). "Design sensibilities, schools, and the new computing and communication technologies" in Silicon Literacies: communication, innovation and education in the electronic age. Edited by Snyder, Ilana, Routledge: London.

locally generated. The basic model chosen was one of 'inclusivity,' and would focus on the skills and identities students would need as adults.[51] Lastly, the teachers decided that they must develop, negotiate and, self-reflect on values for themselves as teachers before engaging students and the community. The community was included through a parent survey asking them to list their top five values to guide school policy. The response was a return of 95% of the surveys sent out whereas the school usually received a 15% return. The top five values were respect, honesty, tolerance, caring, and personal-responsibility. Students' opinions were solidified through class discussion and activities that help children develop, in their own language, what values were and what values they as students held. Thus, the whole community collectively developed what the fundamental beliefs and values should be that guide the actions, programs, and decisions of the school.

The school reported a drastic change in the culture of the school. From 2001-2003 incidents of misdemeanors go from 400 per term to almost none, aggressive parent incidents from term 1, 2001 to term 2, 2003 go from 4 to none, and teachers report large gains in teacher interaction. One important thing to note is that the material needs of children were not overlooked but were considered part of the school's value education initiative.[52] A grounded understanding of various children's material needs was part of the school-communities development of the values education. For example, the school and local communities developed a host of sustainable clubs and committees geared toward the needs of the children. Those clubs and committees included a breakfast and lunch club for

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[51] Inclusivity makes certain that a plurality of perspectives and life experiences play a part in the formation of problems, solution and implementation. Difference, in this view, is seen as a resource for creativity and inquiry. Contradiction also becomes a necessary component. See, Heath, S.B. (1983). Ways with words. Cambridge: Cambridge University Press.

[52] Lankshear & Knobel (2003). New Literacies: changing knowledge and classroom learning. Open university press: Buckingham.

unfed children, homework clubs for non-English speaking households, and employed language broker-liaison workers who as liaisons are native speakers of various languages who help coordinate efforts and concerns between the school and various local communities.[53]

Other Knowledge Producing Schools projects illustrate students working with outside industry and a desire to change or know their own school. Year 7 students developed a tourist promotional video for Queensland Heritage Trails Network where they conducted interviews, developed a script, and filmed and edited the video. The Heritage Trails Network provides public information about historically, archeologically, and geologically significant places to visit and explore in the Queensland's outback.[54] Year 7 students also developed pamphlets for Beef 2003 products. Year 3 students while learning about recycling worked collaboratively to write and send a letter to the city council asking them to adopt the curbside recycling program of a neighboring city. The children received a response that the city would go forth with a trial run of the curbside program and asked the children to be involved with a community education project about the trial program. Year 2 students were unhappy with their play area and designed and implemented a complete transformation of their playground. The transformation included choosing items such as a basketball hoop and painting cement games. Year 1 students were working toward developing an understanding of what made different environments or places different i.e. man-made, natural, social. The inquiry was into how places were classified in regards to the events that tended to occur in specific places. To investigate how places are used, and constructed, year 1 students interviewed peers about what they did in particular

[53] Southvale school: http://www.deakin.edu.au/education/lit/kps/svproj/sv_proj.html.
[54] Queensland Heritage Trails Network: http://www.heritagetrails.qld.gov.au/attractions/index.html.

locations in and around the school. They tallied up how many year 1 and 2 student were using specific places, and investigated school grounds to classify locations based on what they are made of i.e. man-made or natural.[55]

The Yanga Headlands State High School Knowledge Producing School project involved a group of boys classified by the school as "at risk." KPS scholars Colin Lankshear and Michele Knobel dedicated a chapter to discussing this case study.[56] My discussion here only highlights particular aspects of the project that serves my discussion of Knowledge Producing School projects as communities of inquiries in this and the following section.

Yanga Headlands State High School is located on Australia's northeast coast and is designated a rural area.[57] Overall the project focused on four purposed-designed 'networks of practice.'[58] This case study focuses on one of the 'network of practice' groups, which included four boys all 14 years of age in year 9. All four boys had previously lost their school Internet privileges. All the boys had been classified as 'trouble,' and 'having problems with literacy.'[59] Instead of regular English class the boys had been meeting with a teacher in a separate class engaged in projects. The team for the project was made up of the four boys, the teacher providing the alternative English projects, a post-graduate student, who had previously been the boys' coach and who's wife had taught the boys' in

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[55] Waraburra State School: http://www.waraburrss.qld.edu.au/.
[56] Lankshear & Knobel (2003). New Literacies: changing knowledge and classroom learning. Open university press: Buckingham
[57] Ibid. p. 182.
[58] Ibid. p. 180. I develop this later but 'purposed-designed networks of practice' becomes indistinguishable from 'community of inquirers' in Dewey's project method or Lynn Bustle's Deweyan 'creative inquiry' that served to deepen pre-service teachers' interpretation of literacy. See, Bustle, LS (1997). (Unpublished dissertation), "Creative Inquiry: Five Pre-service Teachers' Interpretations of Literacy," Virginia Tech, Blacksburg, VA.
[59] Ibid. Lankshear & Knobel (2003), p. 182.

year 7.[60] Not known to the boys previous to the project, were two researchers, and a research assistant. [61] The group met in a staff room for two hours a week over an 8-10 week period i.e. 30 hours and 14 sessions. Meetings were outside formal school hours and curriculum. The boys were in charge of any project related activities between sessions.

The main goal of the project was to work toward the design and implementation of an intervention effort for disadvantaged learners that employed new technologies and innovative pedagogical approaches. Three main concerns of the researchers had influenced the form of the project. The researchers were concerned that overall teachers' life experiences and cultures were extremely different than students. Teachers' lack of expertise with ICT was resulting in inferior educational experiences with technology; related to this concern, teacher's attempts to design educational experiences with technology for students, some of whom had more technical expertise than teachers, was eroding students' potential with ICTs. The task then was to nurture expert-like activities within group collaboration and expertise that would use ICTs. [62] The boys' personal needs were equally important and seen as connected to their literacy needs. The intention was 'scaffolded co-construction,' to utilize the diverse strengths of participants. [63] Researcher hoped the project would promote the development of a 'pedagogical logic,' that would bloom within the diversity of, and negotiations within, the group i.e. different mindsets, experiences, knowledge, and expertise.[64] Furthermore, researchers desired a "'pedagogical

[60] The post-graduate student brought his infant daughter to all the sessions. Initially the decision was a childcare issue, but soon the teachers involved realized the boys enjoyed seeing the baby.
[61] Researchers engaged in qualitative fieldwork, but also were available as a knowledge and information resource to the group
[62] See, Lankshear & Knobel (2003). New Literacies: changing knowledge and classroom learning. Open university press: Buckingham, p. 180. Mature forms of social practice resulting in an authentic product.
[63] Ibid.
[64] Ibid. p. 181. "Identifying and negotiating across different perspectives, values, experiences, and the like in search of an expert-like production . . ." Implicit here is a value of diversity as a resource for group inquiry.

logic' that would be adaptable to a wider range of educational settings."[65]

Researchers began by describing the project and the participants' participations "in terms of teachers wanting to learn from students how to teach computing."[66] The boys would be contributing to a year 9 subject on technology taught by their alternative English teacher. After a brief social warm up the group negotiated what they were going to do, and how they would do it. The group kept in mind the expertise they had and had access to. Working within the frame of reference of what was familiar and know to the boys, teachers and researchers nudged them toward conceptualizing problems and production as experts i.e. insiders mindsets.[67] Previously, the boys had worked on a motorbike magazine in their alternative English class. All motorbike enthusiasts, the boys had developed interview questions, done interviews, collected information, compared technical differences between bikes, and laid out and constructed a motorbike magazine. The boys decided on a website for motorbikes based on their magazine.

The collaborations between all the group members and the understandings and work that emerged as a result of dense collaboration was too rich to fit into any language of learning outcomes. "The style of work was based upon mutual support and sharing in which young and old, experienced and inexperienced worked together to solve problems

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[65] Ibid. p. 131. "In identifying a Pedagogical logic or (a) 'generic sense of 're-search' what we have in mind here is actually inherent in the very kinds of new literacies we have begun to identify." KPS scholars see that learning to 'research' is the crucial preparation for success in the information age. The desire for a logic, or generic research is in my mind a desire for a working, inclusive, critical pedagogy of inquiry. This implicit desire for pedagogy with a "generic sense of re-search" is key to the extensions offered in this dissertation of a KPS effort with an explicit pedagogy of group inquiry versus New Literacies. Also see, http://www.deakin.edu.au/education/lit/kps/pedagogy.html Deakin University : Geelong, Victoria, Australia.

[66] Lankshear & Knobel (2003). New Literacies: changing knowledge and classroom learning. Open university press: Buckingham p. 185.

[67] Mindsets refer to an insider's view, to expert mindset, and also mindsets of those who have grown up and in online social spaces and benefits. Mindsets are more fully developed in the 'new literacies' subsection of this chapter.

that arose from . . .building . . .the four sets of web pages."[68] For example, the researchers were familiar with the Mac platform and relied heavily on the boys to learn the PC platform. Applications learning was directly relevant to the needs of the project, and problem solving was always group oriented – either in finding resolutions or in creating teaching to share expertise.

The researchers described the learning that ensued as transcendence, decentered, and as a learning consequence of rich experiences i.e. broad tasks, genuine research, and improvisational.[69] An outcome of this particular collaborative work was that the boys' subjectivity was infused into the inquiry, which in turn, contributed to the organization of the unscripted activity. I believe the agency given to the boys created a structure, and was created by the structure of the project, which in turn facilitated greater agency for the boys. In other words, agency and social structure co-evolve; synergy of transformative relationships change agency because they change structure and as such existential experiences. Part of the structural change that transforms agency are changes in negotiations between participants.

Socially the boys bloomed. The project provided a social space for the boys to "(re) negotiate their social place in the school."[70] They spoke of themselves as more capable and became more comfortable with seeing themselves as capable students in other settings. In reviewing their experiences and observations of the project the researchers conclude that "(a) high proportion of this (the boys' learning) had little directly to do with computing or web page construction, but might be seen as nonetheless deeply educational, and, indeed,

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[68] Ibid. Lankshear & Knobel (2003), p. 188.
[69] Ibid. p. 193. Remembering that the " interests, purposes, and subjectivities of the boys themselves established a degree of structuring of the learning context."
[70] Ibid. p. 203. That the boys (re)negotiating their social place in school is synonymous with the personal relationships that gave room for agency replacing the traditional power relationships of schooling.

central to becoming a good citizen, worker, community person and family member."[71] Knowledge Producing Schools' projects insure that inclusivity has a place in schooling activities and in these transformative relationships students' diverse embodied subjectivities have some place in the negotiations of problems, solutions and implementations of communal projects.[72] Implicit in these examples, children and their communities are acquiring expertise that contributes to larger inquiry. These students are, through their deliberations and negotiations, learning to adapt versus the traditional schooling experiences, which teach students to accommodate.

Accommodating is usually made sense of as a passive action. When students find themselves in environments and conditions that offer no recourse they will modify their modes of conduct, traits, identities in accordance with the powerful customs, institutions, individuals and groups that control the conditions.[73] Furthermore, when students modes of discovery are abstract, detached from day-to-day life, autonomous, and ahistorical they are not experiencing being active, creative agents.

Adaptation is an active response of having some recourse and means to modify conditions to specific wants, identities and purposes.[74] The mode of discovery and resolution for adaptation necessitates inquiry and negotiation.[75] There is nowhere else to work from than the immediate present and those involved in it. In working towards changing the long socialization process of school from passive accommodation to active

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[71] Ibid. p. 192.
[72] Heath, S.B. (1983). Ways with words. Cambridge: Cambridge University Press.
[73] No recourse means little or no agency to co-designate in a specific event, likewise, recourse means agency. How an environment supports agency directly relates to the actions individuals and groups take in the human need to modify conditions.
[74] Hickman, L.A. (2001). Philosophical tools for technological cultures: putting pragmatism to work. Indiana university press, Bloomington, p. 39.
[75] Adaptation is part of and is not comprehensive of Deweyan pedagogy. Adaptation is part of students' evolving interests, creativity and growth as they experiences and solves problematic solutions with others. See, Joas, H. (1996). The Creativity of Action. University of Chicago Press: Chicago, p. 138.

adaptation i.e. knowledge production, Knowledge Producing Schools not only focuses on the schooling experiences but also the means of schooling experiences. For technology in schooling to be the means for local, dynamic, and improvisational inquirers it must be freed from its role in traditional education.

I want to now ground and further develop the two related questions that are the catalyst to KPS scholars' pedagogical and research efforts: (1) how might learning be more about the production of knowledge versus passive consumption of knowledge? (2) How do we deschool the classroom use of Information Communication Technology (ICT)? The first question resides in the 'purposed-designed networks of practice' illustrated in the Knowledge Producing Schools' projects previously discussed. Examining KPS scholars' rejection of the Justified True Belief and their alternative epistemology for education can develop a discussion into what is entailed in the deschooling of technology in education.

Taking a different look: Communities of Inquirers

The 'purposed-designed networks of practice' that KPS scholars describe may be best understood as communities of inquirers.[76] These projects, as communities of inquirers, are collaborative efforts with teachers, students and their various communities engaged in unscripted activities that are organized by negotiating problems, solutions, and their implementation. Networks of practice, much like communities of practice, tend to focus on practices solely generated by and in the collaborative group for a specific short-term events and goals. Communities of practice tend to be focused on how actors are brought into specific performances, for example actors are brought in from some peripheral performance into some seemly stable performance. By using the term 'community of

[76] Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham p. 180.

inquirers' it is not my intention to conjure up Lave and Wegner's communities of practice.[77] Community of inquirers is a focus on how we as humans organize action, what we co-create by doing so, how this transforms participants, and on how our co-creations are distributed beyond the seeable situations we find ourselves in.

In his reflections on the limitations of communities of practice in sustainable social change Alistair Mutch states, "The process of (sustainable social) change seems to be dependent on changes in the social division of labor. What we lack (in communities of practice) is a sense of active creative agency, of agents operating with free will in conditions that are not of their choosing, but which they can transform (or reproduce) by their activity."[78] Transformative activity is collective inquiry and the making of things in common to solve day-to-day problems. The concern is to highlight how our 'labor' or ways of organizing transforms the conditions in which we find ourselves in and with others and how those transformations change us. That we find ourselves in conditions alludes to another import distinction that situations are legible interactions between actors, which belong to vast social networks with rich histories. This is well stated by Jan Nespor:

> [F]ace-to-face interactions in specific situations is never just that, and that instead what we think of as interactions and situations are, as Doreen Massey (1993) puts it, articulated moments in networks of social relations and understandings, in which our experiences and understandings are actually

[77] Lave, J. & Wenger, E. (1991). Situated learning: legitimate peripheral performance. Cambridge: Cambridge University Press.
[78] Mutch, A. (2003). "Communities of practice and habitus: a critique," in Organizational Studies, May-June, 2003, Vol. 24, No. 3, 383-401, p. 392.

> constructed on a far larger scale than we happen to define for that moment as the place itself, whether that be a street, a region, or even a continent.[79]

Actors act out the interests of the communities and social network in which they continue to and have participated. This is because communities and social networks "aren't just situated in space and time, they are ways of producing and organizing space and time and setting up patterns of movement across space-time: they are networks of power."[80] Communities are ways of producing and organizing meaning, events, identities, perspectives, and histories. A look at what we co-create can never be limited to people in, or even a particular group, a specific event as if all things of consequence are constituted in any given event.

Knowledge Producing Schools and associated projects are more involved in on going, sustainable investigations and transformations for the good of the community and its participants i.e. communities of inquirers. The reference to "good" implicitly means a capability to negotiate durable consequences, and change or form social institutions. The political agency of the community manifests in things such as communal points of view, which serves to direct members' actions. Communal points of view are dependent on the interdependency of communal inquiry facilitated in this case by Knowledge Producing Schools as repositories and a specific pedagogy. Inquiry is also infused with subjectivity. The communal inquiry of active creative agents also means participants who understand the role of theirs and others life experiences to be able to negotiate problems, solutions, and implementations. Inquiry is a mode of discovery that is grounded in the immediate present. The details of the present (conditions), and how those details relate to other

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[79] Nespor, J. (1994). Knowledge in Motion: space, time and curriculum in undergraduate physics and management. Falmer Press: London, p. 3.
[80] Ibid. p. 9.

perspectives in other places, must be attended to if meaning and consequence are to be negotiated. This can be seen in what KPS scholars' desires Knowledge Producing Schools to be – the means by which local communities can develop and make public their points of view to negotiate with the world, at large. Communities of inquirers serve the pedagogical and knowledge needs of this type of local community.

There are many implicit and explicit examples of Knowledge Producing Schools' projects functioning as communities of inquirers. Overall it seems reasonable to conclude that these projects generate more of a commitment, than traditional individualized schooling, to competence and completion. Inquiry tends to cultivate interdependency between participants to address and respond to the every-day life concerns of participants and their communities brought up in the course of inquiry. The communities of inquirers are explicitly dependent on the participation of its members and the formation of these projects is directly influenced by the unique experiences and contributions of the members. Since students and teachers participate in, share, and have life experiences relevant to the events, and issues being investigated and studied, I believe, there is a greater potential for participants to better understand the relational impacts their actions have on others and vice versa.

The value education project is an example of successful deliberation in a diverse community engaged in the investigation of what is value education. Other examples are the collective reflections, an aspect of inquiry, of dealing with bullying that were incorporated into the bullying CD-ROM produced by the students. The curbside recycling project was the direct consequence of the actions taken by the students in appealing to their local government for the good of the community. The primary investigators, data collectors, of

the playground transformation and year 1 inquiry into different environments are the students themselves. All these projects necessitated student deliberation on what the problem, communal good, solution, and implementation was to be in regards to a relevant day-to-day situation.

The value education project of the Victoria schools and the Yanga Headlands State High School case study both illustrate not only how Knowledge Producing Schools changes the role of the student, but the teacher as well, opening some interesting question of what KPS faculty development could be. A community of inquirers demands a reliance on teachers' collaboration and self-reflection. In the formation of a value education curriculum in Victoria the teachers made self-reflection, an aspect of inquiry, part of the process. They also negotiated the meanings of values from themselves before engaging the students and parents of the community in discussions of school values. That the material needs of the Victoria school children were not overlooked but seen as intrinsic to the implementation of value education in the school is, I believe, directly related to how, and who was involved in the implementation.

Collaboration in a community of inquirers also means that the divisions of labor and research efforts are horizontal and distributed. In the Yanga Headlands State High School case study the boys negotiated the project and where held responsible for any project related activities between meetings. The students' expertise was an explicit resource in the project. At the completion of the project the boys would contribute to the teaching of relevant computer programs to other students. The boys were also more familiar with the platform of the project, PC, and helped the researchers who were more familiar with the Mac platform.

The teachers, boys, and researchers built the web site and necessary expertise together and jointly enabled the negotiations of mutual support and sharing necessary to complete the project with everyone involved. The teachers and researchers engaged in practices that undermined their authority while explicitly making their expertise a resource for the group. The boys seemed to release themselves easily from the pedagogical imposition of the project while retaining durable changes to how they saw themselves as students. The researchers reported that the boys saw themselves as much more capable in many different contexts. I believe that the Yanga Headlands project the boys experienced allowed them more agency i.e. to be a competent and uniquely valued participant in the group's inquiry. The boys, like many of the students in these Knowledge Producing Schools' projects, are placed in collaborative schooling experiences based on the presupposition that they, the students, can organize themselves to act effectively when given the guidance and support to structure the needed deliberation on every-day events to form problems and solutions.

The epistemology of Justified True Belief

The Mechanistic language, models, and fixation on end user relationships that dominates the field of education are symptomatic of a much deeper problem. These KPS scholars argue that the problem lies in constructing educational students as passive knowledge consumers, a construction that springs from the epistemological underpinning of Western education in the modern world, which, calibrates our practices of schooling.[81] Epistemology, the central focus of modern philosophy, deals with questions of knowledge;

[81] One way to think about how any given epistemology calibrates how technology is used is to think of epistemologies as archetypical set of values. The set of values are the catalyst for the techniques, technologies, practices, and institutions that preserve and extend the set and therefore line up subordinate to the archetype values.

definition, justification, claims, scopes and limits. If schooling is to significantly shift from consuming to producing knowledge, then our assumptions of schooling need to be reopened.[82] This older ordering, which frames the assumptions, tenets, and practices of curriculum and instruction is the epistemology of Justified True Belief.

School curriculum is devoted to what kinds and types of knowledge products should be taught, for example, propositional (knowing that), procedural (knowing how), and explanatory (knowing why) all highlight specific aspects of knowledge products, such as subjects, content, and tasks. In accordance with the traditional epistemology Justified True Belief, products of knowledge are thought to be carried linguistically as propositions (knowing that) within an individual's semantic memory and it is assumed that students' possession of the knowledge product will translate to the ability to produce and exercise similar knowledge in practice.[83] The use of technology in education is calibrated to and remains domesticated by Justified True Belief because the assumption, tenets, and practices of curriculum and instruction are based on the tenets of modern epistemology or Justified True Belief. The focus of knowledge in instruction or standards is to specify learning outcomes and testing. The overwhelming object of learning has been in subject content, a view based on a perspective of knowledge as discovered i.e. Justified True Belief.[84] Curriculum, instruction, and instructional models teach specific points of views from subjects. Subject-matter experts make explicit the only way subjects are to be made sense of and linked to other subjects and situations. The student's actions are directed to

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[82] See, Bigum, C. (2002). "Design sensibilities, schools and the new computing and communication technologies" in Silicon Literacies: communication, innovation and education in the electronic era, edited by Snyder, I. Routledge: London.

[83] It is argued that meanings of words and concepts form a memory representation that is stripped of contextual information and that this information is stored in a discrete memory system termed semantic memory.

[84] See, Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham.

passively consume completely finished products of knowledge.[85] Therefore students are encouraged to accept the authority of content, or to accommodate versus adopt, schooling experiences into how to investigate, evaluate, and negotiate positions. Before continuing, let us pause to clarify the idea of Justified True Belief.

The preeminent epistemological theory in the Western tradition is Justified True Belief; it concentrates exclusively on knowledge as stable linguistic propositions. Lankshear et al. explain Justified True Belief by stating that "According to this epistemology, for 'A' (a person, knower) to know that 'P' (a proposition): A must believe that P; P must be true; A must be justified in believing that P."[86] Lankshear et al. critique of Justified True Belief serves as the cornerstone heuristic in their development of a non-propositional epistemology for education. I would like first to give more detail and sharpen the KPS scholars' critique of Justified True Belief before discussing their response to it, which is, Lankshear et al. Digital epistemology and New Literacies.

The Justified True Belief theory of knowledge limits itself exclusively to knowledge <u>that</u> something is thus and so (e.g., the cat is on the mat). It arbitrarily ignores knowledge <u>how</u> something is done, or <u>why</u> it is done. Knowing <u>how</u> deals with skilled action such as knowing how to produce something that is commonly found in various social practices involving technologies, processes, etc. Knowing <u>why</u> deals with explanations. According to <u>The Cambridge Dictionary of Philosophy</u>, "Propositional knowledge (that something is so) has three necessary and jointly sufficient components: justification, truth, and belief. On this view, propositional knowledge is, by definition,

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[85] See, Bigum, C. (2003). "Rethinking Schools and community: the knowledge producing school." Deakin University : Geelong, Victoria, Australia at http://www.deakin.edu.au/lit/KPS.

[86] Lankshear, C. & Knobel, M. (2003). New Literacies: <u>changing knowledge and classroom learning</u>. Open University Press: Buckingham, pp. 156-7.

justified true belief. This is the tripartite definition that has come to be called the standard analysis."[87]

I begin with the belief component. Propositional knowledge involves a psychological relationship of someone who, in knowing, believes some proposition "p." "A knower must be psychologically related somehow to a proposition that is an object of knowledge for that knower. Proponents of the standard analysis hold that only belief can provide the needed psychological relation."[88] Belief is then a disposition (or attitude) toward some p. Most commonly it is assumed such dispositions belong to a 'cogitating,' atomistic, individual who exists apart from the proposition or the object to which the disposition refers.[89] Justified True Belief highlights a spectator's view of knowledge where atomistic individuals, distinct from communities, mediate the world by propositions. Those committed to Justified True Belief tend to view the individual as a spectator to knowledge and to the skilled practices of discovering knowledge.[90] As such, it assumes a dualism between subject and object, knower and the known.

The truth condition in Justified True Belief has "a factual requirement: we genuinely know that p only if it is the case that p. The pertinent notion of 'it being the case' seems equivalent to the notion of 'how reality is' or 'how things really are."[91] Truth is extra-epistemic in that truth must correspond to an essential, external metaphysical

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[87] See, The Cambridge Dictionary of Philosophy, ed. Audi, Roberts, 2nd edition, Cambridge: Cambridge University Press 1999, p. 274.
[88] Ibid.
[89] Justified True Belief asserts "the only way for the mind to comprehend things as 'they really are' is by attainment of a dis-embodied view from nowhere." The body is not seen, in JTB, as contributing to the context of social interactions and meaning. Bordo, S. (1993). Unbearable weight: feminism, western culture, and the body. University of California Press: Berkeley, p. 4.
[90] The spectator is a subject endowed with inner consciousness whose main relationship to the world is that of spectator. "The spectator-knower's primary task is to gather information until a particular result is attained." Boisvert, R.D. (1998). John Dewey: rethinking our time. SUNY: Alabny, New York, pp. 35-6.
[91] See, The Cambridge Dictionary of Philosophy, ed. Audi, Roberts, 2nd edition, Cambridge: Cambridge University Press 1999, p. 275.

reality. Individual knowers are in conflict with nature. Truth as correspondence between knower and known (or more exactly proposition and reality) assumes a veil between nature and us occasionally pierced with neutral, purely cognitive, instrumentality. The knower separated from the object of knowledge has nothing to do with the creation of knowledge, because knowledge has a strict, extra-linguistic, extra-epistemic, essential, unchanging correspondence to an external reality.

The last component of Justified True Belief is justification. In Justified True Belief, the "general view of the justification condition (is) justification as evidence."[92] In other words, there must be "adequate indication that a known proposition is true."[93] Justification as evidence is not just grounded in something being true, since that is always something extra-epistemic, but rather in what leads an individual to affirm some propositions are true. Justification is not about what we claim to know but backing and warranting knowledge claims. It is assumed that there are epistemological criteria for adjudicating evidence that exists apart from the concrete social practices of a culture. The so-called problem of the criteria is how do we know the original criteria (rules) for adjudicating non-propositional knowledge. The result is a potentially infinite regress of rules that threatens to destroy the entire enterprise of foundationalist epistemology.

KPS scholars critique of Justified True Belief

Knowledge Producing Schools scholars argue for a non-propositional epistemology of practically learning how to do (make, produce) something and knowing why, hence it is incompatible with Justified True Belief. The caveat of KPS scholars' critique of Justified

[92] Ibid.
[93] Ibid.

True Belief is digitization referred to as 'digital fallout.'[94] These scholars sees that the "capacity to digitize has changed aspects of and our experiences in the world. This has led to a challenge to the underlying assumptions of curriculum theory and practice, which is Justified True Belief."[95] Therefore, challenges to Justified True Belief in the work of KPS scholars is explicitly made visible within, and contextualized by the impacts of increased digitization and the use of Information Communication Technology (ICT).[96]

These KPS scholars state that one of the impacts of digitization is that the skilled practices and active constructing involved in producing knowledge are made visible. This impact results in a direct challenge to seeing 'knowers' as spectators rather than practitioners.[97] The individual then can no longer be seen as a spectator but "may be more properly understood as a collective assemblage involving many minds and machines."[98]

Seeing individuals as assemblages' means that identities and knowledge are constituted from and emerge out of social interactions involving humans, tools (machines), and institutions. Since Justified True Belief is a spectator's theory of knowledge there is a tendency in Justified True Belief to ignore the practical knowing how involved in justifying truth claims. The key concern of KPS scholars with knowing as a propositional disposition and reasoning as the "mental" combining of propositions is that it often

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[94] Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, p. 158. Also see, Bigum, C. (2003). "Rethinking Schools and community: the knowledge producing school." Deakin University http://www.deakin.edu.au/lit/KPS.
[95] Ibid. p. 156.
[96] KPS scholars do not believe that ICT and digitization has changed some previous essential, stable, nature of knowledge rather they see technology and tools as the means of producing knowledge in social ways. Digitization and ICT serves to make explicit in new ways the non-propositional, social nature of human meaning and knowledge products.
[97] Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open university press: Buckingham, p. 165.
[98] Ibid. p. 166.

instantiates a passive relationship between students, knowledge, and authority.[99] In view of the fact that propositional knowledge results in spectators, KPS scholars are concerned that adherence to Justified True Belief produces students who are individual containers for information rather than creative, inquiring, and constructive agents. Individual here refers to atomistic, disconnected, isolated, egotistic individuals that tend to be unable to deal with difference, and is not to be confused with individuality which described unique selves connected to the purposes of the larger group that tend to embrace diversity. [100]

For these KPS scholars, knowledge and processes as "coming to know how," made more visible by the digitization of modern everyday practices, also challenges the Justified True Belief formation of knowledge as outside the social practices of people.[101] For KPS scholars knowing is not knowledge of what already exists, but the result of performing and creating, meaning to solve problems or negotiate specific situations. Therefore, knowledge is made not discovered.[102] An example is their description of point of view: "The knowledge assembly process is much more obviously a matter of a production performance than some unveiling of what already exists, we assemble a point of view, a perspective, an angle on an issue or story."[103] Point of view is the assemblage of a specific perspective that encompasses the needs, desire, wants, and consequences to a particular person, group, or public. The rejection of Justified True Belief ordering in the development of curriculum and instruction "seeks to open up for the young understandings of

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[99] See, Ibid. Also see, Bigum, C. (2003). "Rethinking Schools and community: the knowledge producing chool." Deakin University http://www.deakin.edu.au/lit/KPS. Also see, Lankshear, C., Peters, M. and Knobel, M. (2000). "Information, knowledge and learning: Some issues facing epistemology and education in a digital age." Journal of Philosophy of Education. Special Issue: Enquiries at the Interface: Philosophical Problems of Online Education, Eds. Nigel Blake and Paul Standish, vol. 34, issue 1, feb 2000: 17-40.
[100] See, Dewey, J. (1938). Experience and Education, New York: Macmillan.
[101] Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, p. 162.
[102] Ibid. p. 173.
[103] Ibid. p. 175.

knowledge and its location in the social networks, institutions and codes of practice built up by knowledge producers over time."[104] Since meaning and knowledge, for KPS scholars, is constituted out of social practices, schooling experiences must cultivate the social transactions that produce specific ways to know. The focus of learning and education for these scholars "is not children, nor schools, but human lives seen as trajectories through multiple social practices in various social institutions," because truth or meaning resides within relations and communities.[105] Thus, KPS scholars reject truth as strict correspondence to a fixed and final external reality.

Knowledge is seen by these scholars as a contingent process of social construction, meaning that, it cannot be separate from the community, processes, practices, technologies, etc. from which it emerges such that "the assembly of knowledge is seen as a collective assembly involving many different minds" this implies that there is a negotiation of or "balance among, different kinds and modes of knowing."[106] In other words, students must know how they know if they are to not only create but also justify their creations in their communities. These KPS scholars sees knowledge production as the social ability to create and negotiate how something is known through its creation and use. These scholars do implicitly see the criteria to deliver judgment on evidence as embedded in the local, concrete, social practices of a community. This is evident in their discussions of communities' point of view as inquiry for, and Knowledge Producing Schools as repositories of self-generated knowledge. Therefore, an example of the social nature of knowledge can be seen in KPS scholars' concept of and need for communal points of

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[104] See, Bigum, C. (2003). "Rethinking Schools and community: the knowledge producing school." Deakin University: http://www.deakin.edu.au/lit/KPS.
[105] Ibid.
[106] Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open university press: Buckingham, pp. 172, 167.

view. Point of view serves to tell a community about itself and its expertise, so that, the community may negotiate consequences in the community with the world at large.[107] In discussion of communities' using their communal points of view KPS scholars envision a community's point of view being used to make public, debate and offset the consequences of globalization.[108]

Likewise, in the previous discussion of Knowledge Producing Schools' case studies as communities of inquirers.[109] In communities of inquirers inquiry and the negotiation of problem, solution, and consequence is explicit making the requirements of justification paramount. Year one students were learning to justify how they see specific schooling environments as different by the data they collect as a group not because the teacher told them so. Year 2 students prioritized playground renovations as a group based on diverse desires, and also divided the labor that was appropriate for them to be involved in. These young children were involved in schooling activities that facilitate the dispositions of inquiry.[110] Communities of inquirers place emphasis on students and teachers mutual participation in making, negotiating, and revising knowledge and is aimed at producing understanding.[111]

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[107] POV describes the communal moral imperative, intelligent reassembling of the information, inquiry, and expertise of local communities to understand and act upon the world.

[108] Bigum, C. (2003). "Rethinking Schools and community: the knowledge producing school." Deakin University: http://www.deakin.edu.au/lit/KPS. Lankshear, C., Peters, M. and Knobel, M. (2000). "Information, knowledge and learning: Some issues facing epistemology and education in a digital age." Journal of Philosophy of Education. Special Issue: Enquiries at the Interface: Philosophical Problems of Online Education, Eds. Nigel Blake and Paul Standish, vol. 34, issue 1, feb 2000: 17-40. Urry, J. "Locating HE (higher education) in the Global Landscape," published by the Department of Sociology, Lancaster University, Lancaster LA1 4YN, UK at http://www.complancs.ac.uk/sociology/papers/Urry-Locating-HE.pdf.

[109] KPS project as communities of inquirers, starting on page () of this document.

[110] Dispositions will be discussed in chapter 2. For Dewey, durable dispositions are habits embodied, affective disposition to act acquired by participating in the customary social practices of a culture.

[111] To be discussed in Chapter 2, the inquiry in communities of inquirers, which requires the making, revising and negotiating of problem, solution, and consequence necessitates the embodied subjectivity of all participants.

The pedagogical possibilities of inquiry are implicit in KPS scholars' discussions describing their desired outcomes for Knowledge Producing Schools' projects, such as, a capacity to re-search aspects of the world, pedagogical logic, and the generic sense of re-search. [112] What is most important about communities of inquirers is that at it best they are inclusive epistemic communities where members are free to investigate in diverse inquiry, but are expected to address and negotiate how something is known. In other words, as we will see in the next chapter, justification is better comprehended as warranted assertion within an epistemic community.[113]

My reservations of KPS scholar's rejection of and response to Justified True Belief is that KPS scholars in their pedagogy and research are not as far from Justified True Belief as they believe, and as such, Knowledge Producing Schools does not fully escape the assumptions of the atomistic individual residing in the epistemology of Justified True Belief. I believe both individuals as pedagogical units and a focus on literacies facilitate the disposition of atomistic individualism, reified in the epistemology of Justified True Belief, thwarts productive investigations and efforts to counteract the issues of power in the social relations between groups. The tactics and strategies of power and the locus of social change cannot only be in changes to the isolated individuals "consciousness, modes of perception and forms of ideology," but in offsetting as public(s) the "tactics and strategies of power," which makes the characteristics of those in power the standards and

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[112] "(A) capacity to re-search aspects of the world as opposed to merely looking at them or receiving content." See, Lankshear & Knobel (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham. P. 131. Pedagogical logic, and the generic sense of re-search are also discussed on p 180. Paper presentation that looked at research in terms of its logic and the implications for new literacies, see, Lankshear & Knobel (2003). "Implications of new literacies for writing research," Keynote address to the Literacies and writing SIG AERA, Chicago, April 21. One of the issues I wish to address is that inquiry as pedagogy, which KPS implicitly facilitates, must be made explicit for KPS to reach a fuller potential as a non-propositional epistemology for schooling.

[113] Warranted assertion, as justification for non-propositional knowledge will be developed in chapter 2.

norms.[114] Schooling experiences that will help offset the tactics and strategies of power necessitate an embodied non-propositional epistemology of warranted assertibility for education. In chapter 2, I will use John Dewey's pragmatic theory of inquiry to deepen and broaden the KPS scholars' critique of Justified True Belief. Oddly enough, KPS scholars see Dewey and Pragmatism as upholding Justified True Belief when in fact they are even further away from Justified True Belief in epistemology, pedagogy and curriculum than the KPS scholars themselves.[115] Before presenting more fully in this chapter my concerns with KPS scholars' response to Justified True Belief, I will first present and give some examples of their response to Justified Truth Belief in the form of digital epistemology and New Literacies.

KPS scholars' response to the epistemology of Justified True Belief

The underlying epistemology in traditional schooling is Justified True Belief; the epistemology of knowledge production for KPS scholars is digital epistemology or social realism.[116] The response of KPS scholars for a non-propositional epistemology, Digital epistemology, is located within pedagogy and curriculum focused on individuals and New

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[114] Foucault, M. (1980). Power/Knowledge: select interviews and other writings, 1972-1977. Pantheon, pp. 2-90. See, Brantlinger, E. (2003). Dividing classes: how the middleclass negotiates and justifies school advantage. Falmer Press.

[115] "This general concept (Justified True Belief) has accommodated many variations since Ancient Greek times. For instance, it has accommodated various theories of truth (correspondence, coherence, pragmatist), in theories of reality (realism, idealism) and so on. Beneath all such variations, however, the kernel of Justified True Belief has remained the epistemological standard in the Euro-Western world." Lankshear & Knobel (2003). New literacies: changing knowledge and classroom learning. Open University Press: Buckingham, pp. 157, 166, 171. Also see, Lankshear, Peters, & Knobel (2000). "Information knowledge and learning: some issues facing epistemology and education in a digital age." Journal of Philosophy of Education, Special Issue: Enquiries at the interface: philosophical problems of online education, Eds. Nigel Blake & Paul Standish, vol. 34, issue 1, Feb. 2000: 17-40, pp. 38-9.

[116] Lankshear, C., Peters, M. and Knobel, M. (2000). "Information, knowledge and learning: Some issues facing epistemology and education in a digital age." Journal of Philosophy of Education. Special Issue: Enquiries at the Interface: Philosophical Problems of Online Education, Eds. Nigel Blake and Paul Standish, vol. 34, issue 1, 2000: 17-40. Moore, R. & Young, M (2001) "Knowledge and the curriculum in the sociology of education: towards a reconceptualization." British Journal of Sociology in Education, Vol. 22, No. 4 Feb.

Literacies. Lankshear et al. states "We use the term 'digital epistemologies' as a shorthand to refer to issues and processes we think educators should be taking an interest in with respect to matters of knowledge and truth, as a result of the digitization of so many aspects of the world and our experiences of it." [117] I will be distinguishing in the following section of this chapter the key points of the KPS scholars' response to the problem of Justified True Belief -- digital epistemology, and New Literacies with the locus of reconstruction being the individual. By reconstruction is meant, where and by what means is the social negotiated and changed in a sustainable way. In other words, what processes reform social values, meanings and customs. The following section will serve my discussions of KPS scholars' response to Justified True Belief and the possible extension of their pedagogy as communities of inquirers and is not meant as a comprehensive overview of KPS scholar's work in this area.

Jean-Francois Lyotard is used heavily to describe how KPS/New Literacies work in the postmodern situation ushered in by globalization and related technologies.[118] Lyotard is commonly cited in postmodern discussion in regards to transformation of social conditions and concepts of knowledge as a result of on-going developments in technology, especially digital technology.

One broad theme taken from Lyotard's is how technology, especially electronic information communication technologies, brings with it a particular kind of logic or set of

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[117] Lankshear & Knobel (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, p. 156.

[118] See, Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, pp. 162-5; Lankshear, C., Peters, M. and Knobel, M. (2000). "Information, knowledge and learning: Some issues facing epistemology and education in a digital age." Journal of Philosophy of Education. Special Issue: Enquiries at the Interface: Philosophical Problems of Online Education, Eds. Nigel Blake and Paul Standish, vol. 34, issue 1, Feb. 2000, pp 23-26; Lankshear & Knobel (2000). Mapping postmodern literacies: A preliminary chart, in The Journal of Literacy and Technology, Vol. 1, Num. 1, Fall 2000, p. 1.

conditions that determine what specific types of knowledge are valued and legible to the state and its market interests.[119] Market interest privileges knowledge that emphasizes optimal performance of means, flexible expertise, skill, and efficiency.

In Lyotard's transformational view the functionality of technology for market interest calibrates knowledge to a produced consumable good with exchange value. Knowledge becomes competence according to a criterion of high "performativity" or technique. To have and create knowledge is to have specific skills and means to "arrange data," to suit your interest.[120] According to the criterion of high performativity, "future prospects of individual learners will depend upon factors which vary according to access to new technologies."[121]

Lyotard's discussion of performativity describes the collapse of the various goals in education into one idea, class, rule or category, which is to support the efficient functioning of the social system.[122] In the KPS scholars' discussion that social system is globalization. Education then is not to produce communities and individuals that can idealize and actualize their interests, but rather to produce individuals trained to perform as legatos for the market and themselves through the market. Education reifies this performance by identifying the technique, practices, means, and skills related to the interest of the marketable functioning of the social system, such as, globalization. Such a

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[119] Willinsky, J. (1999). Technologies of Knowing. Beacon Press: Boston, pp. 124-5.
[120] Lankshear, C., Peters, M. and Knobel, M. (2000). "Information, knowledge and learning: Some issues facing epistemology and education in a digital age." Journal of Philosophy of Education. Special Issue: Enquiries at the Interface: Philosophical Problems of Online Education, Eds. Nigel Blake and Paul Standish, vol. 34, issue 1, Feb. 2000, pp. 22-25, "arrange data," p. 25.
[121] Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, p. 163.
[122] Marshall, JD (1999). Performativity: Lyotard and Foucault through Searle and Austin. In Studies in Philosophy and Education 18: 309-317, Kluwer Academic Publishers: Netherlands.

person is constituted with discourse and discursive practices; the participation in which plays a large role in the normalization of market values.[123]

In view of knowledge as being a set of competence according to a criterion of high performativity, KPS scholars see Information Communication Technologies (ICT) as bringing with them an enlarged and necessary set of skills or sociocultural literacies in the form of "sociotechnical practices."[124] These are the specific practices, values, ways of being, and doing that are associated with particular technologies that have become necessary due to the changed postmodern situation resulting in and from globalization. Gee states that:

> Such promise and perils (of the changed capitalistic, ICT, postmodern situation) ought, we believe, to become a central focus of sociocultural approaches to literacy and educationally theory in general.[125]

This "taking up" of technology in the leisure, market, and ways of being in the globalized world are seen by KPS scholars as the authentic ways of learning and doing that need to be brought into schooling so that schooling practices will be authentic.[126] These scholars then use sociocultural approaches to integrate authentic, as in valuable, sociotechnical practices that are applicable to work, and school.[127] Lankshear states that educators must, "consider the extent to which education must help prepare learners for

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[123] Ibid.
[124] Gee, J.P, Hull, G., Lankshear, C. (1996). The new work order: behind the language of the new capitalism. Westview Press: HarperCollins Publishers, p. 6.
[125] Ibid. p. 7.
[126] Lankshear & Knobel (2000). Mapping postmodern literacies: A preliminary chart, in The Journal of Literacy and Technology, Vol. 1, Num. 1, Fall 2000, p. 7.
[127] Gee, J.P, Hull, G., Lankshear, C. (1996). The new work order: behind the language of the new capitalism. Westview Press: HarperCollins Publishers, p. 7.

successful participation in such practices."[128] Thus, even if the social systems associated with globalization pre se are not viewed as inevitable, the sociotechnical practices are. These practices for successful participation are so valued as to be necessary New Literacies. "New" is used to describe those literacies that are chronologically new, unprecedented due to new technology, and those literacies new to being conceptualized as literacies.[129] New Literacies are bracketed off relevant out-of-school literacies that are coupled with schooling activities.

Lankshear et al. seem to believe that the most productive way to serve individuals, groups, and communities is New Literacies, to identify the right sociotechnical practices in the right "sort of experiences, skills, and achievements . . .(practiced by) "the right sort of people."[130] This focus on specific bracketed off sets of practices from 'successful' discursive groups is justified by the changes that globalization brings.[131] New literacies then, focuses on enabling participation into the customs and norms of a relevant performance distilled from the "features, patterns, and growing significant of social practices involving new ICTs." These features, patterns and practices are coupled with the skills and high performativity valued as having the means and access to "arrange data" to

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[128] Lankshear, C., Peters, M. and Knobel, M. (2000). "Information, knowledge and learning: Some issuesfacing epistemology and education in a digital age." Journal of Philosophy of Education. Special Issue: Enquiries at the Interface: Philosophical Problems of Online Education, Eds. Nigel Blake and Paul Standish, vol. 34, issue 1, Feb., 2000, p. 26.

[129] Lankshear, C. & Knobel, M. (2000). Mapping postmodern literacies: A preliminary chart, in The Journal of Literacy and Technology, Vol. 1, num. 1, Fall 2000.

[130] Gee, J. (2004). Situated language and learning: a critique of traditional schooling. New York: Routledge, p. 105-6.

[131] See, Lankshear & Knobel (2003). New Literacies: changing knowledge and classroom learning. Open university press: Buckingham. Also see, Bigum, C. (2003). Rethinking schools and community: the knowledge producing school, Faculty of Education, Deakin University, Geelong, Victoria, Australia at http://www.deakin.edu.au/~cbigum/plants/rethinkschlcomm.html

serve particular interests and therefore create knowledge.[132] Specific examples of New Literacies are the focus of the next section in this chapter.

In their efforts to decouple instruction, curriculum and the use of ICT (Information Communication Technologies) from the ordering of Justified True Belief, KPS scholars have sought out an alternative epistemology for education that recognizes knowledge as social production, such as, digital epistemology.[133] KPS scholars discuss the social and how social investigation relates to an underlying logic of practices associated implicitly or explicitly to a known epistemology.[134] "The 'social' character of knowledge is intrinsic to its epistemological status because the logical reconstruction of truth is always a dialogue with others set within particular collective codes and values."[135] In other words, the research question is what are the practices, logics, skills, interactions or techniques involved with knowing and producing a specific body of knowledge?

Digital epistemology is a performance epistemology. Performance epistemology is based on "The relation of knowing to the mastery of technique."[136] The performance is based on practices that reflect strategies or mastery of techniques of knowing. Digital epistemology is akin to learning through apprenticeship. Apprenticeship relies on rich local

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[132] Lankshear, C., Peters, M. and Knobel, M. (2000). "Information, knowledge and learning: Some issues facing epistemology and education in a digital age." Journal of Philosophy of Education. Special Issue: Enquiries at the Interface: Philosophical Problems of Online Education, Eds. Nigel Blake and Paul Standish, vol. 34, issue 1, feb 2000, pp. 25 –6, 38.

[133] Ibid. Moore, R. & Young, M (2001). Bigum, C. (2003). "Rethinking Schools and community: the knowledge producing school." Deakin University : Geelong, Victoria, Australia at http://www.deakin.edu.au/lit/KPS. Lankshear & Knobel (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham.

[134] Ibid. Lankshear & Knobel (2003). Also see, Lankshear & Knobel (2003). "Implications of new literacies for writing research," Keynote address to the Literacies and writing SIG AERA, Chicago, April 21, p. 23.

[135] Moore, R. & Young, M (2001). "Knowledge and the curriculum in the sociology of education: towards a reconceptualization." British Journal of Sociology in Education, Vol. 22, No. 4 Feb. p. 458.

[136] Lankshear, C., Peters, M. and Knobel, M. (2000). "Information, knowledge and learning: Some issues facing epistemology and education in a digital age." Journal of Philosophy of Education. Special Issue: Enquiries at the Interface: Philosophical Problems of Online Education, Eds. Nigel Blake and Paul Standish, vol. 34, issue 1, 2000: p. 24

expertise, sociocultural understandings of literacy, communities of experts, and appropriations of mastery that being unique serves individuals, local communities, and the society at large. In being so, the analysis of performances in digital epistemology should not be confused with authoritative procedural instructional models, such as, task analysis. Unique and local appropriation of mastery means knowing or producing knowledge emerges from and serves creative agents. This is reflected in the KPS scholars' descriptions of students' as having a point of view, having credibility, doing research, discerning or parsing through information, creating marketable knowledge products, and knowing how to proceed without guidance. This means that Knowledge Producing Schools instructional strategies of digital modes of knowing demand an expertise in development, collaboration and performance and not just content or prescribed tasks.

Sociocultural literacies are central to KPS scholars because these scholars' relate the new ways in which we are socially organize as having a relationship to the Information Communication Technologies (ICT) as use. These new ways of organizing are also crucial to accessing benefits and negotiating the consequences of the social rescaling caused by ICT. This is due to the impacts of ICT on the social conditions of knower and knowing. These social conditions are described by KPS scholars in relational terms; knowledge as distributed, a logic of disperse flexible production, knowledge assembly as greatly dependent on technology, individuals as a collective assembly involving many minds, truth made present in participatory communities, and spatial knowing.[137] Digital epistemology is used to form activity-oriented curriculum that focuses on social practices associated with the ability to deal with and benefit from these impacts.

[137] Lankshear, C. & Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, pp. 172-6.

According to, Lankshear et al. digital epistemology is applied to non-schooled emergent practices, such as, the current practices associated with the use of ICT. Their interest is on "the practices involving new ICTs – and, notably, the Internet – occurring within non-formal and non-educational sites (which have) crucial significance for how we think about knowledge and truth, and about their relationship to educational work."[138] These scholars focus on specific aspects of ICT.[139] Aspects of ICT include socially meaningful roles, groups and networks referred to as the dominant or meaningful discourse of ICT use, for example blogs. They couple these aspects with particular techniques and desired socially meaningful and economically viable outcomes connected to producing authoritative knowledge.

> (S)ome 'patterns', features and issues of social practices that have been associated with the rapid growth of electronic ICTs generally and Internet-based practices more specifically, and how these might call for rethinking epistemology in a digital age. This rethinking might conceive of epistemology in social terms as practices of knowing that reflect a range of strategies for 'assembling,' 'editing,' 'processing,' receiving,' 'sending,' and 'working on' information and data to transform 'data' into 'knowledge.'[140]

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[138] Lankshear, C., Peters, M. and Knobel, M. (2000). "Information, knowledge and learning: Some issues facing epistemology and education in a digital age." Journal of Philosophy of Education. Special Issue: Enquiries at the Interface: Philosophical Problems of Online Education, Eds. Nigel Blake and Paul Standish, vol. 34, issue 1, p. 28.

[139] See, Lankshear, C. & Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, pp. 13-19. The expertise of blogging is not only procedural but also understanding the language, use, values, ways of being, and benefit of blogging and developing a creditable online reputation. How and who's social capital tends to be extended via ICT is not discussed. Social power and related social mobility are implicitly associated with becoming fluent in various discourses and associated techniques.

[140] Ibid. p. 23, emphasis added.

Literacy and identity are mutually constituted for KPS scholars by participating in the performances associated with concrete social practices.[141] Lankshear et al. centers on a bracketed off nexus of cultural practices associated with ICT, and most notable those cultural practices that have a relationship to negotiating points of view and, knowledge production; blogs, online creditability in shape of peer review systems, access to information, synthesis, ability to disseminate, and to connect to others in complex ways. These sets of discursive practices, ways of organizing, communicating, and mindsets are encapsulated for KPS scholars within literacies and accompanying techniques which have become instrumental to the ends, in a globalized world, of economically viable, socially powerful, knowledge producers.[142] As such, it is these techniques and making connects with those who use them successful which drive what educational experiences should be.

Reminiscent of means of production, where specific means of producing quasi-determine specific relations of production and social connection, Lankshear et al. see that mastering these techniques of knowledge production may yield a specific kind of student and community; one with some control over their social environment and with increase freedoms due to increased mobility within socially meaningful discourses, economic viability, knowing the unique offerings of their particular community, along with a capability to negotiate their interest with outside expertise or influences. Therefore Knowledge Producing Schools pedagogy is based on the concrete social practices and ways of being, some of which incorporate ICT, which are seen as facilitating knowledge production.

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[141] Ibid.

[142] KPS scholars do not state that they have identified all of the necessary literacies nor that they can. Only that the analysis of new literacies is a necessary component to equipping students and communities to be able to be active, creative agents in producing knowledge. The role of educational researchers in these literacies is seen more as a broker investigating which sets of practices should be incorporated into schooling and how.

KPS pedagogy draws heavily upon and builds on the vast discussions that make up the academic work dealing with sociocultural literacies. Explicit in the KPS work outlining the analytical means by which the modalities of sociocultural complexity may be made transcontextual or distilled into sets of 'new literacies' i.e. discoursive practices, are the influences of C. Wright Mills, an adaptations of Michael Halliday's work referred to a 'genre theory,' and, James Gee. [143]

Mills's sociological imagination states that individuals must understand their social position and the larger social context to be able to change it. Mills stated that people needed not only information, and traditional literacies but;

> What they need and what they feel they need, is a quality of mind that will help them to use information and to develop reason in order to achieve lucid summations of what is going on in the world and of what is happening within themselves.[144]

The sociological imagination is a critical understanding of how our day-to-day experiences and problems relate to larger social issues. Those larger social issues can be changed when individuals in similar circumstance come to know and understand each other contextualizing their 'fate' within larger histories within which they live. KPS scholars'

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[143] See, Lankshear & Knobel (2000). Mapping postmodern literacies: A preliminary chart, in The Journal of Literacy and Technology, Vol. 1, Num. 1, Fall 2000, for the discussion of Mills, C.W. (1959). The Sociological Imagination. Oxford University Press: London. See, Lankshear & Knobel. (2003). New literacies: changing knowledge and classroom learning. Open University Press: Buckingham, pp. 14-6, for discussion of Genre Theory. See, Gee, J.P, Hull, G., Lankshear, C. (1996.) The new work order: behind the language of the new capitalism. Westview press: HarperCollins Publishers, for discussion of Gee's work. Also see, J.P Gee's work in Discourse Analysis.

[144] Mills, C.W. (1959). The Sociological Imagination. Oxford University Press: London p. 5. I agree with Mill's in principal, but I see Mill's 'quality of mind,' as the communities, social networks, and inquires in which we participate and believe we need to facilitate communities to act as publics instead of trying to influences the choices and actions of individuals.

discussions of points of view and mindsets are influenced by the sociological imagination.[145]

Genre theory, for the purposes of this discussion, sees the sociocultural practices associated with specific desirable literacies as something that can be located, and distilled down to be used explicitly in discreet educational experiences. According to Lankshear & Knobel,

> their underlying premise was that certain social groups and their characteristics genres enjoy more power than other groups and their genres. They associated social power with mastery of genres, which, they believe, could be taught and learned under classroom conditions.[146]

James Gee further developed the idea of sociocultural practices associated with discourse groups as more or less powerful literacies.

To Gee "being literate means being able to use the 'right' language in the 'right' way within a discourse," that is, fluency.[147] Power denotes, for Gee, how literacies are used and what literacies can do. Knowledge is a power that resides in things. Gee states,

> We can and should ask how much knowledge resides in a family, an organization, a social practice, a particular technology, a community, a culture or a nation.[148]

Gee continues stating,

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[145] Mindsets "relate to how space is constructed and controlled in terms of values, morals, knowledge, and competence." See, Lankshear & Knobel (2000). Mapping postmodern literacies: A preliminary chart, in The Journal of Literacy and Technology. Vol. 1, Num. 1, Fall 2000, p. 7.
[146] Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, p. 14.
[147] Ibid. p. 13.
[148] Gee, J.P, Hull, G., Lankshear, C. (1996.) The new work order: behind the language of the new capitalism. Westview press: HarperCollins Publishers, p. 6.

> Knowledge then, is like a potential energy in physics, energy that can be released in various forms and for various purposes. . energy that resides in individuals, groups, practices, technologies…we can define knowledge, like physical energy in terms of the amount of work that it can be used to produce.[149]

For Gee, power is knowledge residing in things that can be activated. This is very similar to how capital, economic, social and embodied, is described, in terms of what it can activate in specific events. Here with Gee the energy of activation resides as knowledge in people, groups, technology and practice.

Gee's work is influenced by Basil Bernstein. Bernstein has influenced Gee's perspective by helping him see that differences in performances correlate with language and associated shared assumptions about context.[150] For Bernstein this is 'codes,' for Gee it is discourse. A code was more or less restrictive based on the range of performances it would facilitate – much like Gee's fluency. Elaborate codes are less restrictive, facilitate more performances, are related to social positioning, and are described as having access to more than one code. Elaborate codes are akin to what Gee describes as bi-discursive, that is, fluency in at least a primary and secondary discourse.[151]

Primary discourse describes our most intimate networks of family, friends, and community which serve to shape who we initial are in society at large. Secondary discourses are the organizations, institutions, and work-life related areas of activity we

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[149] Ibid. p. 6-7, emphasis in the original.

[150] I am in agreement with this, my concern, to be develop later, is when the results of social practices are dis-embodied, meaning, decontextualized from the embodied, local situations from which they are defined and shaped. To believe that similar cultural experiences, regardless of time, place, and bodies instantiate semi-universal dispositions or access to resource yielding congruent social benefits in all bodies is the fallacy of a social-body/place dualism as found in the educational taxonomies of Bloom and Gagne.

[151] See, Mutch, A. (2003). "Communities of practice and habitus: a critique," in Organizational Studies, Vol. 24, No. 3, pp. 383-401, May-June.

participate in. Power, for Gee, is an understanding of discourse and how discourse constitutes and positions us in society.[152]

Taken together these various discussions deal with how individuals see themselves in view of the larger social context. The ability to produce "authoritative" knowledge is seen by KPS scholars as the ability to be 'fluent' or 'native' in a specific discursive group.[153] Fluency means participation in specific ways of seeing, social practices, know-how, and interactions actors are socialized in.[154] Actors are socialized, not explicitly taught, into their fluency with specific tools, concepts, perspectives, and frames of reference that serve the discoursive group(s) of which they are a part and acquire benefits from.[155] These KPS scholars seek to demystify literacies' connection to discourse groups and specific Information Communication Technologies to create authentic instructional opportunities by embedding students and instructional activities within the networks of practice associated with a given working expertise. Discourse is seen as being,

> composed of ways of talking, listening, reading, writing, acting, interacting, believing, valuing, writing, and using tools and objects, in particular settings

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[152] See, Lankshear, C. & Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham pp. 13-15. It is interesting to think for whom this is a definition of power. Usually in discussions of power those with it are not very aware of it in a social sense, much like, culture and history. Usually those acutely aware of social power, culture, history, and status are those not in power.

[153] "Authoritative" means many things in different contexts. What I mean here is knowledge or ways of knowing that have some influence with powerful groups, has some economic or cultural value, or demonstrates a 'fluent' persons acceptable contribution to a dominant discourse group In a general way KPS scholars are talking about mobility or social capital in terms of the ability to perform specific social practices.

[154] See, Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham. Also see, Gee, J.P, Hull, G., Lankshear, C. (1996). The new work order: behind the language of the new capitalism. Westview Press: HarperCollins Publishers.

[155] The position of this dissertation is that fluency or native performance of discourse practices may be better understood as embodied habits which maintain durable identities, and way of being, acting, responding to/in the world.

> and at specific times, so as to display or to recognize a particular social identity.[156]

It is in the participation of discourse that we acquire and learn to recognize specific social selves and ourselves.

Learning then "is a process of entry into and participation in a discourse," and the focus of education "should be on social practices and their connections across various social and cultural sites."[157] Learning in this view involves formation of new identities, ways of seeing, and specific know-how depending upon the gap between the individuals native discourse group(s) and desired fluency. Thus, the KPS scholars looks to, in forming their pedagogy, expert insiders' practices to develop students' capabilities, and relationships between schools, communities, and industry to develop resources of expertise, and local repositories of knowledge. Sociocultural practices as New Literacies form the analytic components of KPS scholars' pedagogy.

New Literacies

Since KPS scholars look to sociocultural literacies the things they talk about to develop curriculum are distinctions of discourse groups. Literacies are distinct social practices of specific social spaces and groups. Distinctions are made for analytic purposes since sociocultural literacies cannot be distilled out. Mindsets, literacies, POV, and bi-discursiveness are all distinctions that intersect with each other, and all work together to produce new literacies.[158] These "new literacies" are in response to the deep incursion of

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[156] Gee, J.P, Hull, G., Lankshear, C. (1996). The new work order: behind the language of the new capitalism. Westview press: HarperCollins Publishers p. 10.
[157] Ibid. pp. 6,15.
[158] Literacies is sometimes used to describe capabilities with material things i.e. tools, such as the Internet. Literacies are also used as a broader term of abilities to produce things with necessary material and immaterial things.

ICT into everyday routine," in other words, the changes made more visible by the digitization of everyday practices. [159] KPS scholars use 'new' to describe those literacies that are chronologically new, unprecedented due to new technology, and those literacies new to being conceptualized as literacies.[160]

It is clear that KPS scholars see literacy in all its forms as sociocultural, that is, social practices embedded in discursive groups distributed across multiple sites, which "form our ways of being in the world."[161] There are many 'ways of being in the world' and any one person is, in reality, a network of many connections and interdependences to many sets of social practices and social identities. But even though we are distributed as social actors we are also excluded for specific parts of networks or differentially have systematically and locally different benefits and consequences.

Literacies contribute, helps constitute, maintains, and forms identities, capabilities, directions for action and are "value and belief laden practices carried out in specific places and at specific times."[162] Social practices and identities constitute discourse were as literacies serve to maintain discoursive groups. Since literacy cannot be distilled from the social practices in which they are embedded KPS scholars strive to make visible or semi-formal the "social character of knowledge."[163] To make legible via "descriptive

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[159] Ibid. p. 132

[160] See, Lankshear & Knobel (2000). Mapping postmodern literacies: A preliminary chart, in The Journal of Literacy and Technology, Vol. 1, Num. 1, Fall 2000

[161] Ibid. p 3. Also see, Beck, U. (1999). World Risk Society. Blackwell Publishers: MA

[162] Gee, J.P, Hull, G., Lankshear, C. (1996). The new work order: behind the language of the new capitalism. Westview press: HarperCollins Publishers, p. 3.

[163] Moore & Young's social realist approach to knowledge seems to have influenced the development of KPS pedagogy and is cited by both Bigum and Lankshear. Moore & Young (2001). "Knowledge and the curriculum in the sociology of education: towards a reconceptualisation," in British Journal of Sociology of Education, Vol. 22, No. 4, p. 458. As stated by Gee, "We can define knowledge, like physical energy, in terms of the amount of work that it can be used to produce." [Gee, J.P, Hull, G., Lankshear, C. (1996) p. 7] This is an example of a common frame in education and business that interprets all human activity as a kind of work, and that work is the quintessential defining human capacity. See, Stone, A. R. The war of desire and technology at the close of the mechanical age, MIT press: Cambridge. Interesting to note in Stone's

sociological accounts" the forms of learning and "authentic non-scholastic social practices" that seem to possess the greatest influence, benefit, and economic viability. New Literacies are to make visible those sets of practices that have the greatest potential for authoritative or legible knowledge production.[164] These sets of practices belong to specific, usually powerful, discursive groups and are identifiable aspects of social practices produced by a specific group.[165] To develop instructional opportunities KPS scholars analyze ways of seeing, tools, and meta-understandings.

Ways of seeing describes how experts or specialists see things. For example, how a physicist sees 'force,' a mathematician sees 'typography,' or an artist sees 'color.' Perspectives or ways of seeing are refered to by KPS scholars as mind-sets. Knowledge handling tools' are techniques associated with a specific capabilities or literacies. These are the material and nonmaterial things experts use to produce their products. These KPS scholars believe that students must discover and use tools in collaboration with others to develop expertise. Meta-understanding is the conceptual and critical understanding of how discourse groups are produced, have histories, conflict, and connect. Meta-understanding serves individuals and communities, points of view and being bi-discursive are examples.[166] I would like to further clarify the concepts and language used in KPS scholars' pedagogy to offer some concrete examples of how mind-sets, ICT techniques,

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discussion it is play that facilities complex inquiry and it is play that those in power have the social capital to engage in.

[164] See, Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, pp. 167, 176. I say authoritative or legible due to the fact that some of the examples of knowledge production KPS scholars are attracted to are inspired by business and cyber-elites and are therefore connected to economic viability or traditional cultural ethos. By legibility I mean social practices that serve to get 'air play' for specific non-mainstream ways of thinking or values. For example, social practices usually associated with activism.

[165] See, Gee, Hull, Lankshear (1996.) The New Work Order: behind the language of the new capitalism, Westview Press: HarperCollins Publisher. Also see, Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham

[166] Ibid. Gee, Hull, Lankshear (1996), p. 160.

points of view, and bi-discursiveness play out in Knowledge Producing School curriculum as 'New Literacies.' This discussion serves to not only show how KPS scholars envision translating sociocultural literacies in more universal, semi-formal or legible forms to serve pedagogy and curriculum, but also were these scholars see the potential for Knowledge Producing Schools to contribute to larger social change as a result of creating knowledge producing students and communities.

Literacies for KPS scholars are functional; finding one's way around, and being able to negotiate within a specific social system, in other words, being fluent in a discourse group. Tools, practices, and ways of thinking are inseparable. If tools are approached without the correct, expert or 'insiders' point of view and the kinds of thinking they promote they will be used inappropriately.[167] Specific subjectivities, values, and ideologies are as important as the physical things done with material tools. Ways of thinking refer to 'mind-sets,' which "relate to how space (social space and the tools associated with that space) is constructed and controlled in term of values, morals, knowledge, competence, and the like."[168] Knowledge Producing Schools scholars use examples from business, cyber-elites, and cyber-activism to implicitly fill out the preferred 'mind-set.' The archetype of the preferred 'mind-set' understand the world is radically different due to the operation of ICT, they are comfortable with an accelerate pace of change, developments of new technologies, social and economic shifts, they are aware of discourse as socially constructed and can be critical of powerful discourse while also being economically viable as knowledge producers. Flexibility and adaptability are primary requisites. For example,

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[167] Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham p. 62.
[168] Lankshear, C. & Knobel, M. (2000). Mapping postmodern literacies: A preliminary chart, in The Journal of Literacy and Technology, Vol. 1, Num. 1, Fall 2000 p. 7.

the literacies associated with the peer review system of ebay is seen by KPS scholars as ideological because it directs how one should act in the specific social space of ebay.[169] Following are some of the main examples of New Literacies discussed by these scholars.

Two of the New Literacies examples are scenario planning, and Memeing. Scenario planning is the practice of building scenarios around specific questions about the future.[170] Scenario planning is not an attempt to predict the future but to direct action and develop a proactive stance giving a large range of possible choices about future situations. "Creating scenarios requires decision-makers to question their broadest assumptions about the way the world works so they can foresee decisions that might be missed or denied."[171] Disrupting the traditional ways problems are viewed is thought to facilitate new ways of thinking about problems challenging the status quo.[172]

Memeing is of interest to KPS scholars because it is a "powerful meta-level literacy."[173] Meta-understandings and meta-level literacies are those understandings and literacies that serve in the goal of understanding how various discourses have been constructed, conflict, and tend to produce particular ways of thinking.[174]

> Meme: (pron. 'meem') A(re) contagious idea(s) that replicates like a virus, passed on from mind to mind. Memes function the same way genes and viruses

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[169] Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. OpenUniversity Press: Buckingham.

[170] Scenario planning has a military and corporate history. Peter Schwartz, usually associated with scenario planning, is a previous CIO, chairman and founder of GBN (Global Business Network), and has headed scenario planning efforts for corporations such as Royal Dutch/Shell: http://www.gbn.com. We will see something kindred to but much richer than scenario planning in Dewey's description of deliberation in chapter 2.

[171] Bigum, Chris (2003), "Scenario Building notes and working papers:" http://www.deakin.edu.au/~cbigum/plots/newlits/scenario/workpapers.html

[172] Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham p. 25.

[173] Ibid. p. 37.

[174] Gee, Hull, & Lankshear (1996). The New Work Order: Behind the language of the new capitalism. Westview press: HarperCollins Publisher, p. 161.

> do, propagating through communication networks and face-to-face contact between people. The root of the word "memetics," a field of study which postulates that the meme is the basic unit of cultural evolution. Examples of memes include melodies, icons, fashion statements and phrases.[175]

Students' with mature meta-level capabilities and understandings are "philosophers-historians-ethnographers-sociologists of knowledge in institutions and in society as a whole."[176] Memeing is seen as having activist potential as a literacy because it is based on the idea of self-generating 'contagious' ideas to replace and confront the ideas we do not like in society, at large. Examples of successful memes are cyborg, global village, or digital divide.[177]

A majority of the examples discussed involve many-to-many online communications, online repositories, online and offline alternative social spaces, and cyberactivism in the form of cultural jamming. [178] These examples are mostly made sense of as literacies that encourage the development of a point of view and support more critical

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[175] See, http://memex.org/welcome.html. The idea of Memeing is commonly associated in cyber-culture with avid Bennahun who has a Meme website and newsletter. Recently, Knobel (2005) has been developing her discussion of memes, via Richard Dawkins, as it relates to new literacies, see "Memes, literacy and affinity spaces: Implications for policy and digital divides in education," Conference paper presented to the "Policy Options and Models for Bridging Digital Divides" Conference Global Challenges of eDevelopment Project, March 14-15, 2005 http://www.geocities.com/c.lankshear/memes1.html.

[176] Gee, Hull, & Lankshear (1996). The New Work Order: Behind the language of the new capitalism. Westview press: HarperCollins Publisher, p. 161.

[177] Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham p. 37 [Donna Haraway's cyborg, Marshall McLuhan's global village, the Clinton administration's digital divide.] It is of interest to me that differences between groups in social capital, power, interest and status is not explicitly discussed in Meme.

[178] The idea of safe haven networks from which groups can conduct campaigns is not new to ICT. Two factors allow ICT to be a social space of cyberactivism; non-hierarchical all channel networks where many people can connect to each other, and the provision of relatively safe and detached social places where many people can confront hierarchies see, Halavais, A.M.C. (2001, unpublished dissertation). "The Slashdot effect: analysis of a large-scale public conversation on the world wide web," University of Washington. Individual or small group problems can quickly become social issues on the web, for example 01/14/04 - Rob Gifford, NPR, "China turns to the web," http://www.npr.org.

mindsets. It is in light of points of view that KPS scholars make Blogs meaningful. [179] Blogs (web log) usually serve the personal communications of an individual or small group to the Internet public(s) or serve a larger community, organization, or group. Most blogs are many-to-many communication. In other words, blogs serve as a centralized location to consolidate news, resources, information, participant's comments and ways to contact each other. Point of view, much like Mill's sociological imagination, is a position from which to make sense of events, information, and society. "Point of view is central to what blogging is about," because blogging can support and enable distributed affinity groups to develop and maintain Points of view within and across weblogs. [180]

Mindsets are identified paradigms of the operating values for information/cyberspace.[181] As noted earlier, mindsets "relate to how space is constructed and controlled in terms of values, morals, knowledge, and competence," the example

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[179] See, Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. pen University Press: Buckingham pp. 38-40. Also see, Halavais, A.M.C. (2001, unpublished dissertation). "The Slashdot effect: analysis of a large-scale public conversation on the world wide web," University of Washington. Currently, blogs are moving to wiki. The wiki, from the Hawaiian word for "quick," is an interactive blog that can be changed by anyone. Wikis creating freewheeling, collaborative communities: participants can edit one another's work, bounce ideas around or link to infinite other Web sites. Washington Post, Friday, March 11, 2005; Page B01: http://www.washingtonpost.com/wp-dyn/articles/A25305-2005Mar10.html

[180] See, Lankshear, C. and Knobel, M. (2003). "Implications of 'New' Literacies for Writing Research," AERA, Chicago, April 21. Keynote address to the Literacies and Writing SIG http://www.geocities.com/c.lankshear/key2003.html p. 8. Also see, http://geocities.com/c.lankshear/ifle2003.html p 20. Affinity groups in KPS literature are mostly made sense of as 'like minded' narrow bandwidths of conversation and the individual desire for confirmation of self-identity, i.e. an ability, via mind set, for social critique and change. See, Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, pp. 148-50. Knobel also talks about Gee's concept of "affinity spaces" in her recent work with memes. See, Knobel (2005). "Memes, literacy and affinity spaces: Implications for policy and digital divides in education" Conference paper presented to the "Policy Options and Models for Bridging Digital Divides" Conference Global Challenges of eDevelopment Project, March 14-15, 2005: http://www.geocities.com/c.lankshear/memes1.html. My concern is that issues of affinity spaces and groups are divorced from issues of public(s). With KPS/New Literacies scholars the implementation of social and media critique resides largely in the individual.

[181] Lankshear & Knobel (2000). Mapping postmodern literacies: A preliminary chart, in The Journal of Literacy and Technology, Vol. 1, Num. 1, Fall 2000, p. 7.

given, was the ebay peer review system.[182] The attraction to these new mind set literacies, such as, e-zines, multimediating, Adbusters, and communication guerilla (descriptions to follow), is the appropriation of technology, the awareness and critiques of dominant culture, the active response and grassroots organization to change society. Mind set literacies are attributed by KPS scholars to the creative agents involved. In other words, the adaptive potential of individuals and the techniques associated with them. New Literacies and the use of ICT associated with those literacies, KPS scholars believe, will amplify the opportunities and capacities for people and communities to actively respond to all forms of dominant culture.

E-zines are online and conventionally printed alternative publications. [183] For example, one e-zine "The lady in the radiator," is "an art and literature zine produced by a bunch of kids to counteract the soul draining boredom of suburban life."[184] E-zines are viewed by KPS scholars as products of active knowledge-culture producers who are creating alternative and political publications. Overall the content of e-zines deals with non-mainstream thought, value, concerns, lifestyles, and discussions. Many creators of conventionally printed e-zines trade among themselves or have small fan followings. The Internet has opened e-zines to a larger audience.

Adbusters is a group of like-concerned art activist, writers, graphic designers, ITers, political-minded citizens, and just about anyone concerned with political, corporate, environmental, and media issues. Adbusters engages in activism and choices described as cultural jamming. Cultural jamming is the act of jamming or disrupting the consumer culture in public spaces, and in public ways. Cultural jamming utilizes parody ads,

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[182] Ibid. pp. 7-8.
[183] E-zine archive http://www.etext.org/Zines/.
[184] http://www.etext.org/Zines/TLITR/radiat25.html.

disruption of symbolic or icon images, provision of alternative products, and political action. The idea is to disrupt common assumptions and encourage critical evaluation.[185] Examples of cultural jamming are the American flag displayed at Times Square with corporate logos instead of stars, 'buy nothing day,' which occurred internationally, where citizens were encouraged to buy nothing all day and some stores closed to support the effort, and the 'reclaim public space day,' (2005). Reclaim public space day is a week boycott of TV along with the distribution of universal remote controls to turn off public TVs. Adbusters also offers Antipreneur Blackspot alternative products. These products, for example clothing or shoes, are environmentally sound and labor conscious products, which display the anti-logo of a black circle.[186]

Communication guerillas disrupt culturally symbolic or iconic images, expectations of public spaces and/or events, and appropriate dominate, normative symbolic meaning/action for their own use.[187] Communication guerillas, much like Adbusters, are engaged in cultural jamming. Some examples of communication guerillas includes but is not limited to:

Hacking – infiltration and manipulation of systems

Academy hacking – insurgent intellectuals conducting academic work outside the scope of academe

[185] See, Lankshear, C. and Knobel, M. (2003). "Implications of 'New' Literacies for Writing Research,"AERA, Chicago, April 21. Keynote address to the Literacies and Writing SIG http://www.geocities.com/c.lankshear/key2003.html p. 5.
[186] Adbusters: http://adbusters.org/home/, Adbusters Vol. 12 No. 6 Nov/Dec 2004 #56, Adbusters Vol. 13 No. 2 Mar/Apr 2005 #58, Cultural jammers network: jammers@lists.adbusters.org.
[187] The term communication guerilla is a reference to guerilla warfare and the role information plays in it.

Subcultural bricolage – the refunction by subcultures of symbolic action/symbols usually associated with the dominant, normative culture. For example, 'voguing' by African-American New York drag queens. [188]

Slashing – appropriations of mainstream stories. For example, homoerotic Kirk/Spock stories in e-zines.

Neo-situationist demonstrations – Appropriation of 'public space' such as dance parties in ATM lobbies.[189]

It is clear that KPS scholars are attracted to literacies that generate activist and/or critical activity and ways of thinking. KPS scholars state that they" have aimed to span a wide range in terms of the cultural politics of new literacies" with a "particular emphasis to practices that adopt an active or critical stance."[190] The social justice and equity hopes of KPS scholars not only reside with New Literacies but also with the social opportunities ICT and globalization seem to afford. Information Communication Technologies has contributed to,

> times of great flux (in which) maybe some of the larger meanings that shape our lives can be renegotiated. New identities and new literacies are being developed and in the flux of changing identities and meanings maybe such things as 'global,' 'local,' 'quality,' and 'best' can be renegotiated.[191]

Thus, KPS scholars see the reconstruction potential, or possibilities for social change as largely residing with individuals and the potential plasticity of social structures in times of

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[188] Unfortunately co-oped by Madonna who made a lot of money off of 'voguing.'
[189] Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham pp. 44-45.
[190] Ibid. p. 37.
[191] Gee, Hull, Lankshear (1996). The New Work Order: behind the language of the new capitalism, Westview Press: HarperCollins Publisher p. 158.

great change. The overarching logic of KPS scholars' pedagogy is that by switching the focus from content and subject to discourses "connected to work, or to the public sphere more generally (e.g. government), we can get [educational] goals that stress thinking like members of those discourses, using tools from them, engaging in social practices akin to theirs, and critiquing those discourses in relation to others."[192] Therefore by assimilating the mindsets and tools of powerful discourse groups, individuals can change those groups or form new social spaces that have similar social benefits.[193] "For all the very real challenges they face, bi-discoursal people (people who have or are mastering two contesting or conflicting discourses) are the ultimate sources of change, just as bilinguals very often are in the history of language."[194] Being bi-discoursive, with a meta-understanding of what discourse is and constitutes, is employing a second language. "Employing a secondary language as a meta-language for understanding, analyzing, and critiquing other discourses and the ways they constitute us as persons and situate us within society" becomes a powerful literacy.[195] "Practicing (this) powerful literacy, so defined, can provide the basis for reconstituting our selves/identities within society."[196] Thus, the disposition of individuals through fluency in various and often-conflicting discourses are

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[192] Ibid. p. 163.
[193] For KPS the intersection of identity and mindsets can serve to generate innovative possibilities. For example, Amazon.com founder Jeff Bezos thought differently about ICT. Instead of conceptualizing ICT as doing current processes more efficiently Bezos saw ICT as a distinctly different way of being and so thought about using ICT in innovative ways. See, Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham p. 64.
[194] Gee, Hull, Lankshear (1996). The New Work Order: behind the language of the new capitalism, WestviewPress: HarperCollins Publisher p. 14.
[195] See, Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham p. 13.
[196] Ibid.

the actor(s) of change or reconstruction in the perspectives, worldviews, core values and identities of discourse groups.[197]

Some concerns with KPS scholars' response to Justified True Belief

Knowledge production and social transformation tends to be articulated in the pedagogy developed by KPS scholars as an individual act. These KPS scholars largely ignore the role of the body in inquiry and how the customs of culture act upon it. My concern is that the pedagogy developed by these scholars is not as far from Justified True Belief as they believe, and as such, reifies an emphasis on the individual. A fuller critique in this regard is presented in the conclusion of chapter 2. My intention here is the present some of my general concerns with KPS scholars' response to Justified True Belief for later development in chapters 2 and 3. New Literacies makes explicit some of the current operations involved in the social productions of knowledge but keeps implicit the subjective local negotiation, definition, and terms of the conditions and consequences of producing knowledge i.e. social inquiry. Also developed in chapter 2 are the issues of New Literacies as devolving into disembodied performativity. For example, the right practices with the right people ignore issues of literacies as authoritative congealed means or operations that are assumed transferable, the embodied capital, and social ties associated with use and benefit, the unique perspectives of participants, and the non-linguistic, non-discursive, or pre-discursive boundaries present for specific bodies.

The political and social context of literacies, techniques, ways of thinking or perspectives, i.e. logical forms, cannot be opened up without a community able to investigate the particular consequences to them involved in accepting specific logical forms. The distinction I am making here is that communicative situations, specific

techniques, perspectives or technologies are means by which a community may engage in reflective and reflexive practices that generates knowledge production, deliberation, and other forms of action. The former, means, are explicit in New Literacies, the latter, communal inquiry, is implicit in the Knowledge Producing Schools projects and case studies I have described as communities of inquirers. Those means are not ends in and of themselves – there is no meaning outside human activity, which is both instrumental and consummatory.[198] Communities must be able to investigate and know what consequences are desirable to them, which requires the negotiation of agency. So the processes by which we nurture rational deliberation and decide upon action as a group must be brought to pedagogical light.[199]

The Communities of inquirers that I see as implicit in Knowledge Producing Schools' case studies reflects the untapped educational possibilities in the emphasis on how we, as humans, come to know how to act on what we know, i.e. agreement of action. Agreement of action is not in and of itself emancipatory, though an understanding of the social processes that make it up can be. However power laden or equitable agreements of action are in any particular event or history has to do with how and with what social resources any given community of stakeholders can ascertain and make visible to the larger group consequences and benefits particular to their interests; this is in fact how Dewey defines a public, which is developed in chapter 3.[200] Key here is that reconstruction is not an individual but communities in negotiation or conflict with other communities. Furthermore, agency is embedded in the means to negotiate. Thus, embodiment and

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[198] Dewey, J. (1958). Experience and Nature. Dover: New York p. 202.
[199] Ibid. p. 202. As Dewey says, "Shared experience is the greatest of human goods."
[200] Dewey, J. (1927/ 1991) The public and its problems. Swallow Press: Ohio University Press, pp. 15-6.

community are symbiotic and self-similar to public(s); in other words, meaning as socially emergent and social inquiry are public(s) of scale.

As publics, which emerge from social inquiry, identify themselves and develop coalitions and social resources they too could participate in the economy-politics-decisions of scale. That the leveling of the playing field necessitates public(s) is of significance to educators who wish to support democratic processes. Public(s), communities, groups, and people have some agreement in associated behavior; i.e. have some agreement of action.[201] Key to my concerns about how schooling can assist democratic practices is how in making the agreement of practices explicit the political aspects of negotiating problems, solutions, benefits and consequences become transparent, and as such, facilitate the dispositions involved in being and acting as a public. To do so, students must be knowingly, reflectively, and explicitly involved in social inquiry and the creation of related resources. Crucial, in the political sense, is that the agreement of action or co-designation is explicit and the consequences of action are negotiated between actors who have some agency in the process. Agency here means the means and support to make visible and meaningful how consequences of action particularly affect them – a role schools can be especially equipped to play.

The educational importance here is that for a group, community, public to organize on its own terms without reliance on authority, hegemonic values, or pre-constructed models of resistance, the agreement of action must stem from social inquiry and action steeped in the negotiation of the particular subjectivities of a specific community. Pedagogy of critical social inquiry, such as community of inquirers, with a focus on the

[201] Ibid. p. 179 "It is communication; the establishment of cooperation in an activity in which there are partners, and in which the activity of each is modified and regulated by partnership To fail to understand is to fail to come into agreement in action."

negotiation of problems and solutions may better equip students and their communities to act on what they know, negotiate agency, and to organize and managed sustainable communities and communal knowing.

Agreement of action then directs our attention to the body politic, and what is entailed, biologically-socially-politically, in agreements of action. [202] The body politic here is focused on community as an organic whole engaged in social arts; our ways of being together in the world, listening, speaking, sharing and understanding to make meaning of our embodied experiences and to agree on action to fulfill desires, negotiate consequence, and retain benefits. In many ways, the body politic is reminiscent of Bigum's discussion of point of view, a community knowing about itself to negotiate with the world, at large.

As such agreement of action directs our attention to the body, what meaning is, how meaning emerges and is maintained in a culture. Associative action and the construction of knowledge require the making of something, i.e. some object, common. This means, as chapter 2 develops, that not only are knowing and being distributed but that there is a self-similarity from the limited community of two or more intentional centers of action in associative action to family, group, community, and publics. Discussed first in chapter 2 are the biological and social matrices of inquiry or continuity. After which chapter 2 discusses how habits maintain cultural traditions and the role of social inquiry and habits in modifying inherited practices and meanings. Chapter 3 continues chapter 2 into public(s), the location, regulation and negotiation of consequence.

Chapter 2: What does it mean to know and to use knowledge?

To think about what it may mean to develop a basis for communal literacies we must revisit the conditions that constitute embodied knowing. In chapter 1 I presented and discussed the pedagogical frame of Knowledge Producing Schools. In this chapter I turn my attention to how knowing emerges from and is distributed in social structures, bodies, and place. This distribution has important implications for KPS scholars' goals in that it directs our attention to the requirements of an explicit pedagogy of public social inquiry.

In chapter 2, I turn my attention to the body. I illustrate how the role of the body and its emotions in meaning, action and perception is relevant to the goals set out for Knowledge Producing Schools. KPS scholars' acknowledge that our participation in our culture inscribes our bodies- they focus on literacy as discursive – but their pedagogy is not informed by what it means to have bodies readily brought to yield to inscription.

This chapter introduces Dewey's thinking about the creation of significant meanings, and his theory of social inquiry. Within Dewey's work is a related but very distinct vision from KPS scholars on how public schooling and the appropriation of public schooling as a resource for local community can play a part in socio-political reforms, including educational reform. This chapter revisits the previous discussion of reconstruction for KPS scholars' pedagogy as located within individuals. How KPS scholars articulate reconstruction, operations, and the form of Lankshear et. al's New Literacies as operations will be developed later. I then introduce aspects of the alternative Deweyan reconstruction. Dewey's theory of reconstruction is biologically-socially based with a deep respect for pluralism, contextualism, and operational inquiry. This will be further developed in chapter 3. Chapter 2 looks into the processes of forming pre-

dispositions as embodied biological habits, and how these pre-dispositions frame action within Dewey's theory of inquiry and warranted assertability. Based on this, chapter 2 draws several conclusions crucial for reconstruction from the conclusions of KPS scholars. These conclusions will be developed in later chapters on how public(s) serves to structure, facilitate, and maintain not only the ability for transgressive action in the pursuit of shared goals, but also who is able to engage in such reconstructive action.

Brief introductory comparison of KPS and Deweyan reconstruction

I briefly defined my usage of the term reconstruction in the introduction, but will discuss it here more fully since reconstruction is a key concern in the critique of KPS developed later in this chapter. By reconstruction is meant the tools, means, processes, or from which locus one assumes the social possibly of an intentional, durable redirection, reconfiguration, or evolution of socially consequential events, terms, meanings, values, beliefs, institutions, identities, customs, or traditions. Ideally, reconstruction works toward social amelioration, but in and of it self, is not good or bad. That judgment is left to the analysis of the social consequences of the reconstruction itself. What I ask of KPS scholars is: by what manner of reconstruction can we enjoy the ends, social changes offered in Lankshear et al. digital epistemology. Are the reconstructive means, KPS pedagogy relies upon, i.e. New Literacies, able to create the hoped for changes?

Deweyan reconstruction humanizes, by placing in associative action, all durable, albeit power laden, social creations and negotiations such as cultural traditions, customs, technology, institutions and social arrangements. The creation of the social world is humanized because these social creations are seen as emergent from, and contingent upon participation in communal, transformative co-designations, social activities, and reflections

i.e. social inquiry.[203] Inquiry, as we will see in Dewey's theory of inquiry and warranted assertability, is a transformative process, by way of selected means, to mediate and coordinate situations directed by the intentions of the inquirers that quasi-terminates in a transformed context. Deweyan reconstruction resides in the processes by which experiences are made durable and communal via significant meanings, emergent objects and resolution of problematic situations, all constituted by the social creation of meaning. Therefore the locus of Dewyan reconstruction is communal and distributed. Conversely, KPS scholars' reconstruction for their Knowledge Producing Schools, Lankshear et al. New Literacies, resides excessively within the locus of the individual.

The focus KPS scholars have on restructuring schools is important and timely. These scholars sees interdependent relationships between schools and the communities in which these schools are necessarily embedded along with these schools having repository roles for those communities. My concerns, developed in this chapter and the major themes of this dissertation, are specifically how the reconstruction developed for Knowledge Producing Schools is perceptually interior; the locus of reconstruction as an individualized subject-centered "free" will using operations, such as New Literacies, in semi-determined ways to produce knowledge. The locus of Dewey's theory of reconstruction is the transactional, co-participatory act of making meaning socially, i.e. communications, and the various ways we make meanings durable.[204]

I believe that a Deweyan understanding of habit, the socio-linguistic emergence of significant meaning, and the role of the community in meaning making and inquiry hold powerful aids for achieving the goals of the Knowledge Producing Schools effort. Dewey

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[203] Waks, L. (1999). The means-ends Continuum and the reconciliation of science and art in the later works of John Dewey in Transactions of the Charles S. Peirce Society Summer, Vol. XXXV, No. 3.
[204] Dewey, J. (1958). Experience and Nature. Dover: New York, p. 199.

focuses on reconstructive meaning potentials of individuals, communities, and situations versus what I see in Lankshear et. al New Literacies as operations at hand for, more or less, isolated atomistic individuals.[205] This is largely due to how Dewey saw individual disposition as being the incorporation of our communities customs and social practices into our biological-being.[206] The Deweyan view then is not how "individuals or collective minds form social group and customs, but how different customs, established interacting arrangements, form and nurture different minds," and what is agency in this regard.[207] That the Deweyan view is relational and communal instead of individualistic is due only in part to the acknowledgment that something like "literacies" is a product not only of the socio-cultural but instead stems largely from the more pedagogically consequential observation, that the socio-cultural, and as such communication, is naturalistic in origin and development.[208] To look into why Dewey's theory of reconstruction is described as biologically-socially based and distributed I will first exam the idea of continuity, then the processes of forming habits as pre-dispositions in the biological and social matrices.

The Biological and social matrix of inquiry

I will be using breastfeeding to contextualize the thread of Deweyan continuity from signaling and primordial meaning making to social inquiry, community and eventually, the formation of publics. Key to this dissertation is how an understanding of this thread of continuity exposes meaning, knowing, identity, and action as deeply embodied, participative co-designations of local social inquiry involving and producing social knowledge, knowledge-objects, and technologies. The thread of continuity is

[205] Operations will be defined later in this chapter.
[206] Dewey J. (1922/1988). Human Nature and Conduct: The middle works, 1899-1924, Vol. 12. (Ed.) by Boydston, J. Southern Illinois University Press: Cardondale p. 17-18.
[207] Ibid. p. 46.
[208] Dewey, J. (1958). Experience and Nature. Dover: New York, p. 168.

communication, culture, knowledge production and social positioning. Mother and child are minimal community (a family), and have many of the properties characteristic of a public. My parsing through this thread may at times be a bit stilted because I am highlighting distinctions of a dynamic behavioral processes and events. The Deweyan theory of social co-designation as the emergence and durability of meaning is present in every social transaction, custom, institution, reemergence of meaning, and self reflection we engage as adults, communities, and cultures. In my example here we have mother, infant and the object breast.

Selective attention, biological, need and desire driven, is the biological basis of something in a situation becoming salient to an inquirer. Some process of discriminating a specific feature in an emergently meaningful context occurs because that feature is a potentially relevant condition for something needed or wanted. I refer to the example I will use here as “the boobs in the room.” All mothers will tell you that breastfed children know to locate the “boobs in the room.” It is as if they feel the need to locate all possible breasts in the room. This does not seem as apparent in bottle fed babies and children. The breastfed child selectively attends first to the mother’s breasts then to all breasts. Breastfed infants go from no discernable concern with locating the breast with their gaze, to predictably locating their mother’s breasts to the habit of locating, with their gaze, all breasts in any given place they are. I experienced this with my son, almost simultaneously, not only my breasts but, other breasts became very salient to Ben. You could see, by his gaze and expressions, the object of his attention, breasts, and his satisfaction in locating

them. Ben had developed the habit of "deflecting from the rapid and roaring stream" of raw experience the human breast.[209]

Breast had become an end-in-view, an object of attention and desire by acquiring some biologically, and as such socially, based meaning, such as, food and comfort. The breast must be made salient to acquire the functionality of an object, i.e. the manageable and semi-permanent implication as sign representing food and comfort. In other words, Ben is selectively attending to breasts as an end-in-view for some biological-social reason. Contextualized by his need, Ben's actions toward the object breast will vary. For example, when very hungry he may try to latch on a nearby breast, as he did once with one family member, instead of just locating the available breasts with his gaze. He is surveying for and locating at all times the location of the life necessary object-breast. Ben perceives or attends to the breasts in the room, meaning that in some deeply embodied way he develops the second nature habit of locating or acknowledging all the breasts in the room. He does this by connecting the breasts in the room with the potential consequence he knows and relies on- his Mama's breast which provide milk and comfort. In doing so Ben is retaining a relationship, partially within himself in the form of an embodied habit, between himself and the food-giving breast in new contexts. Ben's infant selective attention to breast, from none, to mine, to all in the room, may not be cognitive in the day-to-day sense but it does demonstrate the biological forming the perceptual and the indexical connection of events that later form meaningful contexts. Indexical relationships need objects and objects are rendered by human activity that produces meaning and by doing so fulfill needs, desire, and wants. Furthermore, Ben, the fully cognitive three-year-old, is still very enmeshed in the meaning of breast.

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[209] Ibid. p. 166.

Our social abilities and communications produce participatory meanings, i.e. knowledge-objects, which are the necessary requisite stock parts for our cognitive products.[210] To attend, survey, contemplate, create abstractions, have ideals, or develop logic we must first have objects. Our social ability to make these objects is grounded in and serves the necessary fulfillments of biological-social needs, desire and wants. We are social out of necessity not choice and our social abilities arise from the specific habits, use of means, and co-designations with others we depend upon and participate with in various contexts of action.

Continuity describes the recursive, continual, symbiotic, and non-dualistic relationship between our biological experiences and needs of being in the world and the cognitive forms we later co-conduct. Simply stated, continuity means that the cognitive emerges from but is not reducible to the biological, so that our most cognitive creations, mathematics or Surrealism are emergent from human actions, relations, and interdependence in physical, natural, and social environments.[211] Thus, the origins of knowing and social inquiry are biological and communicative in nature. This is acutely important because it means that mind and body are not artificially separated into a dualism, there is no cognition separate from embodiment or social functioning. Furthermore, this means that we are what we participate in and the means we use. The first four subsections of this chapter will open-up this thread of continuity, the basic nonlinear development and continuous looping in activity from impulse to habit to the primordial making of

[210] Ibid. p. 168.
[211] See, Dewey, J. (1938). Logic, the theory of inquiry. Henry Holt and Company: New York pp. 23- 5.

significant meaning in a community.[212] To do so I will be grounding these aspects of continuity in examples of breastfeeding and parenting.

Any mother who has breastfed will tell you breastfeeding in not innate. Engorged breasts, milk production, the baby's sucking reflex and a nose shaped for the breast are innate. Mothers usually state "we" (the baby and I) are breastfeeding, more rarely a mother states "I" am breastfeeding. I believe this tendency is due to the mother's experiences of negotiating or learning breastfeeding with the baby within the specific context she and the baby find themselves. Those specific conditions range from the intimate details of the mother and baby involved to the social issues and capital (economic, cultural, and social) in which they are engaged.

Before the baby, the cultural pre-existing meaning of breastfeeding is simply that an object breast has the potential biological function of feeding the baby. For example, pre-natal breastfeeding classes provided operations, for those mother's who have access, i.e. have the capital to use specific means, to possible things to try or places to go for support if a specific 'what if' emerges in the process of trying to breastfeed her baby. Likewise, our beliefs and ideas act as operations in that they frame what or who infants are and in so doing guide our responses and actions in regards to them.

Operations are things we do in the process of implementing means. There are operations that are performed with existential material, such as expressing a breast, and operations performed with symbols or abstractions, such as Algebra or what Lankshear et. al calls "mind sets." Both regardless of being existential or symbolic refer to something being performed in existential conditions to yield possible consequences in explicit

[212] See, Ibid. Chapter 2, "The existential matrix of inquiry social."

conditions. Operations are defined in the lived conditions and particular consequences that take place in specific events. Conditions and consequences do not define operations.[213]

My belief in attached parenting framed my sense making of infants to contextualize infant action in general.[214] After the baby is born the specific conditions of the child and mother involved and the consequences specific to those conditions shape what breastfeeding means, and how both mother and child will be changed as a result of their co-designation of the breast. As two agents, mother and child, co-designate the breast to feed the child the socio-linguistic emergence of significant meaning renders from the human ability to co-designate by taking the place of the other. Together, as we see in the examples that follows, in the act of breastfeeding, and parenting, the habits, meanings, perspectives, knowing, and identities necessary to successful feed and take care of the child emerge, influenced by prior habits and continuously transformed as issues come up, transforming the human actors involved.

The power of taking Habits

Charles Sanders Peirce, the founder of pragmatism stated that "the sense of the process of learning, which is the preeminent ingredient and quintessence of reason has its physiological basis quite evidently in the most characteristic property of the nervous

[213] Ibid. pp. 14-5.

[214] Attached parenting is usually associated with the studies of the residual effects of parent attachment by Sylvia Bell and Mary Ainsworth, at Johns Hopkins University. Dr. Sears, pediatrician and author, is an advocate. Attached parenting has two basic tenets – one, a child one and younger can only express need and should be responded to. This is in response to "cry it out." Second is that children benefit from physical contact, breastfeeding on demand, co-sleeping, slings, being held, spoken to, and having their fears and emotions treated with respect, etc. Recent research has also shown the long-term effects in regard to the stress of children "crying it out." Attached parents see dependence in infancy, becoming independence in toddlers and then interdependence (versus extreme independence or lack of empathy in "cry it out" children) in adulthood. Also relevant to this chapter's example is the products or technology that have arrived with and surrounded attached parenting. See, http://www.parenting.com/parenting/experts/sears/index081601.html.

system, the power of taking habits."[215] Biologically based habits are, for Dewey, biological structures, that determine, guide, and give form to and makes possible meaningful action, cognition and emotion.[216] Habits are predispositions to action and selective ways of attending (i.e. belief, and selective attention) to the environment that are congealed into "second nature" responses that satisfy needs, desires, and wants. In other words, natural impulses are channeled and formed by second nature responses to satisfy needs and desires. "Impulses although first in time are never primary in fact; they are secondary and dependent" on habits for form and structure.[217] Habits then are part of trans-actions with the physical, natural and social environment that are modified by human actions and in turn modify humans.

As discussed in the earlier example, Ben developed the acquired habit of locating with his gaze the breasts in the room. Habits as second nature are acquired. First habits are the reflexes we come into the world with for example Ben's sucking or grabbing reflex. Sucking is a first nature reflex that is realized in a second nature functional coordination. "A babe's scream attracts the attention of an adult and evokes a response useful to the infant, although the cry itself is an organic overflow having no intent."[218] Intention therefore is distributed, it is the desire and need to use action, object, meanings and events as means for some end. The ability to form habit enables stability of some means of response that increase the possibility to repeatedly ensure an end. In learning to breastfeed both mother and infant develop habits to successfully feed that coordinate into their

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[215] Peirce, C.S. (1887-88/1992). A guess at the riddle. In N. Houser & C. Kloesel (Eds.), The Essential Peirce, Vol. 1. Indiana University Press: Bloomington, p. 264.
[216] Dewey, J. (1938). Logic, the theory of inquiry. Henry Holt and Company: New York p. 12.
[217] Dewey J. (1922/1988). Human Nature and Conduct: The middle works, 1899-1924, Vol. 12. (Ed.) by Boydston, J. Southern Illinois University Press: Cardondale p. 65.
[218] Dewey, J. (1958). Experience and Nature. Dover: New York, p. 177.

practice of feeding. Breastfeeding is a practice as KPS scholars define practice, but what we will see here, with Dewey, as this example unfolds is the embodied and emotional nature of practice ignored in the KPS/New Literacies discussions of practice.

I could use none of the breastfeeding 'hold,' due to Ben's inability to tolerate his neck being touched. The holds, or operations, that I learned in my prenatal class, such as, the football 'hold' did not work for Ben. When I tried these holds Ben screamed. This along with his weak latch in the first three weeks was, I believe, due to discomfort from the residual affects of my technologically assisted (forceps) labor.[219] I breastfed on demand, and since I could not hold Ben I placed him on a pillow and brought the breast to him. What first was painfully conscious, with false starts, adjustments and sore nipples soon became second nature. How I picked up Ben, placed him on the pillow, offered the breast, switched him to the other breast, spoke to him, touched him, or allowed him to sleep on my lap all became habits – means to an end. I developed habits; as did Ben to ensure, and make durable, successful breastfeeding. I stated with the holds or operations given to me in my prenatal class, but success involved the success of operations (symbolic and existential) in the concrete social practice involved in trying to secure the sought after consequence of feeding Ben.

This original context of successful breastfeeding became the stock parts of breastfeeding in other contexts, for example, breastfeeding while in bed, in the car, at someone's home. A rich practice of breastfeeding develops as current habits, which gelled in past successful breastfeeding, did not work in our current conditions and the problem of

[219] There is research that indicated that circumcised males have a higher incident of weakened latch during breastfeeding. I did not circumcise my son, the relevance here is that infant pain and avoidance of that pain may manifest in breastfeeding as a weakened latch and tendency to sleep more. It is an example of how complex transactional relations can become.

how to feed successfully arose again. This initiated the production of new habits to breastfeed in specific contexts, such as; the front seat of the car, while Ben was in the sling, or when Ben was ill. Thus, Ben and I developed a practice of breastfeeding and a relationship to each other. As our breastfeeding became successful and consistent our co-joint understanding of breastfeeding became rich and our selves transformed.[220] Habits are not neutral responses, they are formations of embodied habits, creating dispositions, which structure impulses into organized emotions and actions that informs not only how we respond but, make sense of others and ourselves in events. As such we influence the formation of others. This can be seen explicitly in our parenting decisions.

As a newborn, Ben was a collection of "natural" impulses, gestures and cries, needing a social context. As a dependent human infant his needs could only be fulfilled within a social context. An 'able other' needed to interpret Ben in such a way as to desire a restoration that resulted in a response to provided care for Ben in a way which secured his survival.[221] The social context of the 'able other' started before the child was born. I certainly brought a social context to my newborn in that I believed in "attached parenting." Beliefs are habits that merge judgments, views, emotions and actions forming general dispositions to act in specific ways in certain contexts. In this way habits are will and perceptions. Not a western will with a specific goal and individual, ego-conscious application of will power, or conscious choice to chose an attitude but an embodied,

[220] Dewey J. (1922/1988). Human Nature and Conduct: The middle works, 1899-1924, Vol. 12. (Ed.) by Boydston, J. Southern Illinois University Press: Cardondale, p. 18.
[221] Dewey, J. (1938). Logic, the theory of inquiry. Henry Holt and Company, New York pp. 26-7.

distributed, second nature, pre-disposition to respond to a specific context in a concrete way, which has particular consequences.[222]

That I believe in Attached Parenting means that I have an acquired pre-disposition or a compelling need, identity, and emotional investment to make sense of Ben's experiences and needs from a specific standpoint. As Dewey states,

> They [the infant's cries or gesture] are not in themselves expressive. They are constituents of a larger organic condition. They are facts of organic behavior and are not in any sense whatever value-expressions. They may, however, be taken by other persons as signs of an organic state, and, so taken, qua signs or treated as symptoms, they evoke certain responsive forms of behavior in these other persons. A baby cries. The mother takes the cry as a sign the baby is hungry or that a pin is pricking it, and so acts to change the organic condition inferred to exist by using the cry as an evidential sign.[223]

There is no duality between what individuals create in action, such as, who my infant is, and the communal values, beliefs, and customs they embodied through disposition that guides action. Will, value, and belief are embodied pre-dispositions. My pre-disposition framed how I interpreted Ben's cries and gestures and in turn directed my actions toward Ben. Though the means at my disposal to act from that standpoint are directly related to my available social and material technology, capital and position, my empathy for Ben, informs how I desire to make sense of and respond to events in regards to Ben. That

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[222] Dewey J. (1922/1988). Human Nature and Conduct: The middle works, 1899-1924, Vol. 12. (Ed.) Boydston, J. Southern Illinois University Press: Cardondale pp. 22-3. Also see, Bordo, S. (1987). The Flight to Objectivity: Essays on Cartesianism and Culture. SUNY Press: New York, pp. 77-84. What is important here is that the western will originates from the Cartesian doctrine of will, which shuns the body and its needs – it in fact implies you are they way you are because you choose it – will is chosen attitude with little or no self-reflecting applied to a neutral social matrix.

[223] Dewey, J. (1939/1988). Theory of Valuation. In Jo Ann Boydston (ed.) John Dewey: The Later Works, Volume 13 (189-251). Carbondale: Southern Illinois University Press, pp. 197-198, emphasis mine.

empathy also informs the emotional angst I experience if I cannot fulfill how I desire to respond to Ben. This in turn directs my responses and actions, which are based in a belief that Attached parenting is correct and beneficial to Ben's development. Human will in the Deweyan sense, "lives in the muscles," and emotion, not "the mind."[224]

Benjamin had very little or no social context to bring to his infant experiences, except maybe a prenatal response to my voice, and as such his habits were constituted in large part by my response to his impulses and first nature reflexes as an infant. Ben acquires many of my habits by how I respond to him. His impulses became organized into dispositions according to our transactions that transform Ben and his environment, in which I, his mother am embedded and transformed.[225] How my response to Ben constitutes his habits can be explicitly seen in breastfeeding. Ben cries or acts agitated and I respond with the desire to give him the breast on demand based on my beliefs of good parenting; but exactly by what means successful breastfeeding occurs and how the co-joint understanding of that success is co-designated between Ben and myself depends upon the explicit conditions we finds ourselves in.

We depend upon, are conditioned by, alter, and are altered by the environments in which we perform actions, and in doing so incorporate the environment into ourselves by way of acquiring habits. Habits include but are not limited to our predispositions involved in the acts making up gross motor skills, behaviors associated with food, mating, warfare, verbal patterns, ways of perceiving, classifying, thinking, belief, and will.[226] Dewey states:

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[224] Biesta, G. & Burbules, N. (2003). Pragmatism and Educational Research. Rowman & Littlefield Publishers, Inc.: New York. P. 11.
[225] Dewey J. (1922/1988). Human Nature and Conduct: The middle works, 1899-1924, Vol. 12. (Ed.) Boydston, J. Southern Illinois University Press: Cardondale p. 65.
[226] Ibid.

> The essence of habit is an acquired predisposition to ways or modes of response, not to particular acts except as, under special conditions, these express a way of behaving. Habit means special sensitiveness or accessibility to certain classes of stimuli . . . it means will.[227]

Knowing then "is part of a biological structure, functional to the survival of the organism and adaptive (in terms of species) to the demands of the environment." [228] Habits are second nature "adaptive structures" founded on the many different ways we "live by means of the environments" we encounter in the world.[229] As such, habits saturate us forming our predisposition in how we tend to organize ourselves in ways of being, speaking and perceiving. Thus, we are our habits and our habits are our will, character and everything else – all of which are distributed possessions.[230] In other words, "every transaction has transformative consequences for all participants."[231] Habits also encompass our habits with material and immaterial tools. Learning a technique means the embodied habitualizing of skills with tools and artifacts. We organize our habits and the habits of others as means to ends that incorporate tool use. These habits are also second nature becoming part of who we are. I explicitly, organized Ben habits with social tools in regards to feeding him.

Habits reproduce customs and norms. We commonly believe that "things," such as character or preferences must be static, universal, innate or hardwired because everyone has "had" them for so many generations. What we have are habits acquired through participation in our various communities, and the regulation of that participation, and

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[227] Ibid. p. 32.
[228] Bordo, S. (1987) The flight to objectivity: essays on cartesianism & culture. SUNY press: New York, pp. 48, 60.
[229] Dewey, J. (1938) Logic, the theory of inquiry. Henry Holt and Company, New York, p. 25.
[230] Dewey J. (1922/1988). Human Nature and Conduct: The middle works, 1899-1924, Vol. 12. (Ed.) Boydston, J. Southern Illinois University Press: Cardondale, p. 60.
[231] Ibid. p. 18.

therefore the formation of habits, through customs, traditions, and norms. Customary habits determine a series of actions, except when they are disrupted.

My practice of breastfeeding Ben became a non-customary practice of breastfeeding because the normative ways to breastfeed did not work for us. I could not hold Ben so all of the customary hold meant very little to us. I had to create ways to feed him my breast milk and later when he could latch find ways to prop him up and bring the breast to him

Because Ben had a hard time latching onto my breasts they became exceeding engorged, which made it even more difficult for him to feed. We had to finger feed, allowing Ben to suck on a finger while slowly using a non-needled syringe to get expressed milk in his mouth. To ultimately breastfeed Ben it was crucial for his sucking reflex, first nature, to not alter or conform to a bottle but to be more breast ready. I was using social and material technology to try to 'retain' the characteristics of his sucking reflex for the breast. The bottle is much easier to suck and the sucking is different. After pumping with an electric pump and working with a lactation consultant Ben was able to latch. So, early on my ability to afford, have access, and use fairly expensive social technology ensured the successful breastfeeding that gave my son and myself significant heath, social and cognitive benefits. I will return to social technology, capital and benefits in the next chapter. For now, allow me to literally put flesh on the ability to co-designate by taking the place of the other.

The Social matrix of Inquiry: Language

The examples in the last subsection illustrated that habits emerge from the biological matrix and manifest later in complex way in the social matrix. Habits by serving

functions of social cooperation, inquiry and knowing, such as, learning, judging and believing take unique form from the social links in which particular habits are made durable. Those social links include our primary relationships, institutions such as schooling, public forums, and culture at large. These social links are "deeply grooved systems of interaction" or customs.[232] We acquire our habits and thus our minds and selves from participating in our habitat or customs and traditions. "Collective minds," states Dewey, is nothing more "than custom."[233] We emerge from the webs of customs, traditions, and the "systems of interactions" that constitute our communities because we have, and have always had since infancy, our being with those webs.[234]

If you recall the first nature sucking reflex is fulfilled in the second nature coordination of the activity of breastfeeding. We depend upon the ability to have habits, meanings, and objects. Signaling acts, though the material conditions of language are not the sufficient conditions of language, which is meaningful, participatory context and sign usage.[235] Dewey clearly shows that in signaling the response is not to a meaningful sign, but to a new stimulus,

> By habit, by conditioned reflex, hens run to the farmer when he makes a clucking noise, or when they hear the rattle of grain in a pan. When the farmer raises his arms to throw the grain they scatter and fly, to return only when the movement ceases. They (the hens) act as if alarmed; his movement is thus not a sign of food; it is a stimulus that evokes flights. But a human infant learns to discount such movements; to become interested in them as

[232] Dewey, J. (1922/1988). Human Nature and Conduct. The Middle Works, 1899-1924, Vol. 14. (Ed.) by Boydston, A. Southern Illinois University Press: Carbondale, p. 44.
[233] Ibid.
[234] Ibid.
[235] Dewey, J. (1958). Experience and Nature. Dover: New York, p. 177.

> events preparatory to a desired consummation; he (the infant) learns to treat them as signs of an ulterior event so that his response is to their meaning.[236]

Human infants learn to respond to signs in varying meaningful contexts. The impulses of the infant become organized into dispositions (habits) according to how the infant is responded to, interacts with, and experiences co-designation with others in the social environment. Our survival as a social species is dependent upon the ability to form habits but our ability to create significant meaning is based on the human ability to co-designate by taking the place of the other. This subsection will discuss the primordial making of significant meaning in a community, the social matrix of inquiry.

Significant human meaning renders from the ability to socially co-designate some object by taking the place of the other, Mead attributed the formation of self to one's entry into human co-designation through the ability to take the attitude of the other in the negotiation of meaning.[237] Dewey describes this entry as starting in infanthood,

> [The infant's] impulses [such as crying, sucking, focusing on the face] are merely starting points for assimilation of the knowledge and skill of the more mature being upon whom he depends. They are tentacles sent out to gather that nutrition in forms of customs, which will in time render the infant capable of independent action. They are agencies for transfer of existing social power into the personal ability; they are means of reconstructive growth.[238]

These dispositions continue to serve, form and be reformed in the child's ability to act in organized human activity in ways that fulfill her needs and inform her identity. Due to the

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[236] Ibid.
[237] See, Joas, H. (1997). G.H. Mead, a contemporary re-examination of his thought. MIT press: Cambridge.
[238] Dewey J. (1922/1988). Human Nature and Conduct: The middle works, 1899-1924, Vol. 12. Edited by Jo Ann Boydston. Southern Illinois University Press: Cardondale, p. 68.

dependence of the infant on others to survive there is no alternative to this; we are social animals. If successfully nursed and raised by a she wolf, the infant's dispositions, and mind, would be organized in accordance to the actions and proto-culture of wolves. The infant would have a different mind than the wolves with which she lived, but she would not have a human mind as we usually make sense of it, to possess linguistic meaning i.e. representative, because she was not socialized by her biological species.

Primordial meaning making for humans goes beyond the complex signaling of wolves to the socio-linguistic emergence of durable, significant meaning and context or social mind.[239] Significant meanings are the processes of distributed social arts that transform insignificant events into meaningful and durable objects.[240] Distributed social arts describe two or more agents functionally coordinating some behavior-object resulting in an emergent meaning to secure some consequence. Behavior-object here refers to what has been rendered more durable as the result of the meaning made, as all objects incorporate some actor(s) perspective. The body's role in creating knowledge-behavior objects is perspective or ends-in-view formed by needs, desires, and wants.[241] Co-designation of durable, significant meanings, language, and objects all allow for the formation of complex, creative social inquiry.[242]

Meaning is "primarily a property of [cooperative] behavior, and secondarily a property of objects."[243] The essential naturalistic origin of communication, of language, meanings and signs is for an actor to take the standpoint of the other. In other words, how

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[239] Dewey, J. (1958). Experience and Nature. Dover: New York, chapter 5, "Nature, communication and meaning."
[240] Ibid. p. 132.
[241] Dewey J. (1922/1988). Human Nature and Conduct: The middle works, 1899-1924, Vol. 12. (Ed.) Boydston, J. Southern Illinois University Press: Cardondale, pp. 17-18.
[242] Dewey, J. (1958). Experience and Nature. Dover: New York, p. 133.
[243] Ibid. p. 179.

an object, event or action may function in the other's experience, in a situation shared by at least two actors to coordinate some action, event or object to secure some consequence.[244] Something must be made common between at least two actors. To understand is to predict consequences together, to act in coordination, and share in someway in the consequences of action. Making common or the "anticipatory sharing in the consummation of a transaction in which two or more participate," by no means implies equity in co-designation i.e. agency, labor or benefit. Power, identity, histories, and emotions play out in similar durable ways all the way from the micro-relationships in family configurations, communities, and regions, to the macro-relationships of larger publics, nations, and systematic structures. [245]

To communicate is to have cooperation in activity, such as, the various social practices described by KPS scholars. When we co-designate objects by taking the place of the other, we form knowledge-objects and consequential subject positions from which identities render for others and ourselves.[246] How co-designation by taking the place of the other forms knowledge-objects can be see in Dewey's well known flower example:

> A request B to bring him something, to which A points, say a flower. There is an original mechanism by which B may react to A's movement in pointing. But natively such a reaction is to the movement, not to the pointing, not to the object pointed out. But B learns that the movement is pointing; he responds to it not in itself, but as an index of something else. His response is transferred from A's direct movement to the object to which A points. Thus he does not merely execute the natural acts of looking or grasping which the movement might

[244] Ibid. p. 178.
[245] Ibid. pp. 178-9.
[246] Ibid. pp. 178-181.

> instigate on its own account. The motion of A attracts his gaze to the thing pointed to; then, instead of just transferring his response from A's movement to the native reaction he might make to the thing as stimulus, he responds in a way which is a function of A's relationship, actual and potential, to the thing. The characteristic thing about B's understanding of A's movement and sounds is that he responds to the thing from the standpoint of A. He perceives the thing as it may function in A's experience, instead of just ego-centrically. Similarly, A in making the request conceives the thing not only in its direct relationship to himself, but as a thing capable of being grasped and handled by B. He sees that thing as it may function in B's experience. [247]

Indexical relationships establish meaningful knowledge-objects and, as such, are in origin participatory social construction of meaning. Significant meaning making requires creating a common context and sharing consequences and in so doing forming shared knowledge-objects. In other words, significant meaning is intentional in that it is participating in a social coordination from the standpoint of others. We co-designate by taking the place and attitude of the other.

The ability of infants and toddlers to share consequences, meaning and ultimately to share similar meaning and consequences in more diverse contexts, is very explicit in the dramatic development that occurs in the first three years. As Dewey states,

> The importance of language as the necessary, and, in the end, sufficient condition of the existence and transmission of non-purely organic activities and their consequences lie in the fact that, on one side, it is a strictly biological mode of behavior, emerging in natural continuity from earlier organic activities,

[247] Ibid. p. 178.

> while on the other hand, it compels one individual to take the standpoint of other individuals and to see and inquire from a standpoint that is not strictly personal but is common to them as participants or "parties" in a conjoint undertaking.[248]

Let us return to breastfeeding for an example. After breastfeeding became possible, the milk flowed, and Ben could latch, Ben and I could begin to co-designate the object breast.

I needed to feed Ben both in my identity as a parent, habitual will, and my engorged breast, physical need. Ben needed to feed to live. Along with breastfeeding and co-sleeping I always assumed, from attached parenting, that Ben could empathically or otherwise understand me. From research on co-sleeping I knew and had experienced our movement, sleep cycles and heart rate as synchronized.[249] I got into the habit of speaking out loud, narrating what I did with Ben and talking to him. I began to read to Ben at 1 month, we began to do Baby Sign language with him at 4 months.[250] Initially, these would have probably just been intricate signals to Ben who began to use meaningful linguistic signs at about 10 months. In my 3 years of experiences co-designating with Benjamin he seemed to transition seamlessly in his behavior and sense-making from signaling, to meaning, to relationships between meaningful contexts involving identities, bodies and communities. I have seen this especially within breastfeeding, baby sign language, and play.

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[248] See, Dewey, J. (1938). Logic, the theory of inquiry. Henry Holt and Company: New York p. 46.
[249] Barone, M. (2001). "Mother-Infant Sleep Behaviors in Solitary and Bedsharing Conditions," Ph.D. thesis, Claremont Graduate University, in Dissertation Abstracts International, 3020867.
[250] Baby Signs is an idea that if pre-language babies can sign and therefore communicate better they will be happier. Parents start with a few basic signs, eat, hat, drink, full, and parents also incorporate signs young toddlers create, reinforcing their signs. It is common for children to create signs. Most children begin to sign somewhere between 10-12 months.

I had gotten into the habit of patting just above my breast and would say, "the breast is coming." Soon Ben patted my breast to indicate (I assumed, taking his standpoint) "I want the breast," and I responded by giving him the breast. Ben must be able to take my standpoint, what I mean by patting the breast, for him to invest in the gesture as a means to the consequence he desires which is to be fed. Patting meant breastfeeding. At some point Ben becomes interested in the breast being patted as an event preparatory to the desired breast for feeding. Ben learns that the patting of the breast is a sign to a meaning, breast as object of feeding and comfort. Patting above my breast becomes a means to the consequence breastfeeding.[251] Meaning as both consequential and participatory requires the ability to take the other's standpoint and by doing so create common objects, in this case breast.

Ben sees breastfeeding as a meaningful practices that identifies a specific relationship that of mother and child. At three when playing with his babies (stuffed animals -horse & colt, cow & calf, cat & kittens) he dramatically acts out the mother breastfeeding the babies along with sleeping together, holding, and kissing. Ben's disposition to the dramatic role of caregiver to his babies has been formed, in part, by my care giving habits in regard to him. Ben at three still pats, and pinches my breast or places his hand down my shirt; sometimes he rests his head on my chest especially if he is tired, upset or ill. The breast as a knowledge-object; has shared meaning, history, consequence, context, and complex associations to specific practices in specific relationships (mother and child). Furthermore, breastfeeding transformed Ben and I. I became even more nurturing toward my child, our bodies synchronized in co-sleeping, and Ben's socialization of caring for an 'other' was framed. The breastfeeding contexts increased in functional

[251] Dewey, J. (1958). Experience and Nature. Dover: New York, p. 177.

meaning and complexity from we breastfeed, other babies' breastfeed, cow and calf breastfeed, to mammals (like me) breastfeed, have hair, are warm-blooded, and are born from the mother's body.[252] Ben's artwork frequently displays a "mama" body with a 'baby" inside. He no longer breastfeeds, but the breast still signifies comfort – the breast is Mama. Breast to Ben at three-years'-old signifies a set of complex social relationships and responses that frame some of his actions.

The co-designation of the knowledge-object, breast, transformed Ben and me. When communication, participatory meaning occurs knowledge-objects are produced. "Events turn into objects, things with a meaning. They may be referred to when they do not exist, and thus be operative among things distant in space and time, through vicarious presence in new medium."[253] In 'we breastfeed,' Ben and I place our bodies into the object breast. We place our full being into the object and by doing so transform the object and ourselves.[254] Breast for Ben as an infant is life, comfort, and sleep. I start as an extension of him as in many ways he was an extension of me in the womb. I, in the co-designation of the object breast and breast milk, while breastfeeding and expressing, became breast. Breast went from an erotic part of my body to being non-erotic and not 'my' body. My body was not my own. It was not during pregnancy, or lactation, as it is not in parenthood. I must nurse my child during the day and night and produce at least 32 oz. of expressed milk. I must express 7 times a day. Pablo encourages me to pump at 4 AM getting up with me reminding me that I must keep my milk up. To waste breast milk is unconscionable.

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[252] In some sense, Ben understands that he is a mammal and that mammals have these traits. The spectrum here is simplified but outlines Ben's increasingly complex web of meanings, identities and relations in regards to breastfeeding.
[253] Dewey, J. (1958). Experience and Nature. Dover: New York, p. 166.
[254] Bordo, S. (1987). The flight to objectivity: essays on cartesianism and culture SUNY press: New York, p. 103.

Things, like my breast pump, and people, especially Benjamin and Pablo, are external to my body but intrinsic to my functioning.[255] In lactation I am breast and breast milk because I must feed my child. I become the producer of milk that must be in proximity of my child. My diet, fluid intake, health of my breasts and nipples, the reliable working of my breast pump and refrigerator all become crucial preoccupations. With baby sign language the preoccupation became to communicate with Ben to know more about his internal states. Baby sign language became a way to make common with Ben specific meanings and as such know more about him.

We started to expose Ben to baby sign language at about 4 month. There was a video of children doing baby signs, a kind of complex signaling, and we incorporated signing in our day-to-day dealings with Ben; for example, we would sign eat, while saying eat, before we fed him. While he was eating we would sign and tell him he was eating. At 9 or 10 months Ben was using baby signs as signs. Prior to signing he seemed to understand what the signs meant. When Ben began to use baby signs, explicitly signing, the contexts of using the signs focused exclusively on him, for example the sign to eat (hand to mouth moving back and forth) meant I (Ben) want to eat. Very soon afterwards the signs were used in different but similar contexts, Mama is eating, they are eating, and the animal is eating. Language while fixing meaning in some sense, allows Ben to connect and organize meaningful contexts in creative ways.[256]

Dewey's Theory of Inquiry and Warranted Assertability

Social linguistic functional coordination uses meaning and inquiry to linguistically mediate and coordinate a situation in ways that supplements the biological.

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[255] Dewey, J.(1958). Experience & Nature. Dover: New York, p. 212.
[256] Dewey J. (1922/1988). Human Nature and Conduct: The middle works, 1899-1924, Vol. 12. (Ed.) Boydston, J. Southern Illinois University Press: Cardondale, p. 313.

Reasoning functionally coordinates situations, as all reasoning, along with all action, is means-ends. "Means and ends," states Dewey, "are two names for the same reality." Dewey clarifies this by stating, "end is the name for a series of acts taken collectively – like the term army. Means is a name for the same series taken distributively –like this solider, that officer."[257] Rationality, then, is a "means-consequence" relation. Dewey goes on to state that, "only as the end is converted into means is it definitely conceived, or intellectually defined, to say nothing about executable."[258] Means and ends are a continuum.

Means and ends are the possible intentional uses of operations in existential conditions that may produce transformation in context to create equilibrium out of disequilibrium. This taking up of means is deeply grounded and always existentially experienced.[259] Reasoning, as such, relies on first nature reflex and second nature habit. Unconscious pre-figurations or inferences form from our cultural ways of thinking in the forms of deeply held beliefs, identities, and will – all of which are distributed embodied second nature habits and acquired by participating in social practice.

If you recall, my belief in attached parenting informed my possible actions and my emotional experiences in responding to an agitated Ben. Children are objects of our attention, emotions, and identities. We as a species in many cases go to extreme means and even die for our children. We do not continue only from the brute force of volume in offspring. How the infant is made sense of in many cases is directly related to how responsive primary care givers are to infants. Conscious reasoning occurs when current

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[257]Dewey, J. (1922/1983). The middle works 1899-1924, vol. 14. (Ed.) Boydston, J. Southern Illinois University Press: Carbondale, p. 28.
[258] Ibid. p. 29
[259] Waks, L. (1999). The means-ends Continuum and the reconciliation of science and art in the later works of John Dewey in Transactions of the Charles S. Peirce Society Summer, Vol. XXXV, No. 3, p. 597.

first and second nature cannot coordinate the situation. My prior first and second nature prefigured my sense-making of and emotional identity in regards to Ben. In many ways my prior first and second nature allowed a felt disruption. Desperate to breastfeed my child, the acute emotional upset was the disruption, the catalyst to functionally coordinate breastfeeding that took place in the conscious reasoning and use of operations in the social inquiry discussed in earlier examples.[260] It eventually led to more reflective and intelligent inquiry; the use of more effective means to identify a problem and to sustain a resolution to the disrupted functioning.

Inquiry, for our species, holds a common naturalistic pattern.[261] That pattern of inquiry is the formation of day-to-day experiences with knowledge-objects, and subject matter into the techniques and formal conceptions that make up the unique and formative customs, norms, and perceptions of sub-groups, communities, fields, subjects, nation-states, and culture. Dewey used the term subject-matter to described how social meanings, both immaterial such as love, and material such as schooling are subject-matters to be continuously investigated. We produce new ways to investigate and use prior material and sometimes introduce new material. Inquirers directed by some interest or interest as a result of their objectives, such as, their community's specific conditions, needs, desires, and wants inquiry into subject-matter to negotiate or solve problems.[262] There is no one meaning, instead inquirers, subject-matter, and objectives continuously reconfigure to serve matters of concern and interests. This subsection considers the pattern of inquiry and in doing so does not mean to convey that this pattern is linear, non-dynamic, or has clear entry points. Nor does this subsection wish to convey that production of inquiry and the

[260] Dewey, J. (1938). Logic, the theory of inquiry. Henry Holt and Company : New York, p. 15.
[261] Ibid. p. 101.
[262] Boisvert, R.D. (1998). John Dewey: rethink our time. SUNY: New York, p. 36.

stability of its products are not historical and power-laden, the focus of other subsections and chapters. The distinctions I highlight in the pattern of inquiry are the aspects of communal, social processes involved in creating durable, and therefore formative and regulatory ways of doing things.

Let us begin with Dewey's naturalistic concept of inquiry. This subsection will expand upon, and later chapters will continue to develop, what inquiry is in Deweyan reconstruction. Here is how Dewey defines inquiry,

> Inquiry is the controlled or direct transformation of an indeterminate situation into one that is so determinate in its constituent distinctions and relations as to convert elements of the original situation into a unified whole.[263]

In Dewey's holistic pattern of inquiry we begin with a disruption of harmonious functioning (disequilibrium) that gives rise to an indeterminate situation. As a result of we engage in reflective deliberation. By deliberation is meant that we "ascertain the meaning of present activity to secure, so far as possible, present activity with a unified meaning."[264] By doing so we begin on an imagined trajectory of naming or forming a problem. Naming the problem fixes the situation so we can attend to possible solutions. Using our imagination we "hypothesize," we form a possible but yet unproven transformation of the situation as a potential solution to the disruption. We try our hypothesis in which, we literally experience the working out of the problem in the concrete explicit conditions that we participate in along with others. If the hypothesis works it will successfully transform

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[263] Dewey, J. (1938). Logic, the theory of inquiry. Henry Holt and Company: New York, pp. 104-5, italics in the original.
[264] Dewey, J. (1922/1988). Human nature and conduct The middle works 1899-1924, vol. 14. (Ed.) Boydston, J. Southern Illinois University Press: Carbondale, p. 143.

the situation and we have warranted assertability. The transformation of the situation transforms the environment and the participants creating assemblages.

What we have in the pattern of inquiry is reminiscent of the ‘generic sense of ‘re-search’ Lankshear et al. is searching for but cannot locate in New Literacies. Lankshear et al. state, that “in identifying a pedagogical logic or (a) ‘generic sense of ‘re-search’ what we have in mind here is actually inherent in the very kinds of new literacies we have begun to identify.” [265] Likewise, Lankshear et al. states that the changes needed at least “involve learners and teachers beginning with authentic problems and questions to investigate . . .to see the links between effective research strategies, social events and phenomena, and the process of becoming knowledgeable about something.”[266] KPS scholars see that learning to 'research' is the crucial preparation for success in the information age. The desire for a “culture of use,” logic, or generic research is in my mind a desire for a working, inclusive, critical pedagogy of social inquiry – the taking-up-of-means to intentional change social contexts the catalyst of which, is the concrete needs, desires and wants of individuals, groups, communities or publics.[267] Put another way, the desire is for consequential self-organization and self-representation of groups and communities.

The taking-up-of-means in this way is synonymous with forms of intelligent inquiry that we learn from the communities we participate in, the conscious deliberation,

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[265] Lankshear & Knobel (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham p. 131. Also see, http://www.deakin.edu.au/education/lit/kps/pedagogy.html Deakin University : Geelong, Victoria, Australia.
[266] Lankshear, C., Knobel, M. (2003). “Planning pedagogy for I-mode from flogging to blogging via wi-fi,” presented at IFTE (International Federation for the Teaching of English) conference, Melbourne, 7 July http://www.geocities.com/c.lankshear/ifte2003.html, p. 24.
[267] Ibid. p. 25.

selection, adaptation, and use of operations to secure desired ends.[268] We progressively develop practical and intellectual control of methods of inquiry. This implicit desire for pedagogy with a "generic sense of re-search" is key to the extensions offered in this dissertation of KPS scholars' efforts with an explicit pedagogy of social inquiry geared toward publics versus New Literacies or idealized ends for individuals. These issues will be developed in the last section of this chapter.

The pattern of inquiry is the common naturalistic patterns of day-to-day experiences with knowledge-objects, and subject matter into the techniques and formal conceptions that make up the unique and formative customs, norms, and perceptions of sub-groups, communities, fields, subjects, nation-states, and culture. I will now expand on the six aspects or distinctions Dewey highlights in the pattern of inquiry, the indeterminate situation, problem, determination of a problem-solution, means-ends reasoning, logic is operational, and common sense and scientific inquiry.

Unsettled conditions: the indeterminate situation

There are no psychological, mentalistic states, interior doubt or individualized autonomous will.[269] There are only open situations with unassembled potential and possible relations that we participate in and must cope with. Doubtfulness, uncertainty, panic, and disruption are traits of the unsettled situation that we experience and feel. They are not the traits of individuals. Individuals are instead distributed events, or verbs, and not atomistic individuals. Dewey states,

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[268] I am blurring play and inquiry, a lack of distinction that I will develop in the pedagogy chapter of this dissertation. For some of Dewey's comments on play see, Dewey, J. (1916). Democracy and Education. Macmillian: New York, pp. 237-38.

[269] Dewey, J. (1938). Logic, the theory of inquiry. Henry Holt and Company: New York, p. 103.

> The biological antecedent conditions of an unsettled situation are involved in the state of imbalance in organic-environmental interactions which has already been described. Restoration of the integration can be effected, in one case as in the other, only by operations which actually modify existing conditions, not by merely "mental" processes.[270]

The unsettled situation is no mere "subjective" experience. It is the context of an inability to functionally coordinate, a disruption of a necessary function. I place an agitated Ben to the breast and he does not feed. Furthermore he has not fed all day. I do not know why – should he not just be able to latch on? That I cannot feed my child is the unsettled situation. The outcome is not determined nor anticipated. I must understand what is happening and use the means I have to come to some resolution. The disruption creates a field for an emergent intentionality. Objects surrounded by emotions, Ben and the breast, are highlighted and come before anything else. I have an overarching goal, to feed Ben, but what that means, the specific end and means it will entail, and how means that constitute end evolve and co-evolve in my efforts with others and operations I perform, via inquiry, to resolve the disrupted functioning.

Formation of the problem:

The indeterminate situation transforms to a problematic situation, as the situation becomes an object of inquiry. At the start there is an unnamed indeterminate problem situation making transparent what the specific problem is. Naming the problem is authoritative and crucial for inquiry as it highlights and obscures possible trajectories of investigation. Naming the problem becomes the starting "criterion for relevancy and

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[270] Ibid. p. 106.

irrelevancy."[271] For example, I first sense something is amiss, I begin to inquire, only later can I name the problem. I bring him to the breast repeatedly. I try to help him latch. I bring milk up upon the nipple and try again. He is agitated and wanted to eat but cannot latch to get milk. This is the "existential cause," the qualification that there is a problem.[272] The solution will take some time, but now I know what to tell the lactation consultant and with her as a resource, I will devise a way to feed Ben. Most urgently, I find time to investigate how to successfully feed him. Appointments are made, technology deployed (an electric pump is acquired), finger-feeding starts, milliliters are counted at numerous feedings and charts of feedings and wet diapers start. All these are cognitive responses to a precognitive disruption.

Means and ends: two names for the same reality

Reasoning functionally coordinates situations, as all reasoning, along with all action, is means-ends. The realization of a problem has no meaning outside of acknowledging a problem and starting the social processes of creating possible solutions. I brought time by using social technology to feed Ben and retain the breast readiness of his sucking reflex. The inquiry into a solution will be dependent upon a progressive teasing out of a better-defined problem. Dewey's instrumentalist means-ends reasoning is functionally holistic, meaning that means constitute ends in the process of our efforts to have some resolution. As Dewey states, "inquiry is a progressive determination of a problem and its possible solutions."[273] That determination of problem and solution renders from an investigation into the observable conditions i.e. settled constituents of the

[271] Ibid. p. 108.
[272] Ibid. p. 107.
[273] Ibid. p. 110.

situation.[274] Our perceptions of the situation inform and are formed by our conceptions of the problem. Perception and conception recursively transform each other and participants in the social co-designation and experience of trying to determine the specific problem.[275]

In relying on the lactation consultant, I rely upon her expertise. Her expertise is her ability to deliberate on a specific subject-matter in a particularly rich, complex way. Her ability to deliberate is diagnostic, the potential consequences she can imagine, features of the situation she notices, technology she is familiar with, and her history in similar and different contexts. She will help me re-direct my actions until the disruption in my breastfeeding of Ben ceases in some sustainable way.[276] Lets return to breastfeeding for an example.

The situation Ben and I were in was not completely indeterminate; there are some settled conditions or contextual constituents. My milk is located in my breasts and comes out through the nipples. Ben must latch on with his mouth to breastfeed. These constituents in themselves and the interaction between them exist and are observable. The observations of constituents make up the factual conditions of the situation. These factual conditions, are existential fact, and as such are experienced.[277] Possible solutions or ideas render from how the factual conditions are known and observed in a situation. The expertise of the lactation consultant is partially located in the experience, intuitions, values, and operations she brings to, and ability to ascertain the important features from, her observations of Ben and I trying to breastfeed. She helps me discriminated features of my experiences in trying to breastfeed Ben. Her ideas are possibilities or means to a hoped for transformation of the

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[274] Ibid. p. 108-9.
[275] Ibid. p. 111.
[276] Dewey J. (1922/1988). Human Nature and Conduct: The middle works, 1899-1924, Vol. 12. (Ed.) Boydston, J. Southern Illinois University Press: Cardondale, p. 133-5.
[277] Dewey, J.(1938). Logic, the theory of inquiry. Henry Holt and Company: New York, p. 112.

situation that are tried to see if they restore functional coordination. This process of trying ideas for outcomes is her reasoning. Every trial of an idea or possible means further refines the contingent ends. In testing ideas the lactation consultant, for two hours, calm me, adjusts Ben and the breast, checks his mouth and neck, weighs him. We continually transform the context and everyone involved as we experience and co-designated the inquiry and the outcome. Linguistic meanings and physical touch are the means by which we do this as the lactation consultant diagnosis the problem and test ideas with Ben and me to restore the functional coordination of breastfeeding.

As I stated in the earlier example the lactation consultant's process of trying ideas for outcomes is her reasoning. The emergent end is progressively differentiated from the total field as things are tried.[278] The consultant is in the process of a diagnosis. The meaningful context of her ideas is grounded in our ongoing inquiry of what is going on with Ben and me that is making breastfeeding unsuccessful. This process is described by Dewey when he states, "the idea or meaning when developed in discourse directs the activities which, when executed, provide needed evidential material."[279] The hypothesis is progressive. Relational and currently relevant meanings are tossed out or modified as possibilities are investigated and operations tried.

After looking at Ben's mouth and seeing nothing amiss, the mouth was decided to be not the problem. Then the neck was checked along with the breast and relevant problems were observed. There was a relationship between my engorged breast, and possible clogged milk duct, which made feeding harder, and Ben's discomfort with his neck, which also made feeding difficult. Expressing the breast, massaging the breast to

[278] Dewey, J. (1988). The later works: 1938-1939, vol. 13. (Ed.) Boydston, J. Southern Illinois University Press: Carbondale, p. 221.
[279] Dewey, J. (1938). Logic, the theory of inquiry. Henry Holt and Company: New York, p. 112.

bring the milk down, holding Ben in different ways, understanding Ben as able to pick up on my distress were all operations used to further identify that the breast and neck were, in fact, the problem to be focused on. The clarified end-in-view, specific problems with the breast and neck that must be accommodated for emerged as objects in and only in the deliberative and existential experiences of inquiry.[280] As Dewey states:

> The object which then presents itself in thought as the goal of desire is that object of the environment which, if it were present, would secure a re-unification of activity and the restoration of its ongoing unity.[281]

Thus, deliberations imagines possible consequence, the hypothesis is developed in relation to grounded conceptual relationships until it reaches a form that can be researched as being the problem. The problem is researched until it brings about restoration.

Logic is operational:

In light of our example, the ideas and configurations of using operations in specific ways the lactation consultant settled upon served as means to transform the situation. Dewey defines logic as operational by stating that,

> "Operational" stands for the conditions by which subject-matter is (1) <u>rendered fit to serve as means</u> and (2) <u>actually functions as such means</u> in effecting the objective transformation which is the end of inquiry. [282]

Subject-matter is rendered fit to serve as means in that, subject-matter is determined operationally. Dewey further states that,

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[280] Waks, L. (1999). The means-ends Continuum and the reconciliation of science and art in the later works of John Dewey in <u>Transactions of the Charles S. Peirce Society</u> Summer, Vol. XXXV, No. 3, pp. 172-3.
[281] Dewey, J. (1922/1983). <u>The middle works, 1899-1924, vol. 14.</u> (Ed.) Boydston, J. Southern Illinois University Press: Carbondale, p. 172.
[282] Dewey, J.(1938). <u>Logic, the theory of inquiry</u>. Henry Holt and Company: New York, fn. 5 p. 14, emphasis mine.

> The methods of inquiry are operations performed or to be performed.
>
> Logical forms are the conditions that inquiry, qua inquiry, has to meet. [283]

Subject-matter, if you recall, referred to a genre of ongoing inquiry; for example, the lactation consultants ever-growing expertise and my on-going practice of breastfeeding Ben. Dewey further clarifies what operations are,

> Operation, to anticipate, fall into two general types. There are operations that are performed upon and with existential material as in experimental observation. There are operations performed with and upon symbols. The former is performed upon existential conditions; the latter upon symbols. But the symbols in the latter case stand for possible final existential conditions while the conclusion, when it is stated in symbols, is the pre-condition of further operations that deal with existences. [284]

Operations are both symbolic which includes linguistic meanings, and existential, which includes things like industrial or technological processes. Regardless of whether a specific operation appears to be essentially symbolic or existential. All operations involve physical activity and are used to transform situations. Operations like technologies should not maintain fixed, unalterable instances of organized existential operations. Operations are used in inquiry to modified ways to use or interact with new material, to create new things, and to solve current problems. Operations are used in inquiry to transform situations as a means to create new consequences.

The transformation for the lactation consultant and me was the result of two hours of ruling things out. The clarified problem and solution, in the engorged breasts and neck,

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[283] Ibid. p. 14.
[284] Ibid. p. 15.

worked as solutions. That the neck and breast was the problem informed the use of specific operations as a possible solution in how to deal with those problems. When we tried the solution it worked, and worked in such a way as to support her idea about what successful feeding was, a specific duration of feeding time and an after feeding weight gain of Ben. A context of the problem and solution was organized when we were able to experience as existentially verifiable the ideas of what the problems were in a successful solution. These became the facts of the matter, but only for as long as the solution secured successful feeding.

If Ben and I had not continued to successfully breastfeed the process would have begun again informed by our prior inquiry. Facts are operational in that they cannot be decontextualized from the situations in which they emerge. Facts, and the relationships from which facts emerge, are dependent upon the situations in which they are used to further and make-sense of the situational observations of a specific inquiry.

Since our inquiry is linguistically mediated we have not only produced ideas, problems, facts, and solutions but also meanings, as operations to bring to new disruptions. Facts in my situation with Ben are ideas in someone else inquiry into a similar situation. [285]

As Dewey noted,

> Ideas are operational in that they instigate and direct further operations of observation; they are proposals and plans for acting upon existing conditions to bring new facts to light and to organize all the selected facts into a coherent whole.[286]

[285] Ibid. p. 113-4.
[286] Ibid. p. 112-3.

As we have seen in the example of my visit to the lactation consultant there are functional processes in inquiry; the conception of the problem creates the perception of a possible solution or an idea. The idea is operational in that it is carried out so we can see if the idea works as a solution in the existential experiences of the disrupted functioning. We tried the lactation consultant ideas until we breastfed successful, not once, but twice. Making the engorged breast softer, so as to be easier to latch, holding Ben differently so has to not hurt a sore neck, and relaxing so Ben would feed, these ideas directed us to actions that worked and we had two successful feedings. A successful feeding described a specific duration of time feeding and weight change in Ben after feeding. The consultant's ideas were operational in that they directed activity and brought new relationship to light, which supported what the problem was eventually thought to be. In other words, the experiences of means constituted ends.

Common sense and scientific inquiry:

There are no distinctions in regards to the pattern of inquiry between minimal persons or local community inquiry, such as my inquiry into the problem with Ben, and established scientific inquiry, for example breast cancer research. There are differences between communities or systems of inquiry in scope, subject-matter, basic logical forms, problems and consequences, but there are no differences in the structure of inquiry. These systems are practical and not excessively abstract or cognitive as in say mental constructs. The systems of inquiry we form, contribute to, and acquire ourselves from participating in are embedded in and form our social practices creating our social habitats. As Dewey points out,

> Because the symbol-meaning systems involved are connected directly with cultural life-activities and are related to each other in virtue of this connection, the specific meanings which are present have reference to the specific and limited environing conditions under which the group lives.[287]

Our systems of inquiry constitute the formal conceptions, techniques, customs, traditions and norms of the groups who participate and have their being in them. Culture itself can be made sense of as on on-going inquiry. As such, systems of inquiry not only create but also regulate what participants can do, and how objects can be used. In other words, systems of inquiry create habitus.[288]

The previous subsections have focused on the pattern of inquiry. These sections show how the socio-cultural is naturalistic in origin, and functionally coordinating in purpose. In being so, Deweyan reconstruction is pedagogically consequential not only because it shows the role of habit, co-designation, and functional coordination in learning, culture and identity but also how it point to how knowledge relates to inquiry. Deweyan reconstruction points to the potential in the deliberative nurturing of habits, and communities of inquirers engaged in warranted assertability to facilitate ongoing creation and as such socio-political reforms and democracy. Warranted assertability resides within the social arts of communities of inquirers and creates an image of ongoing inquiry very different from our common concepts of knowledge and knowledge production.

The heart of the social arts is communication; from the making of something in common comes the ability to create durable meanings, techniques, tools, objects, and inquiriers. Dewey illustrates this by stating that, “discourse itself is both instrumental and

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[287] Ibid. p. 115.
[288] Hanks, WF. (2005). Pierre Bourdieu and the Practices of Language. In Annual Review of Anthropology. October, vol. 34:67-83.

consummatory, Communication is an exchange which procures something wanted . . ."[289] Communication is cooperative activity, in which partners and activity are modified. Communication is also the enjoyment of communing with one another. Since who we are is distributed we visit ourselves, experiences, and aspects of others in the communion and conflict of community. Thus in Deweyan reconstruction the center of change is not the individual. The center is:

> Indefinite interactions taking place within a course of nature which is not fixed and complete, but which is capable of direction to new and different results through the mediation of intentional operations.[290]

Interactions bring our attention to cooperative activity and doing. Mediation of intentional operations means the deliberative social inquiry into the subject-matter, i.e. consequential affairs and meanings, of the world using material and symbolic means. Dewey states clearly that knowledge is not the goal or focus point, nor is the production of some knowledge, but instead warranted assertibility.

> [Warranted assertibility] is preferred to the term belief or knowledge – it is free from the ambiguity of these latte terms, and it involves reference to inquiry as that which warrants assertion. When knowledge is taken as a general abstract term related to inquiry into the abstract, it means "warranted assertibility." The use of the term that designated potentiality rather than an actuality involves recognition that all special conclusions of

[289] Dewey, J. (1958). Experience and Nature. Dover: New York, p. 183.
[290] Boisvert, R.D. (1998). John Dewey: rethink our time. SUNY: New York, p. 34.

> special inquirers are part of enterprise that is continually renewed, or is a going concern.[291]

From warranted assertibility some very important pedagogical social arts begin to fall out. Knowers must state how they know. Knower and knowing are descriptive of the social action involved in developing warranted judgments, defending claims, grounding meanings and assumptions. Knowing is used to meet and negotiate the needs, desires, wants and interests of communities and people facing problematic situations in their day-to-day lives. Knowing may be relatively stable but always in flux, open to change and never producing universal facts or an end to inquiry. There is in warranted assertibility no obligation to fixed universals and is completely dependent on social inquiry. Warranted assertibility will be further developed in chapter four, for this subsection and chapter the important issues in regards to warranted assertibility, as an alternative to knowledge production, is that it is dependent upon social inquiry, and non-propositional. As such, warranted assertibility is focused on knowing and not knowledge.

Warranted assertability is Dewey's substitute for truth as we find it in JTB. Deweyan truth is existential truth, we experiences a restoration of harmonious functioning. In other words, the hypothesis works in our existential experience. Dewey defines truth as existential in Experience and Nature:

> Sometimes the use of the word "truth" is confined to designating logical property of propositions; but if we extend its significance to designate character of existential reference, this is the meaning of truth: processes of change so directed that they achieve an intended consummation.

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[291] Dewey, J. (1938). Logic, the theory of inquiry. Henry Holt and Company: New York, p. 9.

> Instrumentalities are actually such only in operation; when they operate, an end-in-view is in process of actualization.[292]

Truth is existential operations or what works in our day-to-day life via stable and recursive operations that consistently yield the same consequence. The community comes into agreement about many existential operations. These agreements change as different interests, problems, and consequences of operations are ascertained. The means we use to solve problems and resolve conflict have no essence in and of themselves. As Dewey states, "means as such are neither true or false, truth-falsity is not a property of propositions. Means are either effective or ineffective."[293] Means or operations only have value in how they facilitate the process of actualization. Truth for Dewey involves the success or failure of operations (symbolic as well as existential) of a given social practice to secure sought after consequences. As such it should be ideal for the kind of practice-oriented epistemology that KPS scholars advocate.

If you recall, KPS scholars see Dewey and Pragmatism as upholding Justified True Belief when in fact they are even further away from Justified True Belief in epistemology, pedagogy and curriculum than the KPS scholars themselves.[294] Dewey's instrumentalist means-ends reasoning which is emergent intentionality may have been confused with

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[292] Dewey, J. (1958). Experience and Nature. Dover: New York, p. 128.
[293] Ibid. p. 128.
[294] "This general concept (Justified True Belief) has accommodated many variations since Ancient Greek times. For instance, it has accommodated various theories of truth (correspondence, coherence, pragmatist), in theories of reality (realism, idealism) and so on. Beneath all such variations, however, the kernel of Justified True Belief has remained the epistemological standard in the Euro-Western world." Lankshear & Knobel (2003). New literacies: changing knowledge and classroom learning. Open University Press: Buckingham, pp. 157, 166, 171. Also see, Lankshear, Peters, & Knobel (2000). "Information knowledge and learning: some issues facing epistemology and education in a digital age." Journal of Philosophy of Education, Special Issue: Enquiries at the interface: philosophical problems of online education, Eds. Nigel Blake & Paul Standish, vol. 34, issue 1, Feb. 2000: 17-40, pp. 38-9.

instrumentalism of logical positivists.[295] Regardless, with Dewey we have social inquiry where means constitute ends to solve problems in the explicit conditions we find ourselves in. The focus for Dewey is on the communal negotiation of meaning and truth (i.e. warranted assertability), consistent and reliable operations in the processes of actualization, and as such, Dewey is not only much farther away from but also better equipped to deal with Justified True Belief than Lankshear et. al Knowledge Producing Schools reconstruction with New Literacies.

Lankshear et. al New Literacies are focused on identifying goals and practical operations (for example, performativity) available to individuals as bare reoccurrences of specific acts. As such, Lankshear et. al's New Literacies are much more instrumental in a deterministic sense. New Literacies are operations that must have some essential truth or absolute form to serve as a focus of reconstruction. This is due to the stability in Knowledge Producing Schools conceptually being in the operations because the explicit conditions and emergent intentionality people find themselves in are not seen as the real catalyst for reconstruction. In doing so Lankshear et. al has created with New Literacies operations directed by universal propositions.

A Deweyan Critique of New Literacies as the focus for KPS reconstruction

KPS scholars see the construction of knowledge, by way of literacy teaching, social practices, especially schooling practices and research as political because knowledge is infused with perspectives, beliefs, values and ideals.[296] Likewise, these scholars desire to

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[295] Dewey, J. (1938). Logic, The Theory of Inquiry. Henry Holt and Company: New York, fn., p. 22. Also see, Biesta, G. & Burbules, N. (2003). Pragmatism and Educational Research. Rowman & Littlefield Publishers, Inc.: New York.

[296] See, Gee, J. (2004). Situated language and learning: a critique of traditional schooling. New York: Routledge. Also see, Lankshear, C., & Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Philadelphia: Open University Press.

bring relevant outside social practices into the school in the form of highlighted New Literacies. The questions become whose practices, are these practices transferable or transportable, and can everyone's participation equally potentially change norms and forms of using artifacts?[297]

The disconnect for me in regards to Lankshear et. al's New Literacies as the focus for reconstruction for Knowledge Producing Schools, leaving social inquiry implicit, is that New Literacies are "literacies," practical operations (for example, performativity) available to individuals as bare reoccurrences of specific acts. Meaning that even with this caveat of the political nature of knowledge construction Lankshear et al. believe that the most productive way to serve individuals, groups, and communities in social change and social critique is to identify the right "sort of experiences, skills, and achievements . . .(practiced by) "the right sort of people."[298] This focus on specific bracketed off sets of practices from 'successful' discursive groups is justified by the changes that globalization brings.[299] Though I agree with the concerns these scholar bring up in regards to globalization my concern is that if we focus on globalization as inevitable and to be individually conformed to via New Literacies then we may miss seeing how globalization as a historical continuation of a complex and varying sets of social conditions change

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[297] Lankshear, C., Knobel, M. (2003). "Planning pedagogy for I-mode from flogging to blogging via wi-fi," presented at IFTE (International Federation for the Teaching of English) conference, Melbourne, 7 July: http://www.geocities.com/c.lankshear/ifte2003.html, p. 6.

[298] Gee, J. (2004). Situated language and learning: a critique of traditional schooling. New York: Routledge, p. 105-6.

[299] Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Philadelphia: Open University Press pp. 156-8. Bigum, C. (2003). "Rethinking Schools and community: the knowledge producing school." Deakin University http://www.deakin.edu.au/lit/KPS.

human relations in day-to-day communal events that may be redirected or offset by the political means we still have.[300]

The focus here, which shows the limitation of New Literacies, is how the identification of these "fluid, flexible, mobile" Information Communication Technology related 'literacies' obfuscates specific social conditions relevant to who benefits from them and how.[301] For example, the 'right' practices with the 'right' people ignore issues of literacies as authoritative congealed means or operations that are assumed transferable, the embodied capital, and social ties associated with use and benefit, the unique perspectives of participants, and the non-linguistic, non-discursive, or pre-discursive boundaries present for specific bodies.

Dewey's work is sympathetic to the goals of KPS scholars: that individuals and groups actively produce and critique knowledge in such as way as to serves the negotiations of their interests. Dewey gives a theoretical frame and pedagogy fully free of Justified True Belief. The locus of reconstruction for KPS scholars as individuals with Lankshear et al. New Literacies creates a reconstruction and will that is perceptually organized as interior. The concern of this work is that the Knowledge Producing Schools reconstruction, as put forth largely by Lankshear et al., puts KPS scholars' efforts significantly more calibrated to Justified True Belief than it would first seem. In closing this chapter I would like to revisit some of the issues brought up in my overview of Knowledge Producing Schools. I will discuss KPS scholars reconstruction for Knowledge

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[300] The relationship between social conditions, human association and publics will be developed later in this chapter.

[301] Lankshear, C., Knobel, M. (2003). "Planning pedagogy for I-mode from flogging to blogging via wi-fi," presented at IFTE (International Federation for the Teaching of English) conference, Melbourne, 7 July: http://www.geocities.com/c.lankshear/ifte2003.html, p. 6. Fluid, flexible, mobile ties associated with ICT use seem to me as closely mapped to middle, and upper middle class social ties.

Producing Schools as located in individuals, as disembodied, and reliant, as with New Literacies, on idealized operations, procedures, techniques, perspectives, and tools that are treated as fixed, transferable, transportable means. Some of the problems with KPS scholar's operating conceptions of knowledge in regards to New Literacies will also be discussed. The conclusions drawn from these points will draw us seamlessly into the discussion of how Deweyan reconstruction moves much farther beyond Justified True Belief than the current efforts of KPS scholar's.

My purpose here is to identify what I see as the major limitations or internal inconsistencies with Lankshear et al. new literacies for Knowledge Producing Schools. I argue that the weaknesses in New Literacies can be avoided by a Knowledge Producing School pedagogy drawing on Deweyan reconstruction, concept of publics, embodiment and pedagogy. I structure my critique of New Literacies around three thematic problems of KPS scholars' concept of reconstruction in the form of New Literacies: they are individualistic, disembodied, and an oversimplification of socio-historical context by the reliance on literacies, i.e. practical operations (for example, performativity) available to individuals as bare reoccurrences of specific acts. Each one of these, in my view, shows major limitation in the KPS scholars' approaches to analyzing, identifying, and producing a location and space of reconstruction for a socio-cultural view of learning. Subsequently, I introduce here and address in the remaining chapters, how Deweyan reconstruction might be used to provide a more holistic, consistent and powerful analysis and reconstruction for the goals of KPS scholars.

KPS reconstruction as excessively individualistic:

If you recall from the introduction, the locus of reconstruction for Knowledge Producing Schools resides with individuals constituting and reconstituting themselves in intentional ways using influential New Literacies distilled from powerful discourse groups. Bigum sees transformation or reconstruction beginning with individual critique, Gee's see bicultural individuals as agents of change.[302] The overarching logic of KPS scholars is that by switching the focus from content and subject to Discourses,

> connected to work, or to the public sphere more generally (e.g. government), we can get [educational] goals that stress thinking like members of those discourses, using tools from them, engaging in social practices akin to theirs, and critiquing those discourses in relation to others.[303]

Therefore by assimilating the mindsets and tools of powerful discourse groups, individuals can change those groups or form alternate social-representational spaces that have similar social benefits.[304]

In KPS scholars'analysis of Knowledge Producing Schools case studies and related work they implicitly and explicitly state that what matters is what individuals can do with others using tools and techniques to solves problems, but how we specifically get there and how, as a result, customs in discourse groups or habits of individuals change or do not

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[302] Rowan, L. & Bigum, C. (2005). Transforming frameworks: new approaches to CCTs and the pursuit of educational equity. Deakin University, Geelong. Paper presented at the Australian Teacher Education Association Conference, Gold Coast, July 2005 and at the British Educational Research Association Conference, Glamorgan, September 2005, p. 6. Also see, Gee, Hull, Lankshear (1996). The New Work Order: behind the language of the new capitalism, Westview Press: HarperCollins Publisher, p. 14.

[303] Gee, Hull, Lankshear (1996). The New Work Order: behind the language of the new capitalism, Westview Press: HarperCollins Publisher, p. 163.

[304] For KPS the intersection of identity and mindsets can serve to generate innovative possibilities. For example, Amazon.com founder Jeff Bezos thought differently about ICT. Instead of conceptualizing ICT as doing current processes more efficiently Bezos saw ICT as a distinctly different way of being and so thought about using ICT in innovative ways. See, Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, p. 64.

change in sustainable ways is unclear.[305] Students or individuals, we are told, who have fluency in powerful discourse groups along with meta-literacies, metalanguage, and metaunderstandings may be able to critique how we are constituted and situated. These fluent, literate students are "philosophers-historians-ethnographers-sociologist of knowledge in institutions and in society as a whole" who can reconstitute themselves and possibly larger discourse customs.[306]

This Lankshear and Gee's reconstructive agent is reminiscent of Mill's "omni-competent" individual – judge, jury, and executioner of all situations demanding social critique and political action.[307] This "omni-competent" is an isolated thinker. What is missing is that Lankshear-Gee's über person is a person of specialized habits connected to communities engaged in specific inquiry. As Charlene Haddock Seigfried states,

> There is no ready-made self behind activities. Self is made in action but action is embodied and that body is a signifier that is interpreted and contributes to the contextualization of meaning and events.[308]

There is no generic body where practice, actions, articulations, and responses can mean similar things in some semi-universal or transcontextual way. Those that share similar experiences, histories, embodied capital, social positions, and bodies may benefit in more similar ways with specific literacies and ends in mind.

There seems to be some soft determinism in regards to this KPS personality, "I am free [reconstructive] not insofar as my actions are underdetermined, but insofar as they are

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[305] See, Gee, J., Hull, G., Lankshear, C. (1996). The new work order: behind the language of the new capitalism. Westview Press: HarperCollins publishers, p. 162. Lankshear, C. & Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham.
[306] Ibid. Gee (1996). p. 161. Also see, Ibid. Lankshear & Knobel (2003), p. 13.
[307] Dewey, J. (1927/ 1991). The public and its problems. Swallow Press: Ohio University Press, p. 158.
[308] Seigfried, CH. (1996). Pragmatism & Feminism: reweaving the social fabric. University of Chicago, p. 252.

determined by my own inclinations (abilities, decisions, sense making) rather than external will." "Will" in KPS scholars' conception of reconstruction is much more of an autonomous cognitive western free will than the non-autonomous relationally distributed will as habit as we see with Dewey. This "will" in KPS scholars' conception of reconstruction, more of an autonomous cognitive western free will, uses passive tools that just lie in wait in a tool chest to be called into action from some without. Conversely, with Dewey we have a non-autonomous relationally distributed will as habit and impulse and no within or without, but active tools that are extensions of us, they are "extra-organic organs" in activity to make thing, solve problems, pursue desires. As Dewey states,

> Habit means a special sensitiveness or accessibility to certain classes of stimuli, standing predilections and aversions, rather than bare recurrence of specific acts. It means will.[309]

The sociocultural approaches that inform the performance focus of New Literacies in the form of how "individuals or collective minds forms social group and customs," does not clearly show how individual immersion, assimilation or fluency in discourse groups enables individuals and their communities to achieve sustainable larger cultural critiques or social changes in customs, perceptions or practices.[310]

Gee alludes that bilingual communities change host communities but does not really specify how this occurs or how pedagogy supports it in durable ways.[311] Bicultural brokers are usually, as discussed in other literature, associated with public-building, and

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[309] Dewey, J. (1922/1988). Human nature and conduct: the middle works: 1899-1925 vol. 14. (Ed.) Boydston, J. Southern Illinois University Press: Carbondale, p. 32.
[310] Ibid. Gee (1996). p 158. Direct quote from, Dewey, J. (1922/1988). Human nature and conduct: the middle works: 1899-1925 vol. 14. (Ed.) Boydston, J. Southern Illinois University Press: Carbondale, p. 46.
[311] Gee, Hull, Lankshear (1996). The New Work Order: behind the language of the new capitalism, Westview Press: HarperCollins Publisher, p. 14.

are made sense of as rendering from, serving and having an impact as embedded in deeply interdependent communities and organizations with autobiographical similarities. Freedom projects reside in communities creating meaning and alternative representations that are used in negotiations and conflict with the public, at large - not autonomous individuals. Examples of successful 'bicultural brokers,' are when in the 1930's African-American students from the Southern Negro Youth Congress (SNYC) and again in the 1960's when students from the Student Non-violent Coordination Committee (SNCC) traveled to the rural south, to use their perspectives with Northern experiences to support local rural people. Ella Baker, Martin Luther King, Jr., and Bob Moses are also examples. [312]

One question that is relevant to anyone sympathetic to KPS scholars' goals for schooling is what may be and how may "philosophers-historians-ethnographers-sociologist of knowledge in institutions and in society as a whole" take form? The possible answers to this question inform the pedagogical practices that attempt the goals for Knowledge Producing Schools.

Literacy in KPS scholars' work, seen as social practice and discourse, is by and large associated with language and perceptions but what forms, let alone what can change, these social practices, language, and perceptions and how these become durable in power-laden ways is not addressed in a way that can inform pedagogy.[313] In other words, the analysis for New Literacies can describe what but not how or why.

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[312] See, Anyon, J. (2005). Radical possibilities: public policy, urban education and a new social movement. Routledge: New York, p. 135.
[313] See, Gee, J., Hull, G., Lankshear, C. (1996). The new work order: behind the language of the new capitalism. Westview Press: HarperCollins publishers.

New literacies are disembodied:

Though Lankshear et al. allude to socio-cultural literacies, and genre theory as influences in their work, along with a host of other efforts and theoretical works; one apparent influence, via Gee, is discourse analysis.[314] It is beyond the scope of this dissertation and is not the intentions of this author to define or critique discourse analysis, but only to show how New Literacies regardless of its influences tends to become disembodied in its translation from those theoretic influences to the production of literacies for individuals. New Literacies is the product of an analytical limitation that may be able to describe and document elements of discourse groups or embodiment [body language, culture, custom, values, intentions, and belief], but cannot address how these elements of embodiment are inscribed in the body and normative customs of the community, i.e. have meaning or are acquired, redirected, changed and calibrated, in deeply historical ways, to specific bodies [race, gender, age]. This means New Literacies cannot address the active appropriation and creations of agents, their agentic or non-agentic positioning, nor the embodied reproduction of ideologies in seemingly non-discursive forms such as habit, predisposition, culture, custom, values, will, and belief.[315] Practice and signs cannot be made autonomous from the creation of meaning anymore than speech can be divorced from its context. Meaning is co-designated and is necessarily social, transactional, and embodied constructs.

Issues of human agency, as in Dewey's theory of means-ends reasoning, will, and perception as culturally distributed, or physical body as marked or gendered, are all

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[314] See, Gee, JP (2005/1999). An introduction to discourse analysis: theory and method. Routledge: New York.

[315] Agentic or non-agentic positioning is used here to point to the embodied relational aspects of agency. Examples are lack of creditability and issues of gender, fear and issues of race. See, Davies, B. (2000). A body of writing 1990-1999. Alta Mira Press: CA, pp. 55-68.

subordinate in New Literacies to identified discourse groups, practices, values, and attributes that are to be assimilated. Furthermore that those seemingly non-discursive forms such as embodied habit, predisposition, culture, custom, values, will, and belief usually prefigure or frame emergent conscious meanings in pre-cognitive ways is not addressed. As Dewey states,

> The influence of habit is decisive because all distinctively human action has to be learned, and the very heart, blood and sinews of learning is creation of habitudes. Habits bind us to orderly and established ways of action because they generate ease, skill and interest in things to which we have grown used and because they instigate fear to walk in different ways, and because they leave us incapacitated for the trial of them. Habit does not preclude the use of thought, but it determines the channels within which it operates.[316]

Since the locus of New Literacies is the intentional individual mastering conscious meanings and not the historic community using [and being used by] meanings, new literacies cannot account for the spectrum of consequential social constructions in meaning, and co-designation of knowledge-objects. The social spaces where the active creations, appropriations, alternate representations, resistance and oppression of humans happen.

New Literacies reliance on assimilated fluent individuals is insensitive to powerful historic material and organizational structures that constrain social action and hoards specific positions, benefits, resources, and attributes for specific bodies, genders, races, or lineages. There are non-linguistic, non-discursive boundaries and pre-discursive forms, such as spatial relations, along with economic and political relations, such as access chains,

[316] Dewey, J. (1927/ 1991). The public and its problems. Swallow Press: Ohio University Press, p. 25.

that embed and so constrain participation and social positioning.[317] Fluency in a powerful discourse group does not ensure congruent enjoyment of that group's historic ends or a social ability to change those ends. The ability for communities, as in Bigum's community point of view, to become consequentially more conscious of their situations and actions in the world necessitates self-organization, self-representation, and the ability to have repositories of relevant information. In other words, communities must have the ability, resource, and social access to act as publics. Publics as the location, regulation, and negotiation of consequences will be developed in chapter 3.

The analysis of conscious or universal meanings, language and action means very little decontextualized from the social meanings they stem from and the networks they are historically embedded in. An outward sound or body gesture means nothing without linguistic significance. Meaning is necessary for thought and deliberation. Dewey states,

> while language is not thought it is necessary for thinking as well as for communication…To say that language is necessary for thinking is to say that signs are necessary. Thought deal not with bare things, but with meanings…[318]

New Literacies as such, regardless of its ontology, is dealing with bare things; bare reoccurrences of specific acts. Language is a tool for the communal creation and organization of signs and knowledge-objects, and meanings in dynamic ways i.e. social inquiry. Language or practice is not essentially of any meaning. As Dewey states,

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[317] Spatial relations see, Ruddick, SM. (1996). Constructing difference in public spaces: race, class and gender as interlocking systems. Urban Geography 17:132-151. Access chains, see Ribot, JC. (1998). Theorizing access: forest profits along Senegal's charcoal commodity chain. In Development and Change, vol. 29, pp. 307-341.

[318] Dewey, J. (1986). The later works: 1925-1953, vol. 8 (Ed.) Boydston, J. Southern Illinois University Press: Carbondale, p. 301.

language is not thought, though necessary for thought as well as communication. Signs, language, action, practice are all made meaningful in the process of co-designation. Describing or having a body in minimal action is not enough because action, meaning, and practice cannot be the property of an individual.[319] I remind the reader here of Dewey's flower example for co-designation and my discussion of breastfeeding.[320] Indexical relationships establish meaningful knowledge-objects and, as such, are in origin participatory social construction of meaning.

The processes entailed in creating significant meaning making, like having a point of view or social critique, requires creating a common context and sharing consequences and in so doing forming shared knowledge-objects.

> Processes of this sort cannot be accomplished by isolated thinkers seeking direct insight into ideas. They are products of people working together gathering information, projecting hypothetically, listening to experts, and debating positions.[321]

The focus should be on the communal making of meaning and the issues of power inherent in negotiating meanings. At this juncture I will address the particular problems with KPS scholars' use of New Literacies.

The oversimplification of socio-historical context by the reliance on literacies:

Reconstruction, as it pertains to mastering new literacies, for Knowledge Producing Schools is focused on an adjustment between a thing or object and the subject or ways in

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[319] Hanks, W. (1996). Language and communicative practices, p. 257. Hanks evokes Merleau-Ponty in this discussion and uses Merleau-Ponty and Charles Peirce extensively. Both scholars are compatible with John Dewey's work. The point for this discussion is that social engagement and the products of social engagement cannot be made sense of nor located with individuals.

[320] This document, p. 68.

[321] Boisvert, R.D. (1998). John Dewey: rethinking our times. SUNY Press: New York, p. 88.

which the subject perceives something. New Literacies are operations, defined by conditions and consequences, and as such are fixed idealized means that are transportable within social networks with little transformation to the individuals using them or the local events in which they unfold. In being so, Lankshear et al.'s New Literacies assume the transfer of aspects of social situations, relationships, and organizations associated with Information Communication Technologies (ICT) used to identified techniques using ICT. For example, mind sets, as a new literacy is the translations of some one's existential experiences, values, and norms into another's abstract operation assuming the use of the means or benefit for both will be similar. The meaningful social context, and as such benefit, in which the use of ICT is embedded is seen as partially restored by the mastering of material and symbolic techniques or operations associated with ICT. As with mindsets, the assimilation of identified operative paradigms and values to see things and use tools in a particular way to secure, assumable, similar benefits or cognitive products. This is very different from Deweyan emergent intentionality and means-ends reasoning, where means constitute ends to coordinate concrete situations.

There seems to be a great investment in choosing correct literacies, i.e. operations, or in identifying and making into operations sets of cultural practices associated with ICT. The latter describes what Lankshear sees as education's new role in identifying New Literacies as a "kind of brokerage role" where practices that are seen as fairly certain to produce and distribute knowledge in powerful ways are isolated to be made trans-contextual as literacies for producing knowledge.[322] For example, scenario planning, E-zines or Adbusters are portrayed by Lankshear et. al. in ways that describes actions as

[322] Lankshear, C. & Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, p. 45.

operations, such as the process of making E-zines, instead of the relational autobiographical histories of how these participants understand how the conditions of their lives relate to problematic situations and how they form into, maintain, and organize as groups engaged in sustainable coordination of problem solving and transgressive action. It is important to take a moment and return our attention to what New Literacies are. Here I will be touching upon three issues in regards to New Literacies. (1) New Literacies are operations. (2) What does it mean to use operations and what are some of the concerns with this. (3) How may the focus on New Literacies and the relating assumptions of knowledge, which accompanies this focus on individual literacies, be counter productive to the goals of KPS scholars, especially the goal to develop a pedagogy free from Justified True Belief.

(1) New Literacies are operations. Operations are what we use in inquiry or problem solving. Thus, existential and symbolic operations are brought to inquiry or production, which to be durable and meaningful are always social in nature. New Literacies congeals sets of social practices associated with ICT into pedagogical techniques, or best practices with the focus of these techniques being used in semi-recursive ways for fixed ends. I say New Literacies are used in recursive way because, for KPS scholars' to form their reconstruction around the concept of literate individuals using operations of some or another practice there must be some belief in something prior to local consequential social transaction that can produced the result of that transaction.[323] These KPS scholars seem to believe that the social connections, skills, or benefits they associate with practices involving ICT technology are essential to tool use or become instantiated within or become

[323] This is reminiscent to me of western innate free will reliance on some variation of positivist instrumentality.

part of the social capital of individuals using them. Otherwise, individuals using literacies would not be the explicit locus of reconstruction.

Operations are logical forms, gelled controlled conditions where material and immaterial sets of practices serve as means to stable ends. Operations are performed upon existing conditions and are controlled to various degrees to keep them gelled or stable and the ends or goals consistently meant.[324] Operations include instrumentalities, tools, techniques, concepts and literacies. New Literacies are best described as techniques, such as accepting specific mindsets, creating E-zines, reappropriating public spaces in rote ways, blogs or e-mail.

Learning a technique means the embodied habitualizing of skilled "know how" that wields tools and artifacts well. Once a part of someone else's systematic inquiry, techniques are habits with tools that become embodied habits gelled in orderly and predictable way to secure some end.[325] Furthermore, operations must assume some degree of a stable environment to have fixed ends.[326] The focus with KPS scholars' use of New Literacies are operations occurring in fairly stable environments with pre-determined consequences, the focus is not on the explicit condition and problem situations students and communities find themselves in. Lankshear et. al. New Literacies make operations and ICT, not people, the center of social activity.

(2) What does it mean to use operations and what are some of the concerns with this. Some of my concerns reside with what it means to use operations. When operations are given superior status as the means to deliver specific ends with little regard to how social

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[324] Dewey J. (1938). Logic, the theory of inquiry. Henry Holt and Company: New York, p. 14.
[325] Hickman, L. (2001). Philosophical tools for technological culture: putting pragmatism to work. Indiana University Press: Indianapolis, p. 12.
[326] Dewey J. (1922/1988). Human Nature and Conduct: The middle works, 1899-1924, Vol. 12. (Ed.) Boydston, J. Southern Illinois University Press: Carbondale, p. 38.

groups use them to deal with explicit conditions in specific settings, then operations can and will cast order on the developments, meanings, and habits of those who use them. Operations superimpose themselves on situations, because they are tools. All tools are created, meaning tools solidify the values and habits of those that create them, and the formation of embodied habits, which structure impulses into organized emotions, are necessary for the use of all tools and technology.

Literacies, like other operations, are especially controversial because they are seemingly detached from the subjectivities or bodies which played a role in forming them as knowledge products while setting up consequential subject positions for those who learn, must depend on, are informed by, or use those specific literacies. The political and social context of literacies, techniques, ways of thinking and perspectives, i.e. logical forms, cannot be opened up without a community able to investigate the particular consequences to them involved in accepting the logical form.[327] A community cannot absolutely know what consequences are particular to them without an autobiographical self-knowledge and an ability to deliberate i.e. imaginatively investigate consequences involved in carrying out specific courses of action; this is one of the many roles of Bigum's communal point of view. It is not the tools use, though important, that must be facilitated and developed but the socially creative inquiry in using, appropriating and repurposing them and in revising and adjusting our habits to imaginatively ascertain consequences and actively solve problems in diverse social groups with varied interests.

(3) How may the focus on new literacies and the relating assumptions of knowledge, which accompanies this focus on individual literacies, be counter productive to the goals of KPS, especially the goal to develop a pedagogy free from JTB. This

[327] See, Collins, J. (1995). Literacy and Literacies, in Annual Review of Anthropology, 24:75-93.

overshadowing of participatory social inquiry, where means and ends emerge, by individuals using operations, with pre-selected ends in view, creates a very strange juxtaposition for KPS scholars in regards to their views of knowledge, placing their efforts much closer to Justified True Belief than they may realize. To choose and identify a set of social practices to be gelled into literacy for schooling activity means you have a fairly stable end in mind - to produce something. Literacies, to some degree, must be recursive enough, like a formula, to produce a fairly stable end in this case knowledge or the social power of the knowledge produced. So, for literacies to be the means to produce knowledge, or secure some social value of the knowledge produced, means that not only must knowledge or the value of the knowledge produced be fairly stable, but the individual recursively using the literacies as means to the stable end is, in some form, passive.

We are back to the problem of Justified True Belief. We have at the very least an active user of tools who passively receives some degree of social power or value for their knowledge based on the new literacies tools used. In their pedagogy for Knowledge Producing Schools the social power associated with the production of knowledge has little to do with the social network in which the creator is involved in otherwise the reconstruction KPS scholars rely on would focus on the social to be durable. Stable knowledge in this case is either external reality, which both KPS scholars and I reject, or stable knowledge is operations to be used by active participants in social networks to further inquiry. Knowledge, in this case, has no meaning apart from "the connection with and reference to inquiry."[328] The latter means to the author that the pedagogical focus must be on the active inquiry and social networks and not only the operations to be used to make knowledge.

[328] Dewey J. (1938). Logic, the theory of inquiry. Henry Holt and Company: New York, p. 8.

As stated in Human Nature and Conduct, "the creation of a problem situation provides the occasion for the operation of intelligence, in other words, for deliberation and reflection. Thinking arises when habit is blocked, when a problem arises, and initiates the process of inquiry, which if successful will solve the problem."[329] This means that knowledge is a product of social inquiry and as such if we are attracted to production in the form of innovation, cultural critiques, the repurposing of tools, technology and meanings, critical analysis, transgressive political action, and alternative representations, all of which KPS scholars are attracted to, then we must direct our attention to inquiry as the means to solve problems. Inquiry in Deweyan reconstruction is active "intelligence in action," to solve problems and fulfill needs and it is inherently social and public-building. [330]

For Dewey the goal of inquiry is warranted assertion and not knowledge. "That which satisfactorily terminates inquiry is, by definition, knowledge; it is knowledge because it is the appropriate close of inquiry."[331] Warranted assertion keeps us away from the "institution of conditions," the settled conditions of knowledge or passive belief and keeps inquiry on-going and embodied.[332] A settled condition of inquiry in the form of belief, ideology or fact is a great concern to KPS scholars. As Dewey states:

> The idea that any knowledge in particular can be instituted apart from its being the consummation of inquiry, and that knowledge in general can be defined apart from this connection is, moreover, one of the sources of confusion in logical theory.[333]

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[329] Dewey J. (1922/1988). Human Nature and Conduct: The middle works, 1899-1924, Vol. 12. (Ed.) Boydston, J. Southern Illinois University Press: Carbondale, editor's notes xii.
[330] Bovisvert, R.D. (1998). John Dewey: rethinking our time. SUNY: Albany, New York, p. 31.
[331] Dewey J. (1938). Logic, the theory of inquiry. Henry Holt and Company: New York, p. 8.
[332] Ibid. "This settled condition is a demarcating characteristic of genuine belief. In so far, belief is an appropriate name for the end of inquiry," pp. 7-8.
[333] Ibid. p. 8.

On-going social inquiry and public-building is what is needed to disrupt the cultural equilibrium of power and norms.

Even though KPS scholars are deeply entrenched in socio-cultural traditions Lankshear et. al. New Literacies lacks the Deweyan focus on the origin of the socio-cultural as naturalistic and emergent intentionality. Dewey's concerns with the concepts of the socio-cultural being used divorced from its naturalistic origins is relevant to my concerns with KPS scholars' concept of reconstruction for Knowledge Producing Schools:

> Social interaction and institutions have been treated as products of a ready-made specific physical or mental endowment of a self-sufficing individual, wherein language acts as a mechanical go-between to convey observations and ideas that have prior and independent existence.[334]

This is of utmost importance because the naturalistic conception of the origin and status of the socio-cultural, Deweyan reconstruction, will never produce an individualistic reconstruction and in fact will lead us to a public-building reconstruction. For example, in speaking about operations, Dewey states that the issue is "how are we to use and be used by these things, not whether we are going to use them." Education in general, and New Literacies specifically seems preoccupied with the latter. The former, how to use and how are we used by operations requires locally generated social inquiry specific to the matters of concern relevant to the communities involved.[335]

The pedagogical focus must be on the transformative social creation and negotiation of meaning, the consequences of social action, or else language and discourse practices are mere words and rote technique. Information Communication Technologies

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[334] Dewey, J. (1958). Experience and Nature. Dover: New York, p. 169.
[335] Dewey J. (1922/1988). Human Nature and Conduct: The middle works, 1899-1924, Vol. 12. (Ed.) Boydston, J. Southern Illinois University Press: Carbondale, p. 53.

creates opportunities, possibilities in connections and new means for dissemination knowledge but these means cannot be seen as ends. The focus on ICTs potential to create new relationships should not be seen as means to ends but a creative force for new social inquires and coalitions. Students need deliberately reflective pedagogical places to see, investigate and express the political in the negotiation of problem-solution and consequences of action within diverse groups with varied interests. They do not need ad hoc but rather deliberate experiences to develop pre-dispositions to negotiate and organize action within diverse groups with varied and sometimes conflicting interest. It cannot be assumed that the social just happens in ways productive to social justice and equity when children are given biographies of others, information, tools, more autonomy, and less instruction. They must understand by explicitly negotiating the consequential with each other - the political in the formation of problems and solutions. What is lacking is an analysis to look more meaningfully into the social production of meaning. The fixation KPS scholars' have on the use of operations obfuscates the participants and cultures involved in social inquiry as the most important means to produce social meanings.

I discussed examples of Knowledge Producing Schools' case studies as communities of inquirers in the introduction to illustrate what is implicit in these efforts and explicit in Deweyan reconstruction; that participants and culture are the most important means in social inquiry to produce knowledge and therefore social change. The use and creation of meanings establishes communities of action and when these communities work toward their matters of concern relevant to their interest they are publics.

This chapter puts forth the argument that New Literacies must be abandoned and replaced with participatory social inquiry, and the unit of analysis should no longer be the individual but instead be the community of inquirers. In education we tend to focus on the problems of our teaching rather than the needs of children's communities, and how children contribute to their communities through their families. If we see things like "mind" as communal than the communities in which we develop our minds are paramount. As far as the structure of schooling what has been undeveloped in American schooling is how minimal communities, as for example Ben's daycare, link to larger publics. Likewise, the relationship between schools, the communities in which schools are embedded and the environments in which students receive their primary socialization. What Deweyan reconstruction can offer is to make pedagogically salient for students and their communities the strengths that public deploy to strategically negotiate with other public(s). We see this pedagogical possibility in our discussion of communities of inquirers as social inquirers involved in warranted assertability.

Communities of inquirers are collectives interconnected within the responsibilities and obligations of the problem at hand. communities of inquirers easily develop continuity and purpose because the community works together to negotiate what problems, solutions, and consequences are. Likewise, difference is not a problem to omit but a reality of negotiation, resource of the group, and a benefit to innovation.

What is most important about communities of inquirers is that at its best they are inclusive epistemic communities where members are free to investigate in diverse inquiry, but are expected to address and negotiate how something is know. In other words, as discussed earlier in this chapter, justification is better comprehended as warranted assertion

within an epistemic community. Students involved in inquiry are given unscripted opportunity and support to learn the methods of acquiring and managing their habits (versus inheriting habits without thought) in ways that allow greater control of indeterminate and problematic situations than are generally available to them.[336]

Warranted assertion relies on community engaged in or negotiating some on-going inquiry. Communities of inquirers are communities involved in deliberate and informed social inquiry i.e. warranted assertation that produces and negotiates the interests of groups involved. These experiences can directly facilitate public intelligence because they are the means by which public intelligence develops in and as part of communities, and is some of the means used when communities must take action as a public(s). Warranted assertability is communal and participatory, as such warranted assertability is closely mapped to civic participation. Because warranted assertability is based on articulation of how we know, when it is the basis of communal negotiations of problem and solution formations it serves to constitute the social actions of public(s). For example, warranted assertability in communities of inquirers comes about by the relationships participants have in regards to the on going inquiry. Some meanings must be made common for inquiry to occur at all. That on-going inquiry serves to develop and make transparent for whom there are potential consequences and benefits – showing the contours of coalition and conflict. The negotiation of the problem within diverse groups creates a need to self-generate positions that use or negotiate expertise rather than rely on it. Likewise, the inquiry, in solution formation, is geared toward taking some action. Schools and schooling practices organized and managed to sustain communities and communal knowing serve to facilitate the experiences and dispositions involved in participating in social inquiry. Schooling as

[336] Dewey, J. (1938). Logic, the theory of inquiry. Henry Holt and Company: New York.

processes of inquiry within community organized and negotiated projects will serve to give students experiences in the means to be, identify with, and acts as a public.

Chapter 3: Publics, Communities, and Individuals

Knowledge Producing Schools case studies and KPS scholars' descriptions of the working attributes of these schools implies and requires some working ideas of public entities for social movement and change. In this chapter I extend the discussions of chapter 2 to include the significance of public intelligence as grounded in communities' embodied social meaning making and the ramifications of this for KPS scholars' goals. This chapter first revisits some of the key components of Knowledge Producing Schools in regards to changes in the structure of traditional schooling and the connections between schools and the communities in which schools are embedded.

The idea of "publics," I will propose, are implicit in and necessary to these Knowledge Producing Schools components in regards to the fulfillment of KPS scholars' goals. Reconstruction for Knowledge Producing Schools reliant on individuals with New Literacies decouples desired forms of embodied habits and predispositions from the communal participation, experiences, co-designations, and conditions that constitute those forms. Borrowing from Nancy Fraser that there is never a public but a "plurality of competing publics" and keeping in mind Dewey's discussion of publics as a social function of communities, I use the term publics, and not public, throughout the chapter. [337] Likewise, Fraser statement that these are competing publics reminds us that any social reconstruction extends some interest – leaving some publics more able to fulfill its needs and desires than others. Thus, publics are not only crucial as catalysts of change but also the sustainability of desired consequences such as equity.

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[337] Fraser, N. (1999). Rethinking the public sphere: a contribution to the critique of actually existing democracy in (Ed.) Calhoun, C. Habermas and the public sphere, p. 79.

To develop how and why Knowledge Producing Schools necessitates an investigation into publics this chapter will introduce Dewey's general concepts of publics, democratic publics, emergence of the state, community, and individuality. These general concepts from Dewey's The Public and its Problems will serve to support the conclusions of this chapter that participation and the conditions for participation are constituted by norms and customs of community and as such provide crucial contextual places for social change and reconstruction. This means that forms of participation along with communal conditions create patterns of association that not only form action but also orientations to action. We are what we participate in.

In preparation for the discussions of pedagogy in the next chapter, this chapter examines how participatory social inquiry and embodied intelligence in action, in the form of warranted assertability in communities of inquirers, creates the essential daily practice. Communities must participate in experiences of co-designation, communication and deliberation to have ecologies of participation in which to create social capital, displace normative practices or change customs and act as publics.[338] In the Deweyan view of disequilbrium the transformation for reconstruction does not begin with critique, as in KPS scholars' position, but with experiences of disrupted habits, predispositions and the communal co-designation and creation of knowledge-objects, though all of these often involve critique.[339] In other words, the question becomes how can social inquiry across and within school and communities facilitate ecologies of participation in transformative networks and as such public spaces and life that nurture the formation of publics? In

[338] Boisvert, R.D. (1998.) John Dewey: rethinking our times. SUNY Press: Albany, p. 88.
[339] Rowan, L. & Bigum, C. (2005). Transforming frameworks: new approaches to CCTs and the pursuit of educational equity. Deakin University, Geelong. Paper presented at the Australian Teacher Education Association Conference, Gold Coast, July 2005 and at the British Educational Research Association Conference, Glamorgan, September 2005.

conclusion, the chapter revisits two main themes. The concern of individualism in my previous critique of KPS scholars' reconstruction is revisited to further develop the Deweyan view of individuality. Narrow individualism tends to co-opt the potential characteristics of associative action in community and place them, mythically, within individuals.[340] The Deweyan view of individuality does not exclude the individual nor the various participatory communities. Also revisited is equity as communal projects that are unavoidably emergent from and dependent upon communities and their activation as publics.

Communities, especially communities' dependent upon government institutions, must have some voice in the form and role of "beneficial" government in society. This can only occur as communities construct contextual places of reform for themselves. Constructing contextual spaces refers to developing self-knowledge, alternative representations, and collective spatial mobility, which works toward making the community's specific consequences known for potential coalitions and representation through government. This discussion is made concrete through the current work of school reform as social movement.[341] Key to the concerns of this dissertation is how Knowledge Producing School-like structures and supports for participatory public social inquiry can assist the formation of contextual places of reform for various publics.

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[340] Dewey, J. (1927/ 1991). The public and its problems. Swallow Press: Ohio University Press.

[341] See, Rogers, J. & Oakes, J. (2005). John Dewey speaks to Brown: research, democratic social movement strategies, and the struggle for education on equal terms. In Teachers College Record, vol. 107, num. 9, September, pp. 2178-2203. Also see, Oakes, J. & Lipton, M. (2002). Struggling for educational equity in diverse communities: school reform as social movement. In Journal of Educational Change 3(3-4). Also see, Anyon, J. (2005). Radical possibilities: public policy, urban education, and a new social movement. Routledge: New York.

KPS: structural and organizational changes to schools and schooling

The previous chapter, working mostly with Lankshear et al.'s contribution to Knowledge Producing Schools efforts in the form of New Literacies, discussed how social inquiry, and embodied intelligence is implied in the case studies and projects presented. As such, KPS scholars' goal of knowledge creation pedagogy is best resituated as participatory social inquiry. This section builds upon that discussion by first highlighting the community building components of Knowledge Producing Schools, relying largely on Chris Bigums' work. I then introduce the connections between communities and publics. Participation in social inquiry is revisited in this chapter in regards to how participation in the form of warranted assertability in communities of inquirers, facilitates community and communal self-knowledge and action on local matters of concern. This participation, I propose, facilitates the construction of contextual spaces of reform, and accumulation of material, social, cultural, and embodied capital, which may help forming social ties to be sustainable. Specific pedagogical concerns with communities of inquirers will be addressed in the next chapter.

The roles of schools and schooling in Knowledge Producing Schools as a resources and possible nodes for community knowledge production is referred to by Bigum as KPS attributes. These roles can be seen as the valuing of authenticity in KPS scholars' pedagogy, which both creates and supports interdependence between schools and the communities in which schools are embedded.[342] Schools in Knowledge Producing Schools efforts are possible nodes of attachment between the schools and the communities in which

[342] Rowan, L. & Bigum, C. (2005). Transforming frameworks: new approaches to CCTs and the pursuit of educational equity. Deakin University, Geelong. Paper presented at the Australian Teacher Education Association Conference, Gold Coast, July 2005 and at the British Educational Research Association Conference, Glamorgan, September 2005.

these schools are embedded. Knowledge Producing Schools are repositories of, dissemination sites for, and catalysts of research relevant to community issues and concerns. Working for the interests of the communities' in which it is located, schools become deliberative nodes for the multiple worlds that constitute the "community" the school serves. In this sense schools are not simply located in the communities but are integrated into communities' matters of concern becoming more a consequential resource, space, and place for the communities served. Knowledge Producing Schools are in many ways local appropriations of public schooling. Authenticity for KPS scholars creates 4 main nodes of interdependence between schools and communities; (1) context, (2) expertise, (3) out-of-school schooling experiences, and (4) a value of diversity as providing communal resilience. Context is referred to KPS scholars' pedagogy as emerging from localized and concrete experiences, not idealized situations. Those localized and concrete experiences are relevant, emerging from, attaching to, and directed by out of schooling experiences, community expertise, and local matters of concern. Diversity is valued in Knowledge Producing Schools, as is community, as a resource for schooling and local needs. How these nodes, along with participatory social inquiry can create contextual spaces for reform will be addressed later in this chapter.

The context for schooling is provided by ordinary day-to-day experiences. Traditional schooling tends toward idealized situations or contexts, but KPS, as depicted by the case studies in chapter 1, creates contexts for learning that are actualized in and relevant to communal matters of concern. KPS projects are "real world projects," that are self-generated and coordinated by students, sometimes directly, with outside experts and

clients.[343] These projects are to have real outcomes for the communities, in the sense of what is produced. With the younger children, such as year 1 students' the projects provided realistic inquiry experiences for the children who used their data to support their conclusions.[344]

Expertise in the community is seen as a resource to be used by the school. The school becomes a new site for accessing community expertise. Likewise, the school serves as a node for the expertise of the various communities it serves by connecting community to community as well as communities to the school. The activities making up expertise, schooling and community are seen as being in the interest of the overall community. These nodes, expertise, schooling, and community, serves to constitute resources, locations, and deliberative spaces for communities to develop various points of view.

Communal and individual self-knowledge in regards to larger social issues and our place in those issues are referred to by Chris Bigum as developing a point of view.[345] Point of view is commonly used to describe particular perspectives and worldviews of individuals and discursive groups.[346] In his work, Bigum extends point of view to describe how point of view is used to deliberate on and direct action. The communal moral imperative, intelligent reassembling of the information, inquiry, and expertise that local community relies on to understand and act upon the world. Relationships between the people and groups that make up a local community are necessary to produce a point of

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[343] Ibid. p. 4.
[344] See, CORS (Center on Organization and Restructuring of Schools) (1996). "Authentic pedagogy boosts student achievement," Vol. 8, No. 3: http://www.wcer.wisc.edu/publications/wcer_Highlights/Vol.8_No.3_Fall_1996/Authentic_Pedagogy.html.
[345] Bigum, C. (2003). "Rethinking schools and community: the knowledge producing school," Faculty of ducation, Deakin University, Geelong, Victoria, Australia at http://www.deakin.edu.au/~cbigum/plants/rethinkschlcomm.html p. 5.
[346] Bourdieu, et al. (1993). The weight of the world: social suffering in contemporary society. Stanford University Press: Stanford, California.

view. Without a point of view, without self-knowledge, a community has little or no agency in which to offset the depersonalized power relations that affect their day-to-day lives.

Traditional schooling experiences often have few relevant connections to out-of – school experiences.[347] In Knowledge Producing Schools, schooling experiences are purposely intertwined with out-of-school experiences and communities. Schooling experiences or participation in schooled projects incorporate real-life applications by taking students out of or connecting them to outside school settings, organizations, and people. As Bigum states, the focus for the Knowledge Producing School effort is on "relationships . . .new relationships and partnerships a school can engender with its local community."[348] Though KPS scholars are very interested in what technologies, such as ICT, can facilitate, they are very clear that technology in and of itself does not create relationships.

If you recall, KPS scholars see things such as performance more in light of apprenticeship than ability, which connects the efforts of schooling to communities and groups.[349] Since, expertise and specialist communities usually reside in and at the service of the community at large, Knowledge Producing Schools' projects are integrated into expert practice.[350] These projects are usually cohort projects. The connections to expert practice these projects engender tend to help students see the links between their lives and

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[347] Pugh, K. & Bergin, D. (2005). The effects of schooling on students' out-of-school experience. Educational Researcher, December, Vol. 34, No. 9, pp. 15-23.
[348] Rowan, L. & Bigum, C. (2005). Transforming frameworks: new approaches to CCTs and the pursuit of educational equity. Deakin University, Geelong. Paper presented at the Australian Teacher Education Association Conference, Gold Coast, July 2005 and at the British Educational Research Association Conference, Glamorgan, September 2005.
[349] Bigum references Jean Lave in developing his ideas of community, learning, and expertise.
[350] Lankshear, C. KPS papers, Deakin University: Geelong, Victoria, Australia http://www.deakin.edu.au/education/lit/KPS/pedagogy.html.

their or other communities. The cohort projects also tend to allow a greater range of student participation and contribution to be values in schooling than usually occurs and provides many opportunities for student-to-student mentoring.[351] Likewise, these projects strive to facilitate disciplined inquiry and deep, elaborate communication to build rich, shared understandings.[352]

By creating various ways for communities to come together, either through school projects, the provision of community expertise, the use of schools as repositories of information, or to express points of view on various matters of concern, as the value education example in chapter 1, the Knowledge Producing Schools restructuring of schooling and schools tends to makes the communities stronger.[353] Schools as community nodes turn our thinking toward how schools and schooling can serve to enriching the experience of local associations in the communities in which those schools are embedded. Shared schooling, schools as nodes providing and using community resources and expertise via authentic schooling may facilitate the social ties between parents of students, and parent and children.[354]

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[351] Rowan, L. & Bigum, C. (2005). Transforming frameworks: new approaches to CCTs and the pursuit of educational equity. Deakin University, Geelong. Paper presented at the Australian Teacher Education Association Conference, Gold Coast, July 2005 and at the British Educational Research Association Conference, Glamorgan, September 2005.

[352] See, CORS (Center on Organization and Restructuring of Schools) (1996) "Authentic pedagogy boosts student achievement," Vol. 8, No. 3. http://www.wcer.wisc.edu/publications/wcer_Highlights/Vol.8_No.3_Fall_1996/Authentic_Pedagogy.html, p. 4.

[353] Bigum, C. (2002). "Design sensibilities, schools, and the new computing and communication technologies" in Silicon Literacies: communication, innovation and education in the electronic age. Edited by Snyder, Ilana, Routledge, London, p. 139. KPS can be seen as a sibling to John Willinsky's Public Knowledge Projects (PKP: http://www.pkpubc.ca/about/index.html).

[354] See, Horvat, et al. (2003). From social ties to social capital: class differences in the relations between schools and parent networks. American Educational Research Journal, Summer, Vol. 40. No. 2. pp. 319-351. Later I discuss the ideas that school related parent-to-parent social ties are one of the social capital strengths of middle-class social ties. In regards to parent to child ties, I am reminded of a colleague's experiences in teaching consumer math where the students' learning of relevant math skills created new places for students to contribute to and change family financial practices. In some cases the students' experiences in the consumer math class served to change and deepen their family's financial practices.

Communities even with very little in common and extreme differences in beliefs and values can develop some social ties and experiences of cohesion when they experience common needs, desires, problems, and purposes, the joining together to address some concern, need, or involvement. For this reason, diversity in Knowledge Producing Schools efforts is valued as a resource for the communities. Involvement and working in diverse groups is seen as providing ongoing innovation and resilience for the larger community's point of view in regards to the many matters of concern that are potentially consequential to the community. Furthermore, these experiences of common purpose may increase the community's spatial mobility by facilitating more diffused social ties that can create new ways to transmit support and activation of the capital KPS scholars' hope to help communities create. That Knowledge Producing Schools can be sites for communities to accumulated capital, for example school-community social inquiry, community point of view or schools as repositories of information, may also help those social ties to persist over time.[355]

In discussing Knowledge Producing Schools as geared toward authentic knowledge creation, Bigum states that transformation begins with critique and that "KPS projects were neither about either technology or about diversity: it was very much a both/and framework."[356] Bigum's statement very much alludes to transformative action facilitated

[355] An example can be seen in Native American's students' creation of a repository of study guides and notes to support other Native American students in the course of their studies at the University of New Mexico. Brandt is more concerned with meta-discursive performances, but her work can also serve as an example of a community creating capital to support the negotiation of a traditionally inhospitable organization. See, Brandt, C.B. (2004). University of New Mexico. "To Walk in Beauty: Performance, Gender, and Discursive Space in Western Science," Paper presented at the National Association for Research in Science Teaching, April 1-4, Vancouver, Canada

[356] Rowan, L. & Bigum, C. (2005). Transforming frameworks: new approaches to CCTs and the pursuit of educational equity. Deakin University, Geelong. Paper presented at the Australian Teacher Education Association Conference, Gold Coast, July 2005 and at the British Educational Research Association Conference, Glamorgan, September 2005, p. 6.

by the ability to take up communicative means in ecologies of participation. I would state that Knowledge Producing Schools initiatives, as seen in its projects and case studies, are about social deliberation and the taking up of means, as in Dewey's means-end reasoning, to deal with relevant and real world matters of concern. These initiatives are instinctively participative in the form of warranted assertability in communities of inquirers and instinctively dealing with issues of communities acting as publics in the form of community self-knowledge. These issues of participation dovetail into public social inquiry.

It is clear that Knowledge Producing Schools involve many processes of community building along with a dense interdependence between the school and the communities in which the school is embedded. It is stated on the KPS web site that "what will matter most is a point of view or expertise and for a community this means expertise in itself, knowledge about its own backyard . . . build[ing] sets of data relating community issues, concerns and interest."[357] That KPS scholars' are acutely concerned with, in regards to the architecture and function of schooling as serving to deepen the cohesion between in-school and out-of-school social networks, communities' self-knowledge and ability to negotiate matters of concern leads me to the following conclusion. Knowledge Producing Schools are implicitly about communities' abilities to act and represent themselves as publics. The Knowledge Producing Schools effort implies the community's ability to act as a public because the goals for the community, such as, building capital, having a point of view, negotiating consequences with society at large, and utilizing expertise to serve the community and communal schooling efforts are all actions activated by intentional publics.

[357] See the KPS web site at http://www.deakin.edu.au/education/lit/kps/concept.html (last modified 19 November 2003.)

Communities, when able, act as publics to change the formation of the state to serve their interest in sustainable ways.

The Public and its Problems: Some general concepts

Dewey defines a public as a group that deals with and recognizes a specific shared consequence(s). Thus, the primary problem of a public is to recognize itself.[358] As Dewey states in The public and its problems;

> A community that cannot see itself as a public and has no access to the means to be a public can not be a conscious partner having any degree of control over the consequences that affect that community of it or any other groups making.[359]

The concerns of KPS scholars with dense interdependence between schools and community, along with a pedagogy of engaging in the role of researcher and accumulating capital to serve community self-knowledge is then, implicitly, working toward the actualization of communities' as conscious partner, i.e. to be a public. The "means to be a public" refers to action that can be taken, and capital galvanized to negotiate or redirect the consequences affecting the community. If Dewey is right, and I think he is, then if a community, along with the individuals who participate in it, cannot find a larger community, conscious reflection and critique will be inhibited.

When we talk about publics then we are talking about action, movement, histories and accumulations, or lack, of state formations that reflect the interests of host communities. A public describes a social function used to negotiate and respond to wide-ranging and durable, direct and indirect consequences. Just like individuals, communities

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[358] Dewey, J. (1927/ 1991). The public and its problems. Swallow Press: Ohio University Press, p. 77.
[359] Ibid. p. 98.

deal with disruptions in functioning and negotiate consequences through the activation of publics. Publics are vast temporal-durational events, which can transfer, pool, and activate capital. Discussing the functionally aspects of publics answers what publics are, not who a specific public serves. Dewey answers this by stating,

> The public consists of all those who are affected by the indirect and direct consequences of transactions to such an extent that it is deemed necessary to have those consequences systematically cared for.[360]

Publics are then the porous and continuous actions taken, attempted, and sometimes thwarted among and between community entities, with varying capital and diverse histories, to negotiate consequences. Communities are not simply located but are plastic social links and associations that form for various reasons around actors that share similar consequences and as a result usually related histories. As Dewey states, the challenge is,

> that of discovering the means by which a scattered, mobile and manifold public may so recognize itself as to define and express its interest. This discovery is necessarily precedent to any fundamental change.[361]

Publics therefore must be able to see themselves and be able to take action. Or put differently, communities must be able to see themselves as publics and have the means to mobilize as publics to begin to take action.

Communities' act as publics to protect and secure their interests. For example it could be argued that corporations make up one of the most powerful publics in the United States. State formations or government, ideally interested in serving various communities, functions as the means to deal with the day-to-day direct and indirect consequences that

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[360] Dewey, J.(1927/1984). The Public and its Problems. In Jo Ann Boydston (ed.) John Dewey: The Later Works, Volume 2 (235-372). Carbondale: Southern Illinois University Press, pp. 245-6.
[361] Ibid. p. 327.

emerge from the conditions of life. "Publics in institutionalizing the means to secure their interest bring state formation into being."[362] The state therefore emerges as communities acting as public entities congeal social action to secure, protect and legitimize its interests. For example, the interests of upper and middle class children are secured in the formations of schooling, and educational research.[363] "Publics bring state formation into being" to secure and legitimize their interest. Again, corporations may be the strongest lobby of the state in the U.S.

Publics are not bigger versions of communities with simply larger capacities to see consequences relevant to their interest. Publics "regulate consequence by the criteria of their own interests and the operation they can encrust i.e. institutionalize specific conditions, in the state to control consequences." Regulation guided by the criteria of interest takes the form of individual, groups, and communities along with what they institutionalize to protect their interest.[364] It is not merely that the combined observations of many covers more ground than those of a single person. It is rather that the public itself, being unable to forecast and estimate all consequences, establishes certain boundaries, such as the state along with the non-linguistic, non-discursive boundaries, such as those discussed in my critique of KPS scholars' pedagogy (e.g., access chains or urban renewal),

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[362] Ibid. p. 276-7.

[363] By educational research I not only mean the dispositions of those in power become the norms of society but also the historical tendency in the research consumed by the field of Education to make white middle-class children the normative sample. See, Laboratory of Comparative Human Cognition (LCHC). (1997). Paradigms and prejudice. In (eds. Cole, M., Engestrom, Y., Vasquez, O.) Mind, culture, and activity: seminal papers of the LCHC. Cambridge University Press: Cambridge. Along with the long history of issues of cultural, gender and class in relation to educational measures. Furthermore, Dewey's discussion of the emergence of the state can assist a deeper understanding of institutional racism, sexism, and class stratification.

[364] Dewey, J.(1927/1984). The Public and its Problems. In Jo Ann Boydston (ed.) John Dewey: The Later Works, Volume 2 (235-372). Carbondale: Southern Illinois University Press p. 53.

so that actions are confined within prescribed limits and insofar have moderately predictable consequences.

If you recall from chapter 2, there is a self similarity in the aspects of functional coordination in associative action between minimum community, say a mother and child, and the larger community such as the university said mother works in. That self similar functional coordination is the creating, securing, negotiating, redirecting, and avoiding of consequences. Keeping Dewey's famous flower example of co-designation, used in chapter 2, in the back of your mind, consider how Dewey describes what publics do and how publics relate to individuals as connected to communities.

> We take then our point of departure from the objective fact that human acts have consequences upon others, that some of these consequences are perceived, and that their perception leads to subsequent effort to control action so as to secure some consequences and avoid others. Following this clew, we are led to remark that the consequences are of two kinds, those which affect the persons directly engaged in a transaction, and those which affect others beyond those immediately concerned. In this distinction we find the germ of the distinction between the private and the public. When indirect consequences are recognized and there is effort to regulate them, something having the traits of a state comes into existence. When the consequences of an action are confined, or are thought to be confined, mainly to the persons directly engaged in it, the transaction is a private one. When A and B carry on a conversation together the action is a trans-action: both are concerned in it; its results pass, as it were, across from one to the

> other. One or other or both may be helped or harmed thereby. But, presumably, the consequences of advantage and injury do not extend beyond A and B; the activity lies between them; it is private. Yet if it is found that the consequences of conversation extend beyond the two directly concerned, that they affect the welfare of many others, the act acquires a public capacity, whether the conversation be carried on by a king and his prime minister or by Catiline and a fellow conspirator or by merchants planning to monopolize a market.
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> The distinction between private and public is thus in no sense equivalent to the distinction between individual and social, even if we suppose that the latter distinction has a definite meaning. Many private acts are social; their consequences contribute to the welfare of the community or affect its status and prospects.[365]

Illustrated here is the holism and continuity Dewey saw in the functional similarities of people, groups, communities, publics, and nations. Dewey's discussion of A and B in regards to the consequences of action as it relates to publics is a direct continuation of the co-designation of the flower example, or a mother's breast. In fact, you could equally say publics serve to direct and regulate the consequences stemming from the co-designations of publics, as the communities from which they emerge in and of themselves co-designate. The import here is the reminder of how individuals, and their social minds, habits, and predispositions, are creations of and creators in participation. I remind the reader of this because in the Dewey's distinction of private and public we also see one of the on-going

[365] Ibid. pp. 244-43.

themes in The Public and its Problems, that of atomistic versus social individualism. Both forming very different kinds of entities.

Atomistic individualism places the individual in opposition to the social. The individual is thought to be autonomous, essentially independent of social ties. The struggle of the atomistic individual is to free herself from society "claim[ing] his [or her] inherent or 'natural' self-possessed and self-sufficing rights."[366] Conversely, social individualism is non-autonomous, dependent upon social ties. The struggle of the social individual, key to the Deweyan extension of Knowledge Producing Schools I propose, is that of "readjusting groups and individual to one another . . .the actual problem is one of reconstruction of the ways and forms in which men [women, and children] unite in associated activity."[367] Dewey saw that this struggle, how do we connect to each other, as particularly acute in times of rapid change to the social conditions that affect day-to-day interactions in communities, such as technological innovation and globalization.[368]

Atomistic and social individualism form very different kinds and awareness of public entities and as such different formation of state. As Dewey states,

> And the differentiation may dispose us to look with more favor upon the proposition already advanced: namely, that the line between private and public is to be drawn on the basis of the extent and scope of the consequences of acts which are so important as to need control, whether by inhibition or by promotion. We distinguish private and public buildings, private and public schools, private paths and public highways, private assets and public funds, private persons and public officials. It is our thesis that in

[366] Ibid. p. 355.
[367] Ibid. emphasis mine. This will be further developed in the conclusions of this chapter.
[368] Ibid. p. 355.

> this distinction we find the key to the nature and office of the state. It is not without significance that etymologically "private" is defined in opposition to "official," a private person being one deprived of public position. The public consists of all those who are affected by the indirect consequences of transactions to such an extent that it is deemed necessary to have those consequences.[369]

The distinction of public as based on the extent and scope of consequence is a relational view compatible with social individualism. Atomistic individualism emerging from persons trying to liberate themselves from their society would not produce social reciprocity morality contextualized in communal interest. I conclude this because with atomistic individualism the activation of the individual is connected to self-interest, i.e. inherent or 'natural' self-possessed and self-sufficing rights. In atomistic individualism things like public opinion, capital, action, responsibility, and social good becomes divorce for the community.[370] Likewise, since matters of concern are not contextualized as consequences to communities but instead consequences for individuals when publics do form they usually form around individual, for instance special and private interest publics sorted by artificial means, habits of self-identification, tradition, or as the product of other more powerful publics as in districting and redlining.[371] Thus how public entities form and function shows us that atomistic or social individualism describe specific ways and forms in which people engage in activity, and their predisposition to that engagement resulting in differentially able capital and publics in regards to the ability and desire to respond to matters of concern effecting specific communities.

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[369] Ibid. p. 245, emphasis mine.
[370] Ibid. pp. 296-8, 328-9, 356.
[371] Ibid. pp. 301, 331, 348-9.

One important issues arising in this discussion of atomistic versus social individualism and the fruit each bare, is that each produces very different primary sites of capital. The good or bad equated to specific publics and social capital is a judgment made in an analysis of the social consequence stemming from that specific public or capital formation (e.g. atomistic or social). For example, one direct consequence involving the erosion of communities as primary cites of capital due to atomistic individualism and the economic and political changes created by corporate-government entities, is that community social ties and control declined and thus was lost as a primary site of capital. That lost was "partially compensated by an increase of social capital in its second form, familial support." Familial support as the prime source of social capital was the most easily withstood by those families, such as middle class white families, with access to and ownership of much capital.[372]

In Dewey's social individualism the public comes into being as a distinctly functional entity consisting of those who share some consequence and the need for that consequence to be mediated or redirected. The public is a political state.[373] That the public is explicitly seen as the functional extra-organic extensional means, or tool and technology, for a community to protect, pursue, and negotiate its interest is of utmost importance. Extra-organic extensional means transform the environment and individuals in durable ways. We see that publics change the formation of the state, and we also see that the types of public entities we act with, within, and against change us. Various communal bodily forms of participations create meaning and our embodied perceptions. These participations

[372] Portes, A. (1998). Social capital: its origins and applications in modern sociology. In Annual Review of Sociology. 24:1-24, p. 12.
[373] Dewey, J.(1927/1984). The Public and its Problems. In Jo Ann Boydston (ed.) John Dewey: The Later Works, Volume 2 (235-372). Carbondale: Southern Illinois University Press, p. 258.

and perceptions directly form the structure, direction, and nature of public entities in that our participation in various communities with numerous tools forms our associations, interests, and us. Dewey states that,

> Roughly speaking, tools and implements determine occupations, and occupations determine the consequences of associated activity. In determining consequences, they institute publics with different interests, which exact different types of political behavior to care for them.[374]

Habits and predispositions determine our occupations, social practices, and relationships with specific technologies, which in turn calibrate our associated activities that form our communities and personal interests. Since political behaviors, as in public entities are the activation of perceptions and interests there are direct and connecting consequences between habits and predisposition [which include will and perception], social practices, technology, interests, and political action. Atomistic individualism and social individualism produce very different fruit, due to the perceptions and interests constituted.

In light of this discussion of atomistic individualism and social individualism what kind of individual is rendered in KPS scholars' conception of reconstruction for Knowledge Producing Schools? I see a self-willed, atomistic KPS individual picking up passive tools and acting out the associated performativity of New Literacies to fulfill her interest, and to me in regards to KPS scholars' socio-cultural goals this is suspect. How can her interests be fully known, and investigated by her in isolation? What interests are in, gelled from others existential experiences, the second hand practices and technologies that make up the New Literaices she is urged to passively assimilate because it is good for her functioning in the new social system? Detached from a community engaged in day-to-day

[374] Ibid. p. 263.

life that explicitly experiences, knows, and reflects on the bodily forms of participation required to create meaning, knowing and contextualize experiences, how or who mediates her experiences in the practice of rote literacies? Our student becomes an "autonomous chooser," of literacies she freely uses to act in a self-help way that may have some value of community but sees no dependency upon it.[375] As Dewey states,

> The idea of a natural individual in his isolation possessed of full-fledged wants, of energies to be expended according to his own volition, and of a ready-made faculty of foresight and prudent calculation is as much a fiction in psychology as the doctrine of the individual in possession of antecedent political rights is one in politics.[376]

Atomistic individualism or individuals disconnected from community and intentional connection to others cannot hope to create the capacity or conditions necessary to act or exert social power in ways to know, secure and protect their interest, i.e. community. This is why Dewey states,

" 'The new age of human relationships' has no political agencies worthy of it. The democratic public is still largely inchoate and unorganized."[377] Atomistic individualism along with ongoing unregulated social changes that change the form of human association has left us as citizens incapable of exerting any real power to create or redirect consequences that affect our lives. Since we are detached for communities to know those consequences, make sense of our experiences, and make intentional contact with each

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[375] Biesta, G. & Lawy, R. (2006). "From teaching citizenship to learning democracy: overcoming individualism in research, policy and practice." In Cambridge Journal of Education, Vol. 36, No. 1, March, p. 68-9.
[376] Dewey, J.(1927/1984). The Public and its Problems. In Jo Ann Boydston (ed.) John Dewey: The Later Works, Volume 2 (235-372). Carbondale: Southern Illinois University Press. p. 299.
[377] Ibid. p. 303.

other, and build capital we cannot influence the formation of the state as able publics. The public says Dewey, "seems to be lost; it is certainly bewildered."[378] "The outstanding problem of the public is discovery and identification of itself."[379]

Atomistic individualism creates politics geared toward the interests of isolated agents. Strangers, experts, special interest groups, and private think tanks appeal and urge us as isolated consumers to do this, think this, buy this product, or feel this way about a specific issue, policy or law. The interest of one, "the bare individual [or family] face-to-face with the state," is reliant on the mediation of their lives by a market of mediation providers.[380] Mediation providers are those that provide products, services, and points of view to respond to policy and law that is sold as being in the interest of the individual, for example, your media sources, retirement, childcare, health, and food. So politics is left up to professionals, journalist, lobbyist and experts while we negotiate our individual interest in a sea of individual consumer and service oriented offerings. Along with securing and limiting our interests to purchasing products and services our predisposition to think in terms of consuming tends to make the point of work individuals leisure, divorcing politics as a necessary part of life and community. We tend to not see consequences as systemic because we are not in contact with diverse others in ways to know them.[381] In other words,

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[378] Ibid. p. 308.

[379] Ibid. p. 351.
[380] Ibid. p. 329.
[381] Our day-to-day communications with others may increase in quantity via blogs, cell phones, email, My Space, IM and other ICT, but an increase in intensity of communications or exposure to global news does not ensure a richness and diversity in who we communicate with nor a knowledge of their specific consequences. It may be that our social networks, especially in the white, middle, class are becoming increasingly narrow while they increase in intensity as we more easily find, via ICT, others who share our specialized interests. See, Bargh, J.A. (2002). Beyond simple truths: The Human-Internet interaction. Journal of Social Issues, Vol. 58, No. 1, pp. 1-8. Also see, McKenna, K., Green, A., Gleason, E.J. (2002). Relationship Formation on the Internet: What's the big attraction? Journal of Social Issues, Vol. 58, No. 1, pp. 9-31.

we tend to stay within out own "interpretive communities."[382] We are not engaged in the politics of negotiating regarding those consequences because the mediation of those consequences, especially for the upper and middle classes, is a service we purchase from others who are professionals in the market of political and news offerings. Dewey described this as the power of "bread and the circus" and says it serves to divert attention from public matters. [383] The public is left unable to see itself and is therefore an "inchoate public."[384] We have too many ways in which to play and work in the pursuit of our individual personal freedom from the constraints of the world to even think about intentional connection to others and becoming attached within communities and organizing into publics. Dewey states that until,

> the Great Society is converted into a Great Community, the Public will remain in eclipse. Communication can alone create a great community. Our Babel is not one of tongues but of the signs and symbols without which shared experience is impossible.[385]

I will first develop some of the historic background of the "the Great Society" before describing what Dewey calls the "Great Community." After that I will touch upon how they differ in the forms of the "public will" each tend to facilitate.

Writing in 1927, Dewey's concerns with "the Great Society" were Woodrow Wilson's Great Society. Wilson's proclamation to make the world safe for democracy begs the question what kind of democracy. International policy associated with this time (1900-1933) shows a great concern with the interests of capitalist and an overwhelming

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[382] Whitty, J. (2006). The thirteenth tipping point. In Mother Jones, November & December, p. 46.
[383] Dewey, J. (1927/1984). The Public and its Problems. In Jo Ann Boydston (ed.) John Dewey: The Later Works, Volume 2 (235-372). Carbondale: Southern Illinois University Press, p. 321.
[384] Ibid.
[385] Ibid. p. 324.

assumption that only an elite few, people, groups, and countries, were seen as equipped and able to create, participate in, and manage democratic systems. The Great Society also marks a dramatic change in the structural conditions of American governance and power. Wilson's administration created the Committee on Public Information the propaganda machine for the administrations policies. Wilson's "arsenal of democracy," mobilized the military, and expanded greatly the size and regulatory powers of the government into the day-to-day affairs related to food, fuel, and armaments.

The Federal Reserve Board was created in 1913, and the Federal Trade Commission was created in 1914. The U.S. also became a corporate dominated economy. As the corporate-dominated economy increased in size and scale it became, and continues to become, so interconnected that every action has great, and diverse social consequences.[386] Current examples would be the policies of the World Trade Organization, or International Monetary Fund (IMF).

The Great Society created vast impersonal organizations that were not remote. The consequences to day-to-day were so great that Dewey writes,

> The local community without intent or forecast found their affairs conditioned by remote and invisible organizations. The scope of the latter's activities was so vast and their impact upon face-to-face associations so pervasive and unremitting that it is no exaggeration to speak of a new age of human relations.[387]

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[386] Lafeber, W. (1999). The tensions between democracy and capitalism during the American century. Diplomatic History, Vol. 23, no. 2. Blackwell Publishers: USA.

[387] Dewey, J.(1927/1984). The Public and its Problems. In Jo Ann Boydston (ed.) John Dewey: The Later Works, Volume 2 (235-372). Carbondale: Southern Illinois University Press, p. 298.

The Great Society not only invaded the community with an increasingly remote but locally organizing government [social condition] but also with an increasingly legitimized individualistic philosophy [atomistic individualism].

Individualism, especially in the U.S. has co-opted the characteristics of the community and located those characteristics in the isolated individual. The ideologies of both the state and social sciences went increasingly toward legitimizing the individual and individual consciousness-mind as the location and direct recipient for liberty, equity, social change, analysis, attributes, and abilities. The focus on individual rights, abilities, attributes, changes of consciousness, and isolated individuals working hard to obtain the American dream populated the state with individuals and in doing so both community and publics were eroded.[388]

A capitalistic corporate-dominated economy kept the means of production and the role of the media in the control of a powerful few in the corporate oligarchy. The corporate oligarchy also has a deep conflict of interest in the government, an example being military contracts, or social science funding and research support. Atomistic individual-citizens having their lives progressively mediated by political services, products, and a media created by a corporate and expert society resulted in a homogenized culture under corporate control. Dewey describes this evolution as the,

> The transition from family and dynastic government supported by the loyalties of tradition to popular government was the outcome primarily of technological discoveries and inventions working a change in the customs by which men had been bound together.[389]

[388] Ibid. pp. 297-301.
[389] Ibid. p. 327.

Consequences previously ascertained by the community or made public by a media that felt obligated to challenge and criticize the corporate-government interest were replaced by a corporate society and corporate values and consequences. Those corporate values became, unregulated by affected publics, the catalyst for the techniques, technologies, practices and institutions that preserved and extended corporate values. This can be seen in the historic evolution of corporate "rights" in America. The conditions of human association are calibrated by ideology and technology that is in the image of corporate interests. In this the public can have no form.

Dewey discusses the necessary conditions for a formless public to render and function. The individual must be connect to the community, and the community must see the value in its many and diverse participants. As Dewey states,

> In a search for the conditions under which the inchoate public now extant may function democratically, we may proceed from a statement of the nature of the democratic idea in its generic social sense. From the standpoint of the individual, it consists in having a responsible share according to capacity in forming and directing the activities of the groups to which one belongs and in participating according to need in the values which the groups sustain. From the standpoint of the groups, it demands liberation of the potentialities of members of a group in harmony with the interests and goods which are common.[390]

The democratic idea in its generic social sense is in fact community. Democracy is then an understanding of community life, so to support the conditions of equitable communities is

[390] Ibid. pp. 327-8.

to facilitate democracy.[391] Some of these conditions of community have been the implicit elements I have been discussing, such as, social inquiry, and community building, in KPS. Communities must have engagement in deliberative public social inquiry, repositories and ways of making public relevant information and expertise, and diverse coalitions with each other "to develop organs of fulfillment," bringing state formation in being that reflect its interest.[392]

These Communities must be harmonious environment that serve to liberate the potential of its member. Authenticity as seen by KPS scholars as a resource for the community, is such an environment. Likewise, in one of the Knowledge Producing Schools' case studies described in chapter 1 the researchers and teachers found sustainable changes in the boys as a result of their experiences in the project that valued the boys' unique expertise seeing it as a resource for the group project. Human association is organic in origin and the condition for community, but when communities intentional think about how they do and how they can connect to sustain the development of thing desired by the community a powerful mode of creation is unleashed.[393]

The content of our intentional and unintentional links to each other is filled by communal values and perceptions made flesh by the habits and predispositions we acquire by participating in the customs and traditions of our communities. There is no natural fruit that communities bring forth, instead habits and predispositions of participants are formed

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[391] Ibid. pp. 326-332. My focus on the conditions of community, such as public social inquiry and community building, are focused on what educational reform effort might be able to do presently in the restructuring of schooling and schools. It is not my intent to marginalize the material needs that exist in communities, such as, food, shelter, environmental and physical safety, and health care, that are necessary for political reform in conjuncture with the conditions of community discussed.

[392] Ibid. p. 254.

[393] Ibid. p. 328.

in action guided by the customs and traditions, or values and character, and technology of the community. Dewey makes this clear in his discussion of habits.

> Habit is the mainspring of human action, and habits are formed for the most part under the influence of the customs of a group. The organic structure of man [woman or child] entails the formation of habit, for, whether we wish it or not, whether we are aware of it or not, every act effects a modification of attitude and set which directs future behavior. The dependence of habit-forming upon those habits of a group which constitute customs and institutions is a natural consequence of the helplessness of infancy. The social consequences of habit have been stated once for all by James: "Habit is the enormous fly-wheel of society, its most precious conservative influence. It alone is what keeps us within the bounds of ordinance, and saves the children of fortune from the uprisings of the poor. It alone prevents the hardest and most repulsive walks of life from being deserted by those brought up to tread therein. It keeps the fisherman and the deck-hand at sea through the winter; it holds the miner in his darkness, and nails the countryman to his log-cabin and his lonely farm through all the months of snow; it protects us from invasion by the natives of the desert and the frozen zone. It dooms us all to fight out the battle of life upon the lines of our nurture or our early choice, and to make the best of a pursuit that disagrees, because there is no other for which we are fitted and it is too late to begin again. It keeps different social strata from mixing.[394]

[394] Ibid. p. 334-5.

Predispositions form our habitual political perceptions and actions, our public will, forming our abilities or inabilities to be coherent publics. That something like "consciousness raising" may be effective may have more to do with what those experiences disrupt, as in habits and predispositions, and how those efforts take place, as in connections between people and communities that result in communal will of action as a public than some change of consciousness.

If we saw issues of race, class and gender as deeply embodied predispositions how different would our curriculum, schooling, and political strategies to combat them be? Our strategies would gravitate toward experiences in diverse groups with the cultivation of embodied knowing or intelligence in those groups. Our strategies would be making public both inquiry and the consequences of specific social actions to particular communities. Our strategies would seek out and highly value the resource of diversity. In fact, our strategies, as far as schooling, would look very much like the democratic communities or the communities of inquirers I described in chapter 2. The individual would not be isolated but instead deeply interconnected to community.

Dewey on Individuality and the Public: Atomistic versus social individuality

"The public," Dewey writes, "cannot find itself if all intention, will, and change resides in the individual disconnected from the community."[395] Atomistic individualism cannot create community since it is conceptually disconnected from it. In that selves are made sense of as complete and "outside of association with others,'" and thought is seen as "guided, if not solely, then most prominently by self-interest."[396] For complete,

[395] Dewey, J. (1927/ 1991). The public and its problems. Swallow Press: Ohio University Press, pp. 150-1.
[396] Boisvert, R.D. (1998.) John Dewey: rethinking our times. SUNY Press: Albany, p. 66.

autonomous selves, community is perhaps necessary but also, burdensome to innate liberty and freedom.

Dewey rejected atomistic individualism seeing this philosophy as incompatible and damaging to democratic community. Instead, Dewey held a position of social individuality. Social individuality maintains that ever-changing selves are constituted by and constantly calibrate in regards to human association. Individuality not only reaffirms that we become the practices we participate in, but that we are always changing and growing as our associations, experiences, habitual disruptions, and connections with each other and the world change and re-link.[397] We are a sum of our experiential transactions, but that sum is never complete until we die. Selves in Dewey's individuality are, as are communities, events, and not finished nouns.

Social individuality renders a more unique self than individualism. How ironic this statement because of how passionately autonomy is guarded as a personal possession. Since the self is a product of unrepeatable, temporal trajectories of events, experiences, disruption, reflections, and transactions each self is a 'one-time' work of the universe. No one else has had your identical configuration of experiences in the same time-space as you. Yet even thought we are deeply unique we connect as social animals in the commons we create, emerge from and require to solve day-to-day problems.

Social individuality is the self connected to the community. This understanding of self as connected; dependent upon, yet unique from, the community facilitates a deeper value of the community and diversity. The community is part of who we are and are becoming and therefore, necessary and of value. Also we are all unique and therefore the community is always diverse regardless of how homogeneous it may appear. The

[397] Ibid. pp. 66-7.

important distinction here is that social individuality, especially in communities' valuing social reciprocity and morality, tends to gravitate towards common interest instead of, in atomistic individualism where interest is purposefully tied to the self. An example is the Native American, First Nations, and Alaska Native cultures prophecies and self-reflective practices of "seventh generation," or "the good path," usually known in mainstream American culture as the inquiry into the consequences of a specific action up to the 7th generation to come.[398] The seventh generation practice, most common to us as co-opted by mainstream American culture and used in an ecological context, changes action by bringing into consideration the implications to not only the current individual and community involved but also the communities to come. We live in communities with which we have an emotional bond, and from which we extend moral equity to the children of our and other communities, before they are even born. Ideas of stewardship involve much more than ourselves and are communal, generational projects.

Equity as a communal project

Dewey rejected the idea of equity as an original possession; just as he rejected innate ideas of self and freedom. Equity, Dewey stated, is "not a natural possession but is a fruit of the community."[399] While rejecting equity as an original possession Dewey saw equity as a necessary value for and desirable creation of democratic communities. Dewey acknowledges physical and mental inequity, but insisted on moral equity (e.g. equity before the law). For example, children and infants are not physically or mentally equal but they are, as demonstrated by most of our childcare practices, customs, and traditions,

[398] Bergstrom, A., Cleary, L. M., & Peacock, T. (2003). The seventh generation: Native students speak about finding the good path. Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools.
[399] Dewey, J.(1927/1984). The Public and its Problems. In Jo Ann Boydston (ed.) John Dewey: The Later Works, Volume 2 (235-372). Carbondale: Southern Illinois University Press, p. 330.

morally equal. Equity, for Dewey, means a rejection of one universal hierarchy and the need to value the uniqueness of all participants.[400]

Equity as a communal standard and project of a community relies upon the value and actual contributions of unique individuals in connection with other unique individuals working together on communal projects. Being in connection, positions individuals in complex sets of pluralistic relationships involving diverse peoples, values, beliefs, histories, and environments within the community.[401] Equity is fostered in forms of social participation that afford opportunities, or what I will call "geographies," for equitable deliberations, experiences, and actions. This is precisely why Dewey states that democratic ends can only emerge from democratic means – we must existentially experience our desired values to embody them and makes them durable parts of our society. Geographies of participation mean an intentional analysis of the social-spatial relationships of knowing, and how the social-spatial relationships form the interpretive frames that create specific knowing, as doing, for various actors. In other words, equity is a social phenomenon connecting transforming contexts. As a community becomes more self-determining in a way that values and envision unique individuals so do its participants.

Communities are not the result of just ad-hoc collective action but intentional actions that create contexts, ecologies, and geographies tending toward particular forms of participation and functional action. Dewey insists: "Human associations may be ever so organic in origin and firm in operation, but they develop into societies in a human sense only as their consequences, being known, are esteemed and sought for."[402] Those things "esteemed and sought for," such as equity do not just happen, but instead we must

[400] Boisvert, R.D. (1998.) John Dewey: rethinking our times. SUNY Press: Albany, p. 66.
[401] Dewey, J. (1927/ 1991). The public and its problems. Swallow Press: Ohio University Press, p. 64.
[402] Ibid. p. 152, emphasis mine.

gravitate towards forms of things desired and in doing so calibrate to what we and our communities desires. Participation changes as we gravitating towards desired things changing social functions, which evolve into other kinds of functions. The state of oppression becomes the means of equity. As Dewey states, "we use the foresight of the future to refine and expand present activity. In this use of desire, deliberation and choice, freedom is actualized."[403] Communities are communities of interest where members are modified, as are their interest, as a result of dealing with matters of concern in regard to that interest.[404]

Present activity or participation is the agent of change, the reconstruction and sustainability for things desired. The social inquiry and community building implicit in KPS is an organization and interpretation of present activity that works towards a desired participation. I make this statement because social processes create patterns of human association and spatial relationship which in turn create not only identity and agency (thing which influence and position actor's actions), but also form and reform human institutions and organizations (as will be illustrated with Ben's day care example) that serve to spread, regulate, or limit those social links and relations. In other words, present activity creates current ecologies of participation that interpret or give meaning to social-spatial relationships, which in turn form and create more durable geographies of social-spatial relationships.[405] The point of this dissertation is that if you are thinking about effecting the

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[403] Dewey J. (1922/1988). What is freedom? The middle works, 1899-1924, Vol. 14. (Ed.) Boydston, J. Southern Illinois University Press: Carbondale, p. 215.
[404] Dewey, J. (1927/ 1991). The public and its problems. Swallow Press: Ohio University Press, pp. 152-5.
[405] My use of term geographies is influenced by Doreen Massey and is used to convey that spatial relationships and forms along with geographical location play a part in the structure and character of durable social structures associated with actors and with 'things' such as organizations, traditions, customs, beliefs etc. In other words, the location and spatial relationships experienced in social relationships matters, contributes, and connect contexts. See, Massey, D. (1994). Space, place and gender. University of Minnesota Press: Minneapolis.

communal projects of equity and knowledge then you need to be thinking in terms of what types of social-spatial relationships interpret the meaning and facilitate the emergence of equity and knowledge specific to that community, this is authenticity – democratic community and public social inquiry.

Social Inquiry and geographies of participation

Here I introduce some ways of thinking in regards to "ordering the relations and enriching the experience of local associations" in Knowledge Producing Schools by way of public social inquiry and community building. We are thinking with intent about not only the social but also the spatial aspects of community-schooling experiences, or as I refer to it social inquiry and the geographies of participation. This is the beginning of investigating Dewey's truly social theory of reconstruction. A participatory community becomes an intentionally transformative entity as a context of unity in purpose, such as equity, is created and excellence is desired, as in cultivating social intelligence-inquiry, and hosted by a value of difference then with consequential reflection and communication the community has the means to work towards desired changes in practically solving life's problems. I have just described a community of inquirers, or a democratic community.

The community of inquirers just described is consistent with the basic tenet of practice theory or socio-cultural views of literacy, "personality, selfhood, subjectivity are eventual functions that emerge with complexly organized interactions, organic and social."[406] The purpose, to be developed in the next chapter, is to fully situate, with intention, KPS scholars' concern with authenticity into the various geographies of social creation that create it. The development of a capacity or knowing is not just tool in hand or even an individual in isolation engaging in some practice with tool in hand.

[406] Dewey, J. (1958). Experience and nature. Dover Publications: New York, p. 208.

> Knowing is not so much a matter of 'finding out' as it is a matter of 'making sure.' On this view, the kind of inquiry that leads to greater control of problematic social and political situations is also a type of technological undertaking since it involves an active construction of desirable outcomes through the use of tools and artifacts that are proper to that domain of knowledge getting. Not only science itself, but the philosophy, sociology, and politics of science become important technological undertakings.[407]

Both doing in community and social-spatial relationships of interpretation constitute and transform each other in participation. What is important is not that people 'link up' for common purposes but how they link up to engage conditions and what kind of social entities effect or disable specific types of linking up.

My intention in using geographies of participation is two-fold. To investigate the specific geographies of participation in public social inquiry (i.e. warranted assertability, knowing as inquiry) and how these geographies can serve Knowledge Producing Schools-like local self-determined community change efforts such as educational reform as social movement. My intent is also to highlight that all schooling and change efforts are attempts to impose on local geographies of participation and on their interpretive frames. The latter means geographies of participation must be in the forefront of all change efforts it also means that even the most well intentioned efforts are easily colonizing.

Specific geographies of participation in public social inquiry (i.e. warranted assertability, knowing as inquiry) connect directly to embodied knowing, which is part of a community's social and cultural capital. If you recall in chapter 2, power denotes, for Gee,

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[407] Hickman, L. (2001). Philosophical tools for technological culture: putting pragmatism to work. Indiana University Press: Bloomington, p. 40.

how literacies are used and what literacies can do. These literacies are overwhelming seen in KPS scholars' work as activated by rather atomistic intentional individuals. Knowledge is a power that resides in things. Gee states, "we can and should ask how much knowledge resides in a family, an organization, a social practice, a particular technology, a community, a culture or a nation."[408]

Gee continues stating,

> Knowledge then, is like a potential energy in physics, energy that can be released in various forms and for various purposes. . energy that resides in individuals, groups, practices, technologies…we can define knowledge, like physical energy in terms of the amount of work that it can be used to produce.[409]

For Gee, power is knowledge residing in things. This is very similar to how capital is described by Bourdieu, the focus of the next section, as in economic, social and embodied that is described in terms of what it can activate in specific events. What is of interest here is what is missing or implicit in Gee's descriptions of power. With Gee the energy of activation resides as knowledge in people, groups, technology and practice. Knowledge then becomes some stable substance.

If we instead think of the activation of power in networks of knowing in relationships transferring and pooling capital, creating boundaries and access, and residing in inscriptions, relations and assemblages of bodies, social practices, meanings, histories, and things like tools we are less concerned with knowledge and more concerned with knowing. Knowing is the capital of a community and my point is that if we think of the

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[408] Gee, J.P, Hull, G., Lankshear, C. (1996.) The new work order: behind the language of the new capitalism. Westview press: HarperCollins Publishers, p. 6.
[409] Ibid. p. 6-7, emphasis in the original.

geographies of participation that cultivate social inquiry formed and fashioned by warranted assertability we may have a self-determined way for communities to accumulate some embodied and social capital that can facilitate their formation of able publics.

Figure 1 serves as an introduction to thinking about supporting geographies of participation to facilitate able publics. This image is not meant to convey that embodied knowledge always fits some predetermined circular path, but is instead intended to illustrated knowing as distributed among human and nonhuman actors, and the cultural habits, norms and customs of various communities.

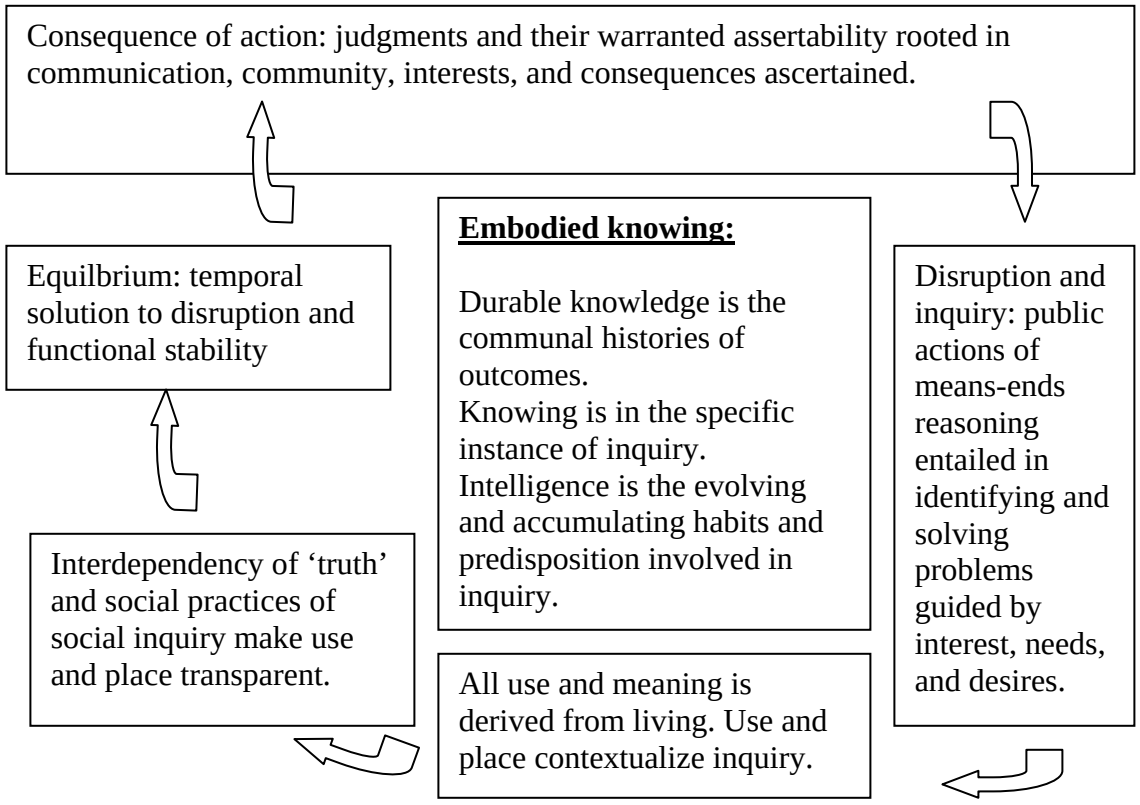

Figure 1: Embodied Knowing. Derived from, Boyles, Deron (2006). Dewey's epistemology: an argument for warranted assertions, knowing, and meaningful classroom practice. In Educational Theory, 56(1), pp. 57-68.

A key point, introduced here and developed in chapter 4, is that knowing is the embodied intelligence of a community. Knowing resides distributed in customs, traditions,

techniques, norms and subject-matter of and among communities and is embodied and inscribed in individuals who participate or have participated in those communities. For example, the military in boot camp highly regulates recruits reinscribing their bodies, identities, knowing and perspectives to that of soldier, reminiscent of Foucault famous example of the soldier's stance in his book Discipline and Punish.[410] Thinking and being a soldier is socially distributed in time and space, resides in the habits, will, perceptions and values of bodies, and in customs and norms of various communities. The accessible accumulation of ongoing intentional judgments and resolutions of reoccurring and novel problems-solutions is the capital a community uses to socially function. Historic judgments and resolutions are sometimes implicit in things like customs and sometimes explicit when they are revisited as the focus of communal inquiry and deliberation. However that knowing and, as such a community, is positioned by, supported, warded or systematically destroyed by other communities directly relates to a communities ability to negotiate its interest in any given society.

What we see here is that, as Bigum states, Knowledge Producing Schools are all about relationships. Though about what these relationships are and how these relationships, by way of participation and institutionalization, direct action by embodied intelligence or knowing is very different than what KPS scholars seem to imagine. To further develop this, I will first introduce some general concepts of Pierre Bourdieu and then will make this introduction concrete by revisiting my ongoing example with Benjamin and using Bourdieu's general concept to analyze Ben's day care situation.

[410] Foucault, M. (1994). Discipline and Punish: The Birth of the Prison. Random House: New York.

Material Capital, Cultural Capital, and Social Capital: Pierre Bourdieu

This section presents a brief introduction to the conceptual frames relevant to capital and publics. To do so I make these frames concrete in examples of Ben's day care experiences that are relevant to his entrance into and negotiation of a larger community. Before sharing these examples, I will first develop an introduction to the conceptual frames relevant to capital and publics.

Capital is more common regarded as monetary exchange. Bourdieu produced the first comprehensive analysis of the role of non-monetary forms of capital as a source of social power and agency. Social capital views the benefits of the individual as acquired, reserved, and accessed by virtue of this individual's participation and membership in specific social networks.[411] Benefits of social networks include the historic, accumulated, and horded resources of the network. Social capital describes social structures. Powerful social networks than can generate and enforce norms, facilitate decisions, actions, and positions of actors, and provide access to specific experiences and participations. These become durable in habitus and as such, have a value of exchange as social capital. Habitus is the regularities of our lives "as in stable orientations and ways of acting."[412] Social capital, as an ongoing property of community, creates, produces, organizes, and sets up patterns of participation and action for participants, such as acting as publics, habits, norms and other durable structures. Social capital also provides contexts to actualize specific types of capital, i.e. cultural and material capital.

[411] Portes, A. (1998). Social capital: its origins and applications in modern sociology. In Annual Review of Sociology. 24:1-24.
[412] Hanks, W. F. (2005). Pierre Bourdieu and the Practices of Language. In Annual Review of Anthropology, vol. 34:67-83 October, 2005, p. 69.

Material capital refers to economic resources. Material capital is most commonly thought of as money, property, and things with stable exchange value. Individuals and groups are usually seen as holding particular capital in specific locations and spaces, such as owning a “block” section of downtown Blacksburg, Virginia. Material capital is not only owned but also produced. For example, KPS scholars, citing Jean-Francois Lyotard, argue that technological trends and globalization in a computerized world, calibrated to market demands, not only changes the forms of, but access to, material capital.[413] In the process, these trends and market demands legitimizes specific performances as most valuable. For example, information becomes material capital via data mining. Material capital reserves and creates specific performances, such as New Literacies. These "legitimized" performances, specific knowledge, technique, and practices, are New Literacies.

Cultural capital describes our memberships in specific social networks and also how those social networks, over time and with accumulation, create durable institutional states that legitimize the character and value of the social networks. Embodied capital describes the habits and predispositions acquired from participating in and having access to those social networks. Embodied capital translates into positive social capital as actors’ specific dispositions become legitimized in the cultural capital that renders the day-to-day fields of action or habitus; the site of which is the body. For example, the habitual perspectives valued in New Literacies “mind sets” are the embodied capital of specific actors.

[413] See, Lyotard, Jean-Francois (1984). The Postmodern Condition: A Report on Knowledge. Translated by Bennington, G. & Massumi, B., University of Minnesota Press: Minneapolis.

The site of habitus in the body illustrates the fluidity in body, self and society. Habitus is the durable constitutive structures of customs, traditions, normative structures and meanings that we are born into and acquire which frame the familiarity of our embodied experiences. Gendered performances can illustrates this well. For example, women socially distrusted with their sexual negotiations are seen as needing and existentially experience in norms and traditions powerful social regulations for sexual purity resulting in porous sexual boundaries vulnerable to the equally constructed heterosexual male sexual possessiveness and lack of control. It is easy to commit to Dewey's thinking on habits, social customs and norms. As we participate in associative action our bodies are inscribed by habits and predispositions to action. Habits and predispositions are correctly thought of as dynamically evolving but are also very durable and acquired by the participation of communal norms, customs and traditions. This bodily inscription becomes our grasp of being a specific body. "Habitus," states Hanks in his discussion of Bourdieu,

> Explains regularity by reference to the social embedding of the actor, that fact that actors are socially formed with relatively stable orientations and ways of acting . . .<u>the stability of habitus is not expressed in rules, which Bourdieu rejects but in habits, dispositions to act in certain ways, and schemes of perception that order individual perspective along socially defined lines.</u>[414]

The observance of the normative structures we acquired in the socialization and participation in the communities we participate serves to internalize norms in members.

[414] <u>Ibid</u>. emphasis mine.

Norms in one community can be resources in other communities.[415] For example, sexism and heteronormativity internalize behavioral norms of habitual response in specific members that are appropriated by other members, such as powerful white males, in a patriarchal capitalistic system that relies on specific domesticated roles for women, and specific roles of masculinity for men. The power of the white, patriarchal, capitalistic system in this example is in part due to how the behaviors of others, non-members of full access to benefits, can be controlled by normativity and the behaviors of which are in turn appropriated for the fulfillment of this specific social network. Benefit remains stable as social networks control access, which networks do by way of the fluidity of habitus; internalized norms that inscribed the body and form its interest and the production of durable social structure that bring state formations in being in the image of the network.

Individual actors are better envisioned as distributed nodes in larger social networks. They are constituted from and constitute the communities they participate in. As nodes, actors' benefit from, constitute, and contribute to the economic and cultural capital of their social networks.[416]

Cultural capital as embodied capital (i.e. habits) is objectified in the translation to social capital, i.e. becomes a legitimized social good.[417] For example, when the upper and middle class demeanor, embodied capital, is made sense of as innate natural aptitude, social capital is translated to a 'social good' that benefits those that have it. Educational measures (standards, tests, etc.) created in the image of upper and middle class social and cultural norms and dispositions are the institutional means by which the embodied capital

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[415] Portes, A. (1998). Social capital: its origins and applications in modern sociology. In Annual Review of Sociology. 24:1-24.
[416] Bourdieu, P (1986). The forms of capital. In: Richardson, J. (Ed.) (1986) Handbook of theory and research for the sociology of education. New York: Greenwood Press, p. 241.
[417] Ibid. pp. 242-47.

of a specific demeanor becomes the legitimized social good of "high ability." Demeanor is an instance of cultural capital, as are test-taking skill. The interest of the social network or community to retain and protect capital of all kinds is ensured through institutional means. The main precondition of appropriating economic and social capital is embodied capital or habits.[418]

Dewey's basic concepts of habits, community, and publics support this discussion of capital. We can see the direct relationship between the formation of actors' interests and the mobilization of those interests in communities' action as publics.[419] This is not a change of consciousness, but deeply inscribed, long-term acquired, desires, needs, wants, and emotions. Our habits and predispositions i.e. embodied capital is acquired in the communities we participate in. In forming us, habits and predispositions, and participation are forming our interests.

Demeanor is something we acquire in the form of our dispositions or identities. A demeanor is usually an articulation of class, how we look, make sense of things, tend to response and behave. Our demeanor is meaningful in that it evokes responses in others, and prefigures how we make sense of event, people, and ourselves. Demeanor is the participation of our culture brought into ourselves by way of habits, as such; they are distributed archetypes expressing values, tastes, and customs of specific classes and communities. We acquire our demeanor form the collective habits or customs of our communities and culture.[420] Our habits form within sets of prior habits or customs. These customs, norms, and values must be acquired, to some extent, for an agent to share,

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[418] Ibid. p. 247.
[419] Dewey, J. (1927/ 1991). The public and its problems. Swallow Press: Athens, p. 44.
[420] Dewey J. (1922/1988). Human Nature and Conduct: The middle works, 1899-1924, Vol. 12. (Ed.) Boydston, J. Southern Illinois University Press: Cardondale, p. 43.

function and have a part in a community. To make more concrete the concept discussed in this section I will now return to my on-going example with Ben.

Ben enters the civic public realm

When Ben began part-time daycare at 16 months he entered a situation where the children did not sign. Ben quickly stopped signing and began to use more words. His habits of communication changed, habituated signs did not work in his new social context, and so he needed to work toward a new set. He needed to develop new habits to successfully participate in his new daycare setting. Ben began, as all children, to use one-word sentences, then built up to full sentences that increased in complexity almost daily. At three-years old it is common for children to begin to deceive and find humor in the absurd. If I tell Ben, as I did last night, it is time to brush your teeth, and he tells me, I have already brushed my teeth, which I know is untrue, Ben is intentionally misleading me so that I cannot coordinate a teeth-brushing activity with him. Ben finds humor in wacky words, and silliness, such as my telling him his ear is a cookie, and he makes up language with his friend Alex in daycare. His understanding of commonly designated knowledge-objects and the stand points of others in those objects is so well developed at three years of age that he finds humor in the breech of those common standpoints.

Our co-designations now explicitly involve the negotiation of significant meaning, i.e. language. Playing with blocks together Ben and I at first just began to stack blocks, then the shape was ‘walls,’ so we needed a roof, and had windows to see each other through the house. We had no goal to begin with other than play with blocks, what emerged from playing with the blocks and shared operations, such as walls, roof, and house, was building a house together. Ben and I have through co-designation by taking the

standpoint of each other created meaningful contexts and objects, which serve our daily coordinated activity. Our relationship with each other continually transforms who we are through activity. Ben also coordinates activity with larger communities; for example, with his peers at daycare, his cousins, and other people he sees and interacts with. He has been brought into the 'making common,' or larger durable co-designations of his culture. His peers reaffirm this at daycare; for example one day after I picked Ben up he told me that Miranda and Lucy were married. After inquiring with his teacher I was told that the toddlers, all about 3, were dramatically acting out, in unstructured play, the role of married couples engaged in cooking. The children had brought into their daycare room their acquired predispositions of 'family,' they had received from home and were able to coordinate these predispositions in play because the roles are common as powerful customs and social norms in the culture they share. In doing so, these children are reinforcing these cultural predispositions by being able to coordinate them. These children also self-monitor, and monitor each other's performance in the acting out of these roles. The associative action of play at school is especially powerful because these children see themselves as part of what they observe, and feel a need and desire to make a place for themselves. They refer to themselves, as their teachers' refer to them, as "yellow room friends," the name of the room they are presently in. These children have taken up in their pre-disposition to position themselves and each other a norm that they are maintaining as valid in their play.[421] Ben who has acquired his habits and meanings from participating in his culture can only understand what he can control, and how he can resist after he has been successfully brought into the habits, knowledge-objects, and common meanings of his culture.

[421] Davies, B. (1993). Shards of glass. Hampton Press: New Jersey.

There are penalties for not coordinating "the common" in play. Ben tends to play differently than many of his male peers. He teachers have noticed that he prefers to play with the girls and dislikes the pushing and rough play of the boys. Many of the boys make weapons out of everything and dramatically use them against each other. The weapons scare Ben, he wants to play with the boys but they are, from his own self-reports, unfriendly, rough, and do not want to play with him. Ben sometimes tells these boys that they watch too much television. Ben also 'learned' just recently that it is not okay to like pink, the verdict is still out for purple. At 3 years old Ben is experiencing, to some extent, exclusion from not fitting into, or taking up a specific gendered position, the deeply grooved systems of interaction and values that outline toddler gender performance in his daycare room. The penalties, if Ben continues to not properly "take up" his masculinity, will increase in severity, as he gets older.

Ben's entry into daycare marks his move into the custom and practice of the civic public realm in a capitalist society; the shift is from family and family control to the civic domain and social sense making. How Ben is made sense of and his identity informed in this institution, daycare, is partially out of my control and directly related to the material, cultural, and social capital of my family and community. Likewise, Ben must be able to participate successfully in the customs, rules, and norms of his daycare, which will in turn influence the form of his values, mind and self.[422] Let's look at a description of Ben's daycare to expand on what customs are, and to introduce how they reflect and secure interests, identities, demeanor, social capital, and membership in specific social networks.

A professor at a local university, whose children attended the daycare, told me about the daycare Ben currently attends and provided a written and oral recommendation

[422] Ibid. pp. 43-50.

to the daycare on behalf of our family. The certification of Ben's daycare reflects only 7% of all daycare nationwide and the daycare is nationally recognized.[423] The daycare recently accepted a $30,000 per year grant from the College of Engineering at a local research level one university to give their faculty 'top of the list' privilege. The daycare is deeply intertwined with the university. For example; workshops on child nutrition and discipline are held at the daycare and hosted by local professionals. Likewise, child development research is conducted and pre-service teachers do field work at the daycare. Overall the daycare has a four-year wait.

The daycare has full-time kitchen staff along with Spanish, Art and Music teachers. Each room has an average of three full-time teachers including subs. The actual child-teacher ratio varies with age, but outside of the infants, which have almost a 1-to-1 ratio the older children average 3 teachers per 14 children. Teachers at Ben's daycare are also supported by subs, usually 2 to a room. In many states daycares average a 2-10 ratio (teacher-child) for infants and a 1-14 ratio for toddlers. I personally spoke with a teacher at the center who had experienced a 1-14 ratio in a toddler room in another state, and was moved by how she articulated the difficulty of providing safe and nurturing care as one teacher to fourteen toddlers.

All teachers have at least an Associates degree, several have Masters, and many in the administration have backgrounds as public school teachers. Subs assist full-time teachers and are usually interning pre-service teachers from the local university. Both teachers and subs. are overwhelmingly white, middle class or come from middle class backgrounds. The faculty attends bi-annual teaching and faculty development conferences.

[423] Rainbow Riders was chosen as one of the Model Early Childhood Technical Assistance Mentor Centers in the state of Virginia. The Virginia Council on Child Care and Early Childhood Programs awarded this distinction. http://www.rainbow-riders.org.

To attend one conference cost the center $10,000, most of which is raised by the daycare PTA. Teachers have teacher-parent conferences twice a year during which children's "me-books" are discussed. Teachers also have at-home visits where they visit children and their families at their homes.

The Me-books are portfolios of children's work, cognitive milestones, and teacher observations. Me-book starts as young as six-weeks and continue for the child's duration at the day-care. Overall the daycare maintains an academy or schooling atmosphere. Cohort groups go from room to room to make transiting to new rooms and teachers easier. The cohorts eat together serving themselves from communal dishes. Children in the cohort have a week dedicated to them where they share in class their day-to-day life at home. Room socials provide opportunities for parents to get to know each other.[424] The older children participate in weekly classroom show and share. Each year the rooms participate in class pictures.

Teacher and student turn over is extremely rare, almost non-existent. Teachers tend to visit children who were previously in their rooms. Many teachers offer nanny services, day, overnight, and even temporary live-in, to the families who children attend the daycare. The center recently had a 20-year reunion where previous families and children returned to the center to visit teachers. It is not uncommon for teachers to remain in touch with and to be visited by children from the center for years after those children leave the daycare.

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[424] Middle class parents tend to respond collectively and develop social network links joining parents of school peers. This daycare has an active and powerful PTA. These links are further strengthen because middle class children are enrolled in many more out of family activities, such as Tumbler Tots, yoga, dance, Kindermusik, and taekwondo than lower SES children. These powerful parent-to-parent links pool and transfer an immense amount of capital kept "in class." See, Horvat, E., et al. (2003). From social ties to social capital: class differenced in the relations between schools and parents networks. In American Educational Research Journal, Summer, Vol. 40, No. 2, pp. 319-351.

Some of the center's children alumni come back as high school students and help out at the center.

At $500.00 - $600.00 per month excluding registration fees, monetary gifts to teachers (about $500.00 per year), and PTA fund raising, Ben's daycare is exceedingly class stratified.[425] Most children come from middle and upper middle class families predominately associated with the local research level one university or nearby teaching colleges. A few children, less than 5%, are foster care children and others who receive scholarships.

The daycare has a PTA and parent collective that donates all kinds of materials used in inquiry-play, collects and recycles paper for the children's art, media, and writing tables, builds and fixes the playground areas, raises money for the daycare to give pay increases and send the daycare teachers to faculty development conferences. The PTA raises a significant amount of money through corporate sponsorship of the daycare community. The PTA hosts silent auctions. "Supermarket dollars," is where a supermarket chain donates to the daycare a specific percentage of how much parents spend in their stores. Publishers also sponsor book sales at the daycare; other sales include cookie dough and art magnet companies. The PTA also raises money for full-time Spanish, art and music teachers. The children, even the infants, go on several field trips a year facilitated by the daycare's 14 passenger vans. The daycare has a bussing relationship with one of the private schools in the area where K-6 children, usually previously at the daycare, are in after school childcare clubs.

[425] The university town surrounding the daycare is economically well above average, but the town is embedded in a larger, economically depressed rural area. The town in which the daycare resides being a mid-sized university town not close to a major city has an average cost of living.

Ben's daycare is functioning like a private academy and these pre-K children will be significantly advantaged by the demeanor that is cultivated by their participation in the daycare. This demeanor will frame how their abilities will be made sense of in their various kindergartens, both public and private they will attend. After developing demeanor, and the reproduction of such, as an embodied cultural capital I will briefly touch upon the benefits enjoyed by the children who acquire the specific cultural characteristics, habits, and predispositions of the privileged class represented by the daycare.

The pre-condition of Ben being successful in daycare is the acquisition of the daycare's customs so that he can function as part of the community. He must function during circle time, art class, in interactions with his peers or else he cannot be in the community. Children who cannot function in the rooms are removed. Removal is rare, but has occurred. I spoke with one mother whose child was removed from the center because of the child's inability to be collaborative in day-to-day classroom life. Ben's daycare, as all communities, is a reinforcing system of practice with specific standpoints and interest, which are embedded within other systems of activity.[426] The class standpoint in Ben's daycare is overwhelmingly white, educated, and upper to middle class. The daycare regulations and offerings are so poor in this state that the safest daycares tend to be the most expensive. Regardless, money was only part of Ben's access to his daycare. The daycare was in my family's set of choices due to my social network in regards to the local university.

The class ideology articulated at the daycare reflects the rigid cultural customs, norms and values rewarded in the American public school system, at large. The daycare functions as a tracked preschool providing and reserving beneficial pre-K dispositions, that

[426] Ibid. p. 52.

the educational system overall rewards, for children of a specific class and income. For example, in informal conversations with local kindergarten teachers (public and private) the center was looked upon favorable as 'producing' children prepared to do well in kindergarten. The predispositions that meet the daycare's criteria for children functioning well, in categories such as empathy, social interaction, intelligence, speech, social, emotional development, dispositions towards play, learning, and schooling environments are biased toward the experiences and sense-making specific to the class make up of the parents involved; powerful parents concerned with securing their children's entitled futures.

The pedagogical and teaching backgrounds of the teachers and administrators of the daycare are closely mapped to assist the class that makes up the families they serve. As these children go on in their schooling trajectories they will continue to experiences rewards for these habits, the demeanor, of their class in such a way as to reify the habits. These predispositions become further and further separated from thought to be, as habits are, "assertive, insistent, self perpetuating."[427] Predispositions become legitimized and made sense of as unique attributes of individuals.

Demeanor is cultural capital. Working together, cultural and economic capital reserve material and social benefits for the children who acquire the cultural characteristics, habits, and predispositions of the privileged class that holds the vast bulk of material capital. Social capital is the collectively owned social obligations, contacts, and economic resources framed and horded through a specific social network; it is also specific cultural characteristics i.e. habits and pre-dispositions, such as tastes, values, and the use of means in specific ways, acquired through systems of interaction or participation. Bourdieu

[427] Ibid. p. 43.

clearly states that that the cultural capital of specific cultural characteristics or demeanor is a time intensive investment, "covering the whole period of socialization," involving the hereditary transmission of acquired communal predispositions through social networks that are ensured and supported by economic means.[428] Bourdieu goes on to state that "most of the properties of cultural capital can be deduced from the fact that. In its fundamental state it is linked to the body and presupposes embodiment."[429] Ben's daycare can be seen as a "socially determinate investment" in a specific cultural capital available via economic "choice" that helps to reserve the cultivation of a specific type of sense-making, not to mention safety, regulation, care, health, and nutrition, for a privileged group of children.[430] That Ben's daycare is an investment is key to seeing how the embodied cultural capital of a specific demeanor in a specific body translates to consequential social capital that is legitimized and provided structure through institutions geared towards the interests of the class, social network, or public, of which, the individual or family is a node.[431]

Embodied cultural capital (i.e. habits) crystallized for Bourdieu in his analysis of differing scholastic achievement among children from different class backgrounds.[432] As it will be for Ben in the American academic market, demeanor, health, and family economic capital, and therefore choice, will cash out in schooling trajectories. Ben's cultural capital will mean that he will tend to be made sense of in a specific way in American schooling.

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[428] Bourdieu, P (1986). The forms of capital. In: Richardson, J. (Ed.) (1986) Handbook of theory and research for the sociology of education. New York: Greenwood Press pp 241-258. Bourdieu's discussion of the transmission of embodied cultural capital see, pp. 243-244, 246.
[429] Ibid. p. 244.
[430] See, Ibid. p. 243. Choice is in quotes to allude to the cruel delusion of equity through the right to choose or universal law as if they provide perfect equality. This point, to be further developed in later chapters, is that specific powerful publics form public policy in the image of their own economic and social means and contexts, such as consumer choice or zero tolerance, obfuscating the lack of choice for or choice systems of those with less economic means or challenging contexts, and maintaining their privilege as exclusive. I am not saying this is always conscious, in many cases it may be that specific publics can only ascertain consequences particular to their interest.
[431] Ibid. pp. 241, 243-3.
[432] Ibid. p. 243.

Children, especially white children, from the upper and middle classes tend to be made sense of as smarter regardless of the situation. Their behavioral infractions tend to be made sense of as stemming from unique situations instead of ongoing essential problems of personality.[433]

African-American male students and children of color tend to be made sense of as cognitively inferior and as essentially problematic.[434] The characteristics or the tendency for Ben to conceptualize things in specific ways are his habits of mind. Based on the communities in which he participates, and those communities' relationship to American schooling, Ben's habits of mind are closely mapped to the nature of the subject-matter and habits of mind valued in the American educational system that will evaluate and document his academic ability.[435] Perceptual understandings are embodied, as in my earlier example of attached parenting in regards to will as distributed.[436]

That Ben's embodied capital or demeanor will continually tend to be made sense of as unique, positive, "natural" innate abilities, such as being smart, is ensured by the accumulated political influence his class of birth has in regard to the American educational system. The political influence and associated publics of Ben's class has not only made their characteristics the standards and norms of education, doing violence to other children in other communities whose abilities are not legitimized, but have also dominated

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[433] See, Ball, A. (2002). Three decades of research on classroom life: illuminating the classroom communicative lives of America's at-risk students. In Secada, W.G. (Ed.) (2002) Review of research in education vol. 26, AERA, Washington D.C.

[434] Ibid.

[435] Habits of mind, see, Rose, M. (1989). Lives on the boundary. Penguin books: New York. Also see, Lee, O. (2002). Promoting scientific inquiry with elementary students from diverse cultures and languages. In Secada, W.G. (Ed.) (2002). Review of research in education vol. 26, AERA, Washington D.C. Bourdieu also spoke about habits of mind as embodied habituality. Bourdieu's habits of mind are influenced by Erwin Panofsky who connected architecture, as cultural production to specific cultural ways of thinking. See, Hanks, W. F. (2005). Pierre Bourdieu and the Practices of Language. In Annual Review of Anthropology, vol. 34:67-83 October, 2005.

[436] Starting on page 61 of this document, habit as will is discussed in chapter 2.

educational reform. This has resulted in the continuation of educational practices, assessments, funding, and tracking which separates and reserves rich and beneficial curriculum, environmentally safer places, and resources from their children of power groups.[437] Separation and reservation of particular curriculum (taking-up-means in specific ways), such as advanced placement and upper track classes, has specific consequences, for example on college admission.[438] This illustrates how embodied capital, pre-dispositions, or demeanor play a part in the abilities associated with, and the negotiation of taking-up-means in specific ways. In other words, exclusive participation in tracking, curriculum, or habits of mind, to constitute and maintain the abilities to take up specific means in specific ways is social capital.

Most relevant for the concerns of this dissertation's critique of Lankshear et al.'s New Literacies is that the use of tools, techniques, technologies, or literacies in particular, intentional ways to serve specific interest not only requires economic capital but, more importantly embodied capital. By intentional is meant to take up specific means in particular ways, such as information communication technologies (ICT), and appropriate them to enjoy particular ends or to redirect social events and in doing so to serve the interest of a specific group, community, or public.[439] Furthermore, different bodies (race, gender, age, physical ability) do not employ or translate embodied capital in congruent ways to identical benefits and ends. Embodied capital is not divorced from the specifics of

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[437] Brantlinger, E. (2003). Dividing classes: how the middle class negotiates and rationalizes school advantage. RoutledgeFalmer: New York. Also see, Wells, A. & Serna, I. (1996). The politics of culture: understanding local political resistance to detracking in racially mixed schools. In Harvard Educational Review, vol. 66, no. 1, Spring, pp. 93-117.

[438] Capuzzi, S. (2006). The college try: getting credit before you get there. In The New York Times, education section, January 8, 2006.

[439] How the taking up of specific means secures material and symbolic benefits and capital for specific publics will be developed in the next chapter.

the body.[440] Bourdieu states clearly that the same laws of transmission for embodied cultural capital, such as demeanor, extend to material and symbolic cultural. On using means or doing things in particular, intentional ways to serve specific interest Bourdieu writes:

> To possess the machines, he only needs economic capital; to appropriate them and use them in accordance with their specific purpose (defined by the cultural capital of scientific or technical type, incorporated in them) he must have access to embodied cultural capital, either in person or by proxy.[441]

The point I wish to return to here for later development in this chapter and the next two subsections, is that the appropriation, and I would add redirection, of tools and techniques, both symbolic and material, requires communal participation in using those means to achieve locally relevant, and communally concrete ends i.e. social inquiry that serves concrete matters of concern.

Action to obtain some end is always mediated by some means, and means always encompass values and interests i.e. communities. The making, adapting or knowing of things cannot be reduced to individuals since the values, beliefs, and perceptions we hold are communal. Revisiting a quote of Dewey's used earlier in this chapter:

> Roughly speaking, tools and implements determine occupations, and occupations determine the consequence of associated activity. In determining consequence, they institute publics with different interest.[442]

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[440] Sargent, C. & Bascope, G. (1996). Ways of knowing about birth in three cultures, in Medical Anthropology Quarterly 10(2): 213-236 American Anthropological Association, p. 232. Authority is invested in the agents who historically have been able to use it.

[441] Bourdieu, P (1986). The forms of capital. In: Richardson, J. (Ed.) Handbook of theory and research for the sociology of education. New York: Greenwood Press, p. 247 (emphasis mine).

[442] Dewey, J. (1927/ 1954). The public and its problems. Swallow Press: Athens, p. 44.

The habits, pre-dispositions or demeanors we acquire from the communities we participate in form our interests and values and thus, our membership into, and action in regards to those communities. Individuals in this sense can be thought of as nodes of larger social networks or communities. The communities in which they participate and they also give structure, as nodes to communities, constitute individuals. Furthermore, when communities act in their interest in consequential ways they are publics.

The point introduced here is that the taking of means to accumulate or secure interest includes publics in two ways. First interests and values are always communal and therefore are distributed, residing in communities. Also when the consequences of the community's actions indirectly affect those outside of the communities intimately involved then the consequence is not only public but, communities sustaining different consequences from those actions will try to regulate or redirect those consequences.[443] The ability to regulate and redirect consequence varies greatly between communities and is an issue of capital and power. For example, that upper middle class communities, as publics, dominate educational reforms to serve their children shows how the community (noun) acts as a public (verb) to serve its interests that not only affect the children in their community and in all other communities, but also other communities abilities or efforts to reform education.[444]

A Critique of the KPS concept of the Public and the Individual

The task of the first three chapters of this dissertation have been two-fold; (1) to show that Knowledge Producing Schools implies and requires a pedagogy of public social inquiry that in turn will facilitate the ability for publics to see themselves. (2) To show the

[443] Ibid. p. 12-13.
[444] Brantlinger, E. (2003). Dividing classes: how the middle class negotiates and rationalizes school advantage. RoutledgeFalmer: New York.

Deweyan continuity, relevant to KPS scholars' goals, between individual habit, community, inquiry, and publics. Habit and habitus have a symbiotic, co-constructive relationship, each calibrating the other. The task for the remaining two chapters will be: what would a pedagogy for Knowledge Producing Schools look like that if inquiry, and publics were explicit? In concluding this chapter, and the task of the first three chapters, and in preparation for the last two chapters I want to revisit and sum up the larger themes involved so far in habit, inquiry, community, and publics.

Knowledge Producing Schools reconstruction and community-building, puts forth an emphasis on literacy which entails a fairly isolated individual involved in mastering performative techniques, and habits of mind associated with the presumably inevitable demands of technological and market trends. This focus on the performance of atomistic individual, or group of such individuals, threatens to decouple practice, action, operations, and functions from the constitutive social participation of making meaning and knowing. Individual performance cannot make legible issues of embodied cultural capital, normativity, emotions, experience, and transformation, because these social constructions are not the property of the individual. Likewise, a focus on individual performance cannot generate possible new knowings and appropriations of new technologies and market trends. Technological changes should be seen as possibilities sites of public social inquiry along with new ways to facilitate different forms of connection, cooperation and communication. Opportunities generated by social inquiry into using ICT could serve to redefine community building, outreach and activism.

Embodiment and emotion is at the core of action, including the actions of reflective inquiry, because norms, customs, and habits precede the construction of knowing and pre-

figure experience. Our habits and our tools help constitute our identity. Two main issues arise in acknowledging the role of habits in knowing. (1) Habits and normativity are linked to all performance and will remain largely unseen in predefined performance literacies bracketed out for individuals. Reflections on embodiment and emotion can make transparent the relational aspects, issues of power, positioning, and stakeholders in specific performances. This was one of the main issues addressed in the critique presented in chapter 2. (2) Social action is embodied. Knowing, intelligence, identity, interest, will, and values are situated embodied inscriptions, i.e. habits, acquired through participation. We are constituted and transformed by our participation in multiple communities. Participation and the conditions for participation are constituted by norms, values, and customs of transformative community and as such provide crucial contextual places for social change and reconstruction. This means, critical habits, much like the earlier discussion of equity, are embodied predispositions and communal projects. Furthermore, the acknowledgement of habits pedagogically means our focus is on embodied knowing and present activity.

Therefore, the community, and how the community and its participants inter-relate is the unit of analysis for social action to analyze the context of participation and consequences of action. Communities, along with the individuals who participate in them, need larger community to develop more complex, conscious reflection and critique. Since individuals, and their social minds, habits, and predispositions, are creations of and creators in participation, the question becomes how does the customs, norms, values, and roles of the community become actualized in the individual. For example, as discussed in this chapter, atomistic individualism has grave difficulty producing social reciprocity morality contextualized in communal interest, because the activation of the individual is

instead connected to self-interest, i.e. inherent or ‘natural’ self-possessed and self-sufficing rights. One possibility Knowledge Producing Schools is particularly well suited for is what are and how can the habits and predispositions of Dewey’s social individuality become a communal project. Developed in the next chapter is how inquiry as a set of embodied predispositions can offer productive contexts of participation in the embodied knowing and present activity of public social inquiry. For example, Warranted assertability can provide a transformative community of inquiry, organized around ongoing communication and criteria of quality and facilitated by technologies such as Information Communication Technologies and reflection on identity-shaping participation. Habits such as collaboration, relational ways of seeing things, critical self-examination can be, based on the concerns of the community in Dewey’s social individuality.

Inquiry is a socially networked undertaking; the “social matrix” as Dewey calls it. Community is necessary for conscious reflection and critique and of the negotiation of values. Communal inquiry that facilitates critical understandings would, as in Dewey’s social individuality, create sites of inquiry with diverse participants drawn together in engagement of conditions as communities with different interest but similar concerns. This is very similar to the communities of inquirers I discussed as implied in the Knowledge Producing Schools’ case studies and projects described in chapter1. Networks of inquiry would extend beyond and intertwine individuals, schools, and neighborhoods. Public social inquiry and the ability to act as a public is necessary for communities to engage in the conditions that affect their lives. Active and reflective public social inquiry works toward communities’ ability to control problematic conditions, both social and political, and inquiry is an active construction of a desired outcome. Inquiry, as the warranted

assertability discussed in chapters 1 and 2, can facilitate communal cohesion, and accumulation of capital for self-management and organization. The ability to act as a public can secure the interests of the community in the formation of the state.

An explicit pedagogy of public social inquiry that intertwines students, schools and communities in the engagement of problematic conditions can be a powerful facilitation of communities seeing themselves as publics that can act. Many scholars are discussing the embracement of the community, the community's acts as a public, and the larger political field to be seen as the location of education reforms, analysis, action, and pedagogy.[445] A Deweyan Knowledge Producing School could serve as a starting support toward the effort of education reform as social movement.

Participation in self-generated community inquiry and supporting structures, such as Knowledge Producing Schools, can facilitates the development of "critical consciousness," new political identities, and the development of new ways to organize and other strategies out of every day activities. Jean Anyon refers to these developments, modified in the course of participating, as the "signifying work" of a community engaged in inquiry, which spurs new identities and action.[446]

[445] See, Oakes, J. & Lipton, M. (2002). Struggling for educational equity in diverse communities: school reform as social movement. In Journal of Educational Change 3(3-4).
[446] Ayon, J. (2005). Radical Possibilities. Routledge: New York, pp. 140-3.

Chapter 4: Extending what we've done: Geographies of participation

This chapter draws together and further develops the ideas introduced in the preceding chapters in preparation for connecting the pedagogy and theory of Knowledge Producing Schools to that of Dewey's Lab School, which I will discuss in the next chapter. I begin by summarizing and expanding the main themes in the first three chapters that are relevant to locating the tenets of socio-cultural literacy in pedagogy and curriculum. Dewey's theoretical response to the socio-cultural involves habits, embodied knowing, emotions and emergent intentionality. He is working out his naturalistic and social understanding of experience, language, and knowing. In this chapter I will expand on Dewey's embodied knowing and emergent intentionality from chapter 2, as it relates to the idea of "assemblages."

Introduced in this chapter is how assemblages, i. e., "distinctive patterns of human association," make legible issues of relation, location, and geographies that are relevant to social meaning and action.[447] If an act is located wherever it has consequences then what does this mean in regard to pedagogy?[448] To introduce this discussion I revisit and expand on geographies of participation introduced in chapter 3, especially in regards to how Dewey's warrant assertibility develops an important pedagogical relationship delivering a geography of participation consistent with his basic socio-cultural tenets that are particularly well suited for achieving the goals of Knowledge Producing Schools (KPS).

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[447]Quote see, Dewey, J. (1929/1958). Experience and Nature. Dover Publications: New York, p. 175. Dewey also uses "assemblages" to specifically describe distributed ways of doing, attitudes, and stabilizing consequences. See pp. 169-75. For example Dewey states, "Because of converse, social give and take, various organic attitudes become an assemblage of persons engaged in converse, conferring with one another, exchanging distinctive experiences, listening to one another, over-hearing unwelcome remarks, accusing and excusing." (p. 170,emphasis added). A person identifies herself or himself with potential acts and deeds that emerge from the collective.

[448] "If it be asked, "where" a transaction is located, the only possible answer . . .it [the act] is located wherever it has consequences." "Mind is spatial." Ibid. pp. 199-200, fn. 3 p. 200.

The educative experiences illustrated in KPS case studies are, as discussed in chapter 2, communities of inquirers that are negotiating self-knowledge, and forming judgments in how to solve problems in collaborative and concrete action.

The communities of inquirers imaginatively, creatively, and concretely discuss consequences of action and require participants to share some grounds for the actions they propose; i.e. the group decides on the warrantibility of action.[449] Pedagogically, communities of inquirers are committed to relevancy. In the next chapter, I will explore how geographies of participation may be applied to KPS case studies and the experimental approach of Dewey's Lab School. For example, relevance, the recognition that only a non-contrived social context can be hoped to supply meaningful experiences for 'knowing,' an important organizing element to both KPS scholars' and Dewey is in fact an attempt to give access to the geography of knowing-- all the places a given act has consequence. Explicitly with Dewey, and implicitly in Knowledge Producing Schools case studies, relevance is thematically bound to occupation, community, and situated with inquiry.

Where Dewey leaves us: Assemblages

Humans as a sentience and social species are constantly creating and mediating use of means to obtain emergent ends.[450] The socio-cultural and its associated knowings, identity configurations, and actions are not "just external or internal" – it is neither.[451] The socio-cultural as neither external nor internal frames the overarching implications of a Deweyan view of learning that what we call intelligence, knowing, knowledge production, or mind cannot be bounding anywhere but is distributed in bodies, situations and social

[449] Boyles, D.R. (2006). Dewey's epistemology: an argument for warranted assertion, knowing, and meaningful classroom practice. In Educational Theory, Vol. 56 Issue 1
[450] We are social animals even when alone. See, Hanks, W.F. (1996). Language and Communicative Practice. WestviewPress: New York, p. 3.
[451] Cole, M. (1998). Cultural Psychology. The Belknap Press: Cambridge, pp. 116-118.

structures. This may sound overly common and redundant, but it is a basic tenet of socio-cultural literacy. It is the specific concern in this chapter, that the basic tenets of socio-cultural literacy have not remained consistent in the development of New Literacies.

The Deweyan view of learning is that what we call self, identity, will, capability, intelligence, knowing, knowledge production, or mind cannot be simply located, but is distributed in bodies, situations and social structures – it is neither external nor internal. Dewey states that,

> The medium is thus one which contains similar and conjunctive forms. At every point and stage, accordingly, a living organism and its life processes involve a world or nature temporally and spatially "external" to itself but "internal" to its functions.[452]

Dewey's naturalistic concept of inquiry or emergent intentionality, discussed in chapter 2, is an example. Means and ends emerged as the lactation consultant and I inquired into the problems of breastfeeding Ben. As we imaginatively and creatively tried operations, linking things up so to speak, and co-designating (creating) objects we gave material expression by way of mediation to our desire to feed Ben. The participants involved and the functional context, from which all emerged, transformed in the process. The lactation consultant and I created "use"; that is sustainable relations of mediations unified by the functional need, of breastfeeding offspring. I also stated in chapter 2 that my body was not my own that I became provider. Literally, has my functioning changed, from pregnant with baby in my body to mother and milk provider with my baby outside my body, my self

[452] Dewey, J. (1929/1958). Experience and Nature. Dover: New York, p. 165.

changed; my functional existence is who I am. I will later refer to this as "assemblage."[453] As Deleuze and Parnet state, "the assemblage's only unity is that of co-functioning."[454]

In trying to imagine what an assemblage is, consider Michael Cole's Deweyan derived definition of artifact.

> An artifact is an aspect of the material world that has been modified over the history of its incorporation into goal-directed human action. By virtue of the changes wrought in the process of their creation and use, artifacts are simultaneously ideal (conceptual) and material. They are ideal in that their material form has been shaped by their participation in the interactions of which they were previously a part and which they mediate in the present.[455]

Intelligence, knowing, identity, meaning and mind emerge from, historic and current, associative action and durable organizations of mediated action in day-to-day life and practice.[456] Tools, artifacts, customs, traditions, habits of the body, meanings, and social structures are the embodiment of purpose and life activity; all of which are in trans-actional relation to each other and linked in various configurations to solve problems, exploit opportunity, or fulfill needs and desires.

Coles' assertion that "an artifact is an aspect of the material world that has been modified over its incorporation into goal-directed human action," could equally be "a custom is an aspect of the socio-material world that has been retained in social participation and modified," or "a habit is an aspect of the biological-social-material body

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[453] "The significant consideration is that assemblage of organic human beings transforms sequence and coexistence into participation." Dewey, J. (1929/1958). Experience and Nature. Dover: New York, p. 175.
[454] Deluze, G. & Parnet, C. (1987). Dialogues. Athlone Press: London, p. 69.
[455] Cole, M. (1998). Cultural Psychology. The Belknap Press: Cambridge, p. 117.
[456] Our past has never been fully excluded from our present. One could say some part of our human history has always been accessible, before language, written, spoken, sign or symbol, because we have had our history of habits.

that is modified" or "a symbol is an aspect of the social world." These things, artifacts, habits, customs, symbols, join in various transactional, relational, and mediating configurations to create durable human-cultural products such as intelligence, identities, customs and knowledge. Embodiment, sociality, and place are aspects in being; knowing and doing in some spatial-temporal place that cannot be separated. Knowing resides in the innermost part of the concentric circles of place, body, and sociality. "The concept of dwelling assigns importance to the forms of consciousness with which individuals perceive and apprehend geographical space."[457]We physically 'dwell' in the "interpretative belonging" of being a social species in communities of possible creations – we do not possess everything, but we can potentially create it with each other and our tools.[458]

In thinking about human creation, and before continuing on to the discussion of assemblages in general, I will pause a moment to consider tools. Cole relies on Dewey to discuss how tools, including language, mediate humans' ability to cope with the world and as such develop indirect, tool mediated, action and intelligence (cultural-historical thinking) to function and survive. We are our tools – both by habits and predisposition, including identity, in use and the development of social intelligence. [459] Cole highlights the fact that "[t]his idea of tool mediation is not original to the early Russian cultural-historical psychologists. It is also central to the ideas of John Dewey, whose work was well know

[457] Basso, K. (1996). Wisdom sits in places. University of New Mexico Press: Albuquerque, p 106. Consciousness is consciousness of something, places become objects of awareness especially as they constitute use and embodied history - "More precisely, dwelling is said to consist in the multiple "lived relationships" that people maintain with places, for it is solely by virtue of these relationships that space acquires meaning," Ibid.
[458] Cooper, R. (1997). Review article: Millennium notes for social theory. In The Sociological Review, p. 691.
[459] Cole, M. (1998). Cultural Psychology. The Belknap Press: Cambridge, p. 117.

among Russian educators and psychologists."[460] Cole in discussing Dewey observations states "tools and works of art are (quoting Dewey) simply prior natural things reshaped for the sake of entering effectively into some type of behaviors."[461] Those behaviors we enter into to reshape natural things, such as the lactation consultant, and myself are creative, intentional human acts of use to serve as and for human functional structures or assemblages. When a function is disrupted, e.g. Ben is not breastfeeding we socially and physically reshape functional contexts until they function again, e.g. Ben is breastfeeding. Human creativity or use is called upon when function is disrupted and is the social and embodied "intelligent selection of ends-in-view or things to be done," in other words, emergent intentionality.[462]

In line with this, all actors (human and non-human) and functional contexts transform as prior thing reshape. In this way,

> Some parts of the environment become what have been called "extra-organic" organs; that is to say all the tools and devices of all the arts, although outside the body, operate in behalf of the functions of life just as do the eye, stomach, hand etc.[463]

If you recall in chapter 2, I stated in discussing that my body was not my own that technology outside of my body become intrinsic to my functioning as a provider. My breast pump, refrigeration, natural-shaped nipples for bottles, and slings all allowed me to distribute the care of Ben while keeping him in breast milk. I certainly could not have

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[460] Ibid. p. 109.
[461] Ibid. emphasis mine. Cole is citing Dewey 1916, p 92 from Hickman, 1990, p. 13.
[462] Hickman, L. (1992). John Dewey's Pragmatic Technology. Indiana University Press: Indianapolis, p. 13.
[463] Dewey, J. (1911/1978). Contributions to A Cyclopedia of education, In Jo Ann Boydston (ed.), John Dewey: The Middle Works, Volume 6 (357-467). Southern Illinois Press: Carbondale, p. 439, emphasis mine.

continued my education if I had not been able to distribute Ben's care while keeping him in breast milk, or I would have been forced to make different decisions.

Merleau-Ponty referred to the human body as hinged, the intentional, use-creating joint which connects and disconnects or links and unlinks to various human and non-human actors to meet the trans-actional needs of life activity.[464] "For Merleau-Ponty, then, subjectivity is a bodily being-in-the-world; intersubjectivity even when expressed through fantasy or empathy, is a modality of bodylife. Embodiment is thus as much a primordial aspect of human subjectivity as it is of sociality."[465] I refer to these configurations as assemblages. Assemblages are geographical mutual-functional sets of relationships unified by functions that cannot be reduced and constantly move, change and flux.[466] Bees and wasps are said to be assemblages.

An assemblage in regards to bees describes the communal structure of these social insects. The bees as a hive are literally in sync, acting in intention unison to maintain the functional structure of the hive. It is important to note that bee assemblages reflect the organized diversity of the bee community with each bee contributing to the functional structure of the hive. These social insects are in constant contact and communication with each other and the queen. They do act in unison as a hive, but as individual bees and subgroups of specialized bees they fulfill highly differentiated roles that are all necessary

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[464] Merleau-Ponty, M. (1968). The Visible and Invisible. Northwestern University Press: Evanston Illinois, p. 264. Also see, Ellis, R.D. (2006). Phenomenology-friendly Neuroscience: The return to Merleau-Ponty as Psychologist. In Human Studies, 29: 33-55.

[465] Jackson, M. (1996). Introduction: phenomenology, radical empiricism, and anthropological critique. In Things as They are: New Directions in Phenomenology anthropology. Indiana University Press: Indianapolis, p. 32.

[466] Cooper, R. (1998). "Assemblage Notes." In Chia, R. (ed.) Organized Worlds: Explorations in Technology and Organization with Robert Cooper. Routledge: London, p. 108. Geographical assemblages will be discussed later in this chapter.

for the overall survival of the hive. Likewise, bee communities have highly developed protocol to determine the adoption or rejection of bees not originating from the hive.

A famous example of human assemblages is the stirrup.[467] Around since 2 century B.C.E. the stirrup, White postulates, provides a cornerstone assemblage that become a centrifugal catalyst for the social structures of the feudal system.[468] The stirrup created a human-horse hybrid. Human's no longer had to rely on human power while on the horse but could harness the power and stamina of the horse for human purposes. A new military force was unleashed, cavalry and knights, along with an increase and severity in violence and injury. Everything was recalibrated from amour, land surveying, being able to sleep on your horse to land granted to knights. Changing the configurations of mediation among actors changed feudalism. The relevance here, though the history is interesting, is that embodied-social need and use selected and exploited existing tool and operations. To endure, a tool must fit specific social conditions, functions, and needs in such as way as to reconfigure 'mission critical' social structures and relationships. The stirrup became linked to feudalism in a way that allowed actors connected to that assemblage to function and interact differently; take land from the church, create powerful cavalries, survey large tracts of land, and start the Crusades.[469] Tools and technology (extra-organic organs) most

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[467] Though White's conclusions have remained controversial Deleuze uses White's discussion of the stirrup to illustrate the idea of assemblage, my reason for using it here. See, Deluze, G. and Parnet, C. (1987). Dialogues. Athlone Press: London, p. 70-1. My first introduction to this example before seeking the primary text was in Cooper, R. (1998). "Assemblage Notes." In Chia, R. (ed.) Organized Worlds: Explorations in Technology and Organization with Robert Cooper. Routledge: London, pp. 108-129. For the original text see, White, L., Jr. (1962). **"**The Act of Invention: Causes, Contexts, Continuities and Consequences." In Technology and Culture, Vol. 3, No. 4, Proceedings of the Encyclopaedia Britannica Conference on the Technological Order pp. 486-500.

[468] White, L. (1962). Medieval Technology and Social Change. Oxford University Press. All "things" are heterogeneous via the processes from which they are constituted. The processes by which assemblages constitute the "seeming attributes of things" are influenced by both the connections between human and non-human actors and the actors embedded in the connections or flow.

[469] Cooper, R. (1998). "Assemblage Notes." In Chia, R. (ed.) Organized Worlds: Explorations in Technology and Organization with Robert Cooper. Routledge: London, p. 113.

certainly create, channel, form and connect human purpose and need, but it is humans in dynamic situations with specific conditions that create use, that is to inquire to solve problems, negotiate needs, and follow desires in associative action; associative action shaping and constraining human agency both individual and communal-group.[470] The stirrup in White's discussion is a freeze frame illustration of a continually evolving reconstruction where through action some objects or ideas becomes significant and necessary as arising from the events to solve a problem, express something, or some purpose, i.e. emergent intentionality[471] There is no simple location to mind, knowing, or knowledge. To create a single location is to obfuscate the relevant relations of mediation that create assemblages, which are greater than any part or location. Dewey then leaves us not with individuals who obtain New Literacies or tools with stable ends regardless of context but with contingent situations, ever-changing conditions, and social structures.

It is important not to overlook the co-functioning geographical properties of assemblages. An example to revisit here is the chapter 2 discussion of the human "will" as distributed. In that example the first nature sucking reflex in the infant is completed in the second nature habits of responding and breastfeeding – a participial act.[472] Infant and provider of response and breast become an assemblage; one deeply connected to breast as place-object, and within other cultural durabilities that benefits and transforms both actors. The child receives fatty acids, food, identity, and the advantages necessary to development inherent in receiving the breast [the act of breastfeeding] such as cranial development,

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[470] Deleuze would describe assemblages as manifesting some type of agency. In my mind this is akin to interest being distributed, historical and currently, in social relations and constructions. Individuals partially acting out the interest of the social networks in which they participate and have their being. Relational aspects of agency see, Giddens, A. (1986). The Constitution of Society: outline of the theory of Structuration. University of California.

[471] See, Tanner, L. (1997). Dewey's Laboratory School. Teachers College Press: New York, pp. 139-45

[472] Two actors become each other or transformed by the trans-action. See, Scarry, E. (1985). The body in pain: the making and unmaking of the world. Oxford University Press: New York, p. 51.

touch, and specific entry into the social world the infant will participate. The provider receives the many health benefits of breastfeeding to her body along with a surviving offspring. The unity of the assemblage is relational and functioning – it is not locatable. Something is created or transformed in identities of being a provider, the infant, and the provider-infant bond.[473]

Geographic assemblages

I want to expand on assemblages speaking specifically of geographic assemblages. By geographic assemblage I mean that places come to possess things such as behavior norms, e.g. conservative religious places and gender-norms, in similar ways that communities and bodies do. Furthermore, places have symbiotic relations to other places, for example, conservative religious places and gender-norms, such as American Evangelical churches, and norms of male privilege in places such as strip clubs. Human histories and actions inscribe places, creating likely grooves or predispositions for further action and meanings, just as habits of the body predispose perception, imagination and action or customs and traditions can be seen as the habits of a culture. My statement is really nothing new, as previously stated assemblages are distributed among bodies, communities, time, and place. If we revisit Dewey's emergent intentionality we see that means-ends are emergent. The body may be catalyst for action based on needs, interests, desires, and purpose but consequential conditions, which contribute to the form of situations or transactions, also reside in some place(s) and contribute to the action taken and the transformation of actors and locations participating. Before continuing a

[473] "No person remains unchanged and has the same future efficiencies, who shares [directly or indirectly] in situations made possible by communication." Dewey, J. (1929/1958). Experience and Nature. Dover Publications: New York, p. 204. Dewey specifically discusses transubstantiation, changing from one form to another. See, Ibid. p. 166.

description of geographical assemblage I will pause to further embellish my example of place, behavior norms or values, and symbiotic relationships between places.

Places become and provide physical and communal contexts for living, acting, and using objects involving survival, capacity to provide habitat, other social and biological functional needs, and the literal need for experiences of which behavior norms must be a part for the meaning of place to be common.[474] Social structure and associated identities reside in our existential dwelling in places dense with meaning, community, and connections.[475] Each place then is inscribed with some behavioral norms of what ought to or can happen here. The inscription of place serves as a precognitive cue of how subjective experiences are made sense of in a particular place. This is why violations of norms in place, for example, defacement, defilement, and destruction, of and in sacred places means so much. Sacred places are said to elude 'geopiety,' a sense of reverence.[476] There is a character of the sacred developed and used in the architecture of sacred places from the cathedrals of Europe, the minimalism of American Protestant churches, or the ascetic of Buddhist temples. Sacred sites are also places of historical processes such as beliefs, morals, doctrine, and expectations of the individual. Schools are often treated as at least semi-sacred sites.

Returning to my example of the American Evangelical church and the strip club both these places are symbiotic places or institutions. The church is fetishists in regards to married, reproductive, heterosexual monogamy. [477] The places and associated social

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[474] Bott, S., Cantrill, J., Meyers, O., Jr. (2003). Places and the promise of conversation psychology. In Human Ecology Review, Vol. 10, No. 2., Society for Human Ecology, pp. 105-6.
[475] Ibid. p. 103.
[476] Ibid. p. 102.
[477] Frank, K. (2002). G-strings and sympathy: strip club regulars and male desire. Duke University Press: Durham, p. 275.

networks that constitute the American Evangelical church maintain hetero-normative, male power and the female social position associated with this. Many feel that the mainstreaming of porn and adult entertainment and the mainstreaming of Evangelical norms is not coincidental nor only dependent on recent technological changes, but instead visits to clubs and the like are seen as interrelated to the particular norms and practices of marriage and gender in American conservative religiosity.[478]

The voyeurism of the strip club is a safe place for men to experience and maintain sexual mastery over females, and aggression toward the love object.[479] The places and associated segments of society against strip clubs maintains the actors with the privilege and power to easily travel these two places with minimum consequence – they are both ultra-male places maintaining in binary a normative geography of direct experiences that reinforces male power. For example, the stigma of a male, even a conservative male going to a club is far less than a woman who is a dancer. Likewise, most clubs prohibited women unless escorted with men, and many times corporate business can justify club expenses.[480]

American conservative religiosity and the adult entertainment industry are certainly not, currently or historical, the only sites related to the larger social structure of inequality. My point in developing this example is that place and the normative behaviors, emotional connectiveness, and human value systems inscribed in place frame our subjective experiences in those consequential places and therefore our identity and agency. Aspects of place experiences, since places are in fact functional contexts for social objects, inform our selves as much as, if not more than, our interactions with specific actors. Places, especially

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[478] Ibid. p. xxi. Also see, Greenfield-Sanders, T. (2004). XXX 30 Porn-star portraits. Bulfinch Press: New York.
[479] Frank, K. (2003). Just trying to relax, masculinity and masculinzing practices, and strip club regulars. In The Journal of Sex Research, Vol. 40.
[480] Ibid.

the places that make up significant social institutions, such as schooling, make legible to us how our community or society makes sense of us, where a particular actor's judgment can be thought of as just that persons perspective of us. Institutional geographies affect children's experiences and opportunities in those and other places. Schooling is a geographical assemblages and if we are to see school as such, consistent with our socio-cultural views then the place of school and the spatial composition of schooling, e.g. pedagogy, is of utmost concern especially in regard to student identity. For example, for whom are the experiences afforded by the geography of participation in school impoverished and for whom is it nurturing? In the same view, how do actors challenge and change the behavior norms associated with place? Academic and ability tracking is a particularly transparent example; students in lower tracks are usually made sense of as cognitively inferior to upper track and AP students. More importantly for this discussion, these various tracks, upper AP, mid-range college bound, and lowers track or vocational education place students in participations, curriculum, pedagogy, and cognitive-ability identities that produce differentiated academic performances.[481]

Assemblages are relational mediations of use that take 'place' in some emergent, temporal field of action. Actors and the actions in which they engage are irrevocable situated in time and space. Place emerges, as does meaning and conditions, as the environment becomes an object that actors are aware.[482] We are "place-makers" along with being significant meaning-makers.[483] The social world then is also a place-world because

[481] See, Rose, M. (1989). Lives on the boundary. Penguin books: New York.
[482] Selective attention refers to the biological-social basis of something in a situation becoming salient, in other words the process of discriminating a specific feature(s) in an emergently meaningful context occurs because that feature is a potentially relevant condition relevant to or for something needed or wanted. See, Dewey, J. (1958). Experience and Nature. Dover: New York, p. 166.
[483] Basso, K. (1996). Wisdom sits in places. University of New Mexico Press: Albuquerque, p. 7.

we humanize places as we do all social creations that are emergent from and contingent upon participation in communal, transformative, co-designations, social activities, and reflections, i.e. social inquiry.[484] Deweyan reconstruction, if you recall from chapter 2, resides in the processes by which experiences and mediations are made durable and communal via significant meanings, emergent objects, and resolution of problematic situations, all constituted by the social creation of meaning and made durable in assemblages of mediation and use and the inscription of place.

Historical and current inscriptions of space, which constructs place can contribute to the character of the community as well as to current action and identity because place can be seen as contributing precognitively as 'spatial anchors' and 'situating devices' to bodies in action, and bodies of knowledge creating use and meaning.[485] There accumulates a flux and flow of dense meanings in places that contribute to social order such as moral norms, use of places and objects for survival, and embodied histories.[486]

It is ironic that the sense of place, and geography of knowing, where knowing happens and takes us or where acts are consequences, is so overlooked in education. We are, I believe so focused on the social we create a dualism between the social and place. Schooling experiences and histories establish patterns of social order, social positions and other social meanings. As Keith Basso states,

> If place-making is a way of constructing the past, a venerable means of doing human history, it is also a way of constructing social traditions and, in

[484] Wals, L. (1999). The means-ends continuum and the reconciliation of science and art in the later works of John Dewey. In Transactions of the Charles S. Peirce Society, Summer, Vol. XXXV, No. 3.
[485] Basso, K. (1996). Wisdom sits in places. University of New Mexico Press: Albuquerque, pp. xiv, 33, 47.
[486] Ibid. pp. 28, 30, 33

> the process, personal and social identities, we are, in a sense the place-worlds we image.[487]

Basso's observations are much akin to Dewey's ideas of equity as a communal project discussed in chapter 3. What we use, and what we consider it, and what happens in schooling spaces become our orientations and spatial relations in schooling places. Basso echoes Dewey's sensibilities when he states:

> Knowledge of places is therefore closely linked to knowledge of self, to grasping one's position in the larger scheme of things, including one's own community, and to securing a confident sense of who one is as a person.[488]

The relevant point for the discussion here is that body along with its thoughts, feelings, and doings, social structure, and place all constitute identity, meaning and action, and all are relevant constitutive partners in assemblages – especially schooling assemblages. In the next chapter I will discuss concrete examples of Dewey's lab school where Dewey is concerned with the creation of schooling places as in relation to school as community without reducing one into the other.

Another look at New Literacies

Before discussing schooling assemblages specifically, I will revisit New Literacies to show how the lack of location in assemblages such as 'knowledge' makes New Literacies (e.g. mind sets, meta-understandings, scenario planning, ezines, communication guerilla, subcultural bricolage) problematic. If you recall, New Literacies is one of the main reconstructive mechanisms offered by KPS scholars. The locus of that reconstruction resides with individuals constituting and reconstituting themselves in intentional ways

[487] Ibid. p. 7.
[488] Ibid. p. 34, emphasis mine.

using influential New Literacies distilled from powerful discourse groups.[489] From the three previous chapters we know that New Literacies are bracketed off forms or organized social practices, many times associated with Information Communication Technologies (ICT), mastered by individuals. My concerns with New Literacies, stated earlier, is that though KPS scholars emphasize discursive construction they largely ignore the role of the body, emotions, and the communities in which we 'dwell' in the formation of meaning, action and perception. KPS scholars' reliance on disembodied atomistic individuals with New Literacies decouples desired forms of embodied habits and predispositions from communal participation, experiences, co-designations, and conditions that constitute those forms.[490] Literacy, regardless of how socio-cultural, verges on cognitivist when transcontextual "cultural characteristics" are associated to the individual learning, fluency or performance of bracketed off 'characteristics of specific practice' that are guided by consciousness.[491] That the locus of New Literacies is the isolated intentional individual mastering conscious meanings and not the historic community using [and being used by] interpretations and meaning brings up specific concerns. This latest visitation of New Literacies discusses those concerns by way of two specific problems arising from not keeping social, body, and place deeply coupled in pedagogy; (1) the separation of skill

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[489] Rowan, L. & Bigum, C. (2005). Transforming frameworks: new approaches to CCTs and the pursuit of educational equity. Deakin University, Geelong. Paper presented at the Australian Teacher Education Association Conference, Gold Coast, July 2005 and at the British Educational Research Association Conference, Glamorgan, September 2005, p. 6. Also see, Gee, Hull, Lankshear (1996). The New Work Order: behind the language of the new capitalism, Westview Press: HarperCollins Publisher, pp. 14, 163. Also see, Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Philadelphia: Open University Press pp. 156-8.

[490] Literacies, such as mind sets in New Literacies, separate, by bracketing off, literacies from the "cultural and social contexts that make [those] literacies . . . masking the cultural values these literacies authorize" and "creating essentialized subject positions." See, Schroeder, C. (2001). Academic Literacies, Legitimacy Crises, and Electronic Cultures. In The Journal of Literacy and Technology. Volume 1, Number 2, spring, accessed at http://www.literacyandtechnology.org/v1n2/schroeder/schroeder.html (25 September 2006).

[491] O'Loughlin, M. (2006). Embodiment and Education: exploring creatural existence. Springer: Netherlands, p. 69.

from the explicit conditions and emergent intentionality of human problem solving. (2) The separation of ethical action from the participation in the places in which we 'dwell.' I conclude this subsection with a brief discussion of whom the self-transformative person, our pedagogical efforts seem to desire, may be and revisit Dewey's ideas of 'truth,' e.g. logical and existential, the management of truth in a community, and warranted assertibility as it related to a spatial pedagogy.

(1) The separation of skill from the explicit conditions and emergent intentionality of human problem solving. Literacy, such as New Lieracies, is described in a past tense. This is indicatives of our tendency to treat contingent and ever-changing products of cultural processes such as knowledge as finished products; a [problems with the] "conversion of experience into finished product."[492] There are still remnants in our use of individual literacy, even in our most socio-cultural efforts such as New Literacies, of the assumption that the important aspects of tasks, capacities, and knowings can be pre-sorted, classified, and bracketed off. The process of producing bracketed off New Literacies does not simple disembody activity but destroys the explicit embodiment of the nature of human creation, how and what it means 'to know,' by placing individuals in solitude.

Since we functionally inhabit our life-worlds then habits and therefore knowing cannot be understood outside of the contexts from which it emerges. Embodied habits have a relation to habitat. Unconscious expressions of habit are acquired from our habitat, our participation in organized social practices, and are automatic, repeatable techniques, responses, perspectives, emotions, actions, and beliefs that make the specific knowing and

[492] Harvey, D. (1996). Justice, Nature, and the geography of difference. Blackwell: Cambridge, MA, p. 46.

doing of something possible. Knowing means to be someone who does something somewhere that changes some context in regards to seeing some end-in-view.[493]

We tend to live in a 'general linear reality,' a "mentality aris[ing from] [the] treatment [of] linear models as representation of actual social worlds."[494] The world is in some way fixed entities and attributes that can be pedagogically pre-defined and that interact in time to create similar outcomes with different actors.[495] Keeping emergent intentionality in mind, nothing could be further from the social reality of ends and means emerging in the unfolding of local conditions and problematic situations that people must work through and with. "The use of tools, operations and instruments to develop coherent knowledge must be contextualized, such as in inquiry, and emerge and are negotiated in social communication, cooperation, and influenced by community."[496]

A shift from the govermentality in models, best practice or New Literacies which impose a truth, i.e. an order, connection, value, perspective, and identities by way of how the self-imposed knowledge informs subjects self-knowledge, to being situated within an inquiry into the concerns of the day with diverse others is as dramatic a shift as dead to alive.[497]

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[493] Dewey, J. (1922/1983). Human Nature and Conduct. Jo Ann Boydston (ed.), John Dewey: The Middle Works, Volume 14. Southern Illinois Press: Carbondale, p. 21.
[494] Abbott, A. (2001). Time Matters. The University of Chicago Press: Chicago, p. 38.
[495] That a literacy can deliver similar or same social benefits to all actors is akin to the thought that a 'given property of a social actor has only one set of causal implications,' an assumption debunked by Marx and Weber. See, Ibid. p. 40.
[496] Emphasis mine, Piaget and Dewey have remarkable similarities in the importance of knowledge constructed in a social environment, the social nature of intelligence and moral development. For example, the 'tool' chosen by Piaget for children to develop coherent knowledge was the scientific method i.e. inquiry and warranted assertability, developed through group work, common study and self-government and other collaborative approaches to problem solving in schooling experiences. See, Tanner, L. (1997). Dewey's Laboratory School. Teachers College Press: New York, pp. 134-5.
[497] See, Graham Burchell, 'Governmental Rationality: An Introduction' and Michel Foucault, 'Govermentality', in Burchell et al., eds., The Foucault Effect (Oxford 1991), 1-51, 87-104

Govermentality is a termed developed by Foucault to described practices through which states organizations, such as schooling, and for my use here the use of literacy performance for sorting and classification, identify, govern and constitute their inhabitants as particular individual subjects. Keeping in mind that we acquire our habits and therefore our selves from our habitat, govermentality is in fact a technology of truth from which forms of embodiment and subjectivity emerge by way of how students existential schooling experiences inform students about themselves and, are constructed, in part, by curriculum, pedagogy and other associated and informal schooling practices.

Conversely, students who experience curriculum and pedagogy that situates them within an inquiry have very different forms of embodiment and subjectivity in which to make sense of themselves. Since they are encouraged and supported in the critical reflection of everything that informs them they can in fact mature into "self-care," a "reflective and critical deployment of technologies of the self," so that types of resistance and agency may emerge.[498] Technologies of the self, which I will have more to say about in the next subsection, are "the practices by which subjects constitute themselves, and work to improve themselves, while living within institutional frameworks of power."[499] Inquiry here is the continual reconstruction of communal 'truth' where, through action, some objects or idea becomes significant and necessary as arising from the events to solve a problem, express something, or some purpose. Most importantly, this cooperation has a "marked intellectual quality in the exchange of experiences and ideas."[500]

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[498] Taussig, K., Rapp, R., Heath, D. (2003). Flexible eugenics: technologies of the self in the age of genetics. n Genetic Nature/Culture. (Eds.) Alan Goodman, Deborah Heath & M. Susan Lindee, University of California Press: Berkeley, p. 59.
[499] Ibid. p. 60.
[500] Tanner, L. (1997). Dewey's Laboratory School. Teachers College Press: New York, p. 106.

Again, and this will be revisited later, technologies of truth is the community's management of truth. Technologies of self or self-technologies are the existential experiences afforded by the management of communal truths that inform us about ourselves and our right relation to our community. Oppressive technologies of truth, govermentality models such as tracking or IQ testing, question only self not truth. What we find with other technologies of truth, such as with Dewey, is a questioning of both self and truth. As a community adopts more flexible technologies of truth, such as warranted assertability, questioning publicly both self and truth, more flexible relationships emerge between the individual and the community she or he is connected to.

In his idea of school as social community, the focus of the next chapter, Dewey develops his reconstructive ideas of curriculum and pedagogy.[501] Those reconstructions were focused on the biological-cultural-historical views of development, identity, and knowledge discussed in the preceding chapters. Intelligence, knowing, identity, meaning and mind emerged from associative action and organizations of mediated action in day-to-day life and practice. In collaborative inquiry a community's participants are engaged in mediating collective sense-making; intersubjective processes of sharing experience, perspectives, assumptions, values and inquiry in problem and solution formation. Participating in associative action, customs, traditions, and communication develops 'additional experiences' or a common body of experience.

Communities of inquirers are consciously and explicitly in active relationships to create use in particular lifeworlds. Exploration of circumstance and consequence is

[501] Dewey stated that schools must become " an embryonic community life, active with the types of occupations that reflect the life of the larger society, and permeated through out with the spirit of art, history and science," Ibid. p. 3.

determined by locality, co-residential, and transformative.[502] We have seen this repeatedly in the first three chapters, regardless whether the transformation in human and non-human actors is seen in solving the problems of breastfeeding or ensuring and preserving privilege for a particular set of children by the legitimization of their specific class characteristics in state organizations such as schooling. As Cochran-Smith and Lytle observed in there investigations into teachers learning in communities, it is a "knowledge-of-practice" and not tools taken up by individuals or a "knowledge-for-practice" or "knowledge-in-practice."[503] The researchers state,

> Unlike the first two, this third conception [knowledge-of-practice] cannot be understood in terms of a universe of knowledge that divides formal knowledge, on the one hand, from practical knowledge, on the other. Rather, it is assumed that the knowledge teachers need to teach well is generated when teachers treat their own classrooms and schools as sites for intentional investigation at the same time that they treat the knowledge and theory produced by others as generative material for interrogation and interpretation. In this sense, teachers learn when they generate local knowledge of practice by working within the contexts of inquiry communities to theorize and construct their work and to connect it to larger social, cultural, and political issues.[504]

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[502] Ibid. pp. 103, 106, 110-1.
[503] Cochran-Smith, M. and Lytle, S. (1998) Relationships of knowledge and practice: teacher learning in communities. In Review of Research in Education, ed. A Iran-Nejah and C.D. Pearson. Washington: American Educational research Association (AERA), p. 250, emphasis mine.
[504] Ibid.

If we are to stay consistent in our socio-cultural views then the translation of these views into schooling practices must focus on the participatory and social structures involved in developing and maintaining contexts of inquiring communities.

(2) The separation of ethical action from the participation in the places in which we 'dwell.' If you recall, KPS scholars are attracted to literacies that generate critical activity and ways of thinking. The social justice and equity hopes of KPS scholars reside with New Literacies and the social opportunities of ICT and globalization seem to afford. The overarching logic of KPS, according to Lankshear and Knobel, is that by switching the focus from content and subject to discourses "connected to work, or to the public sphere more generally (e.g. government), we can get [educational] goals that stress thinking like members of those discourses, using tools from them, engaging in social practices akin to theirs, and critiquing those discourses in relation to others."[505] They are much influenced by the postmodern critique of global economic thinking. They proclaim: "Practicing (this) powerful literacy, so defined, can provide the basis for reconstituting our selves/identities within society."[506] Thus, the disposition of individuals through fluency in various and often-conflicting discourses associated with in and out of school practices are the actor(s) of reconstruction in the perspectives, worldviews, core values, and identities of discourse groups. KPS New Literacies scholars see the construction of knowledge, by way of literacy teaching, schooling practices, and research, as political because knowledge is infused with perspectives, beliefs, values, and ideals.[507]

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[505] Lankshear C., and Knobel, M. (2000). Mapping postmodern literacies: A preliminary chart, in The Journal of Literacy and Technology, Vol. 1, Num. 1, Fall 2000, p. 163.
[506] Ibid.
[507] Gee, J. (2004). Situated language and learning: a critique of traditional schooling. New York: Routledge, p. 105-6; Lankshear C., and Knobel, M. (2003b). New Literacies: changing knowledge and classroom learning. Open university press: Buckingham.

The KPS reconstructive person is fluent in various and often-conflicting discourses and is a omni-competent individual "philosophers –historians-ethnographers-sociologist of knowledge in institutions and in society as a whole"[508] In chapter 2, it was discussed how this person could not be constituted or sustained outside of some form of community. In this subsection I will discuss how moral or ethical interpretive identities cannot be constituted, sustained, or changed outside of explicit and reflective exchanges within the primary community that individuals' experience. There is, I believe, a dangerous pedagogical fallacy in believing we can easily change, through presentation of information and others' experiences, changes to individuals' consciousness, not explicitly supported by a community, that results in changed values, political behaviors, and action. We should investigate instead what it means to facilitate the change of habits, which are perspectives, beliefs, and will. For example, Ellen Brantlinger found in the course of her research for Dividing classes (2003) that many university affiliated, well-educated upper class white mothers who espoused liberal values still justified and supported, in their actions, conservative pedagogies that served to retain the separation and advantage of their children at the expense of other children from poorer communities.[509] The internal inconsistencies demonstrated by the mothers' were not born out of ignorance, that consequences to poor communities were unknown, but of ideology and deeply held beliefs of race and class. The upper class mothers in Brantlinger's research stated, though few of these mothers had any social relationship outside their class, that more equitable schooling was not possible because the poor were different, cognitively inferior, uninterested, unmotivated and desired

[508] Gee (1996). The New Work Order: behind the language of the new capitalism. Westview Press: HarperCollins, p 161. Lankshear & Knobel (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, p. 13.
[509] Brantlinger, E. (2003). Dividing Classes. RoutledgeFalmer Press: New York

separation.[510] Likewise, the mother's self-knowledge, i.e. liberal, seemed to be constituted largely from what they desired the world and themselves to be, i.e. equitable, rather than their actions taken in regards to social equity.[511] One of Brantlinger's conclusion was that educational reform would need to address the ethical dilemmas of class; the middle and upper classes would need to see and be disturbed by the fact that their actions, i.e. children's advantage, was at the expense of other children in other communities.[512]

There are moral and emancipatory aspects to the KPS scholars' philosopher – historians-ethnographers-sociologist. In all 'knowing' especially critical activity there is some element of expressing and teaching right or ethical behavior, judgment or standards of conduct. Likewise, we unconsciously know there is a relationship between social conceptual development and moral development.[513] This directly connects to the equity as a social project discussed in chapter 3. The conceptual development and knowledge experienced by the individual, as self-connect to community, and reflected upon in collective inquiring into specific issues and their consequences directly relates to the implications of those consequences, which is moral. For example, this occurs in children's play when children see that the consequence of their actions interfere with their desire for

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[510] The upper class mothers extended and adapted their ideology of class and race (consciously and unconsciously) to provide emotional and psychological legitimacy for the class and race power relationships Brantlinger was challenging. Brantlinger states that many mothers were disturbed when pressed to explain why they believed what they were stating. It is interesting to note how infrequently we are expected to justify our beliefs or give reasons for what we feel justified in believing. The psychoanalyst Erich Fromm stated, "we are concerned exclusively with ourselves…'I am' is the only system to which thoughts and feelings refer." See, Utne Reader, Nov-Dec 2000; also see the Home of the Int. Erich Fromm Society accessed at http://www.erich-fromm.de/e/index.htm.

[511] "[C]onfronting what one desires rather than what one does is what really constitutes self-knowledge [in the Western Christian-medical-educational tradition]." Foucault, M. & Sennett, R. (1982). Sexuality and solitude. In Humanities in Review, volume 1, Cambridge University Press: Cambridge, p. 20.

[512] Brantlinger also observed that there was a correlation in teachers between knowing about or where to find information from advocacy organizations and a higher likelihood of engaging in active responses to inequity those teachers' observed.

[513] Tanner, L. (1997). Dewey's Laboratory School. Teachers College Press: New York, pp. 135-6.

associative action as children evolve into more 'peer-centered values.'[514] Therefore, the individuals who we hope will later recreate the community's values in action must first experience those values; the community's desires constitutes our self-knowledge of ourselves.[515] Pedagogically, we must think about what students schooling experiences, their schooling geographies, telling them about themselves and others.

Jennie Oakes and Jean Anyon both see deeply held belief, values, and ideologies as significant barriers to social changes, both scholars also conclude that there is a need for publics to create change.[516] Assimilating the habits and predispositions of power as for example in New Literacies mind sets or the social fluency of powerful discourse groups by no means guarantees that the consequences or values of the oppressed will be known to or cared about by the powerful.[517] In many cases assimilation, critical mass, or changing demographics in a society, social class or organizations does not easily bring about associated radical cultural changes because the cultural criteria and values necessary to have access to many forms of the social benefits enjoyed by a particular powerful discourse group do not change.

KPS scholars' note some of the dilemma in their views, for example Lankshear notes that,

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[514] Ibid. p. 136.
[515] Ibid. pp. 136-7.
[516] See, Oakes, J. & Rogers, J. (2006). Learning Power: organizing for education and justice. Teachers College Press: New York; Anyon, J. (2005). Radical possibilities: public policy, urban education and a new social movement. Routledge: New York, p. 135.
[517] See, Lankshear & Knobel (2000). Mapping postmodern literacies: A preliminary chart, in The Journal of Literacy and Technology. Vol. 1, Num. 1, Fall 2000, p. 7. Mindsets "relate to how space is constructed and controlled in terms of values, morals, knowledge, and competence." For KPS scholars the intersection of identity and mindsets can serve to generate innovative possibilities. For example, Amazon.com founder Jeff Bezos thought differently about ICT. Instead of conceptualizing ICT as doing current processes more efficiently Bezos saw ICT as a distinctly different way of being and so thought about using ICT in innovative ways. See, Lankshear, C. and Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, p. 64.

> [i]n various places, Jim Gee states very clearly a major dilemma with respect to effective learning construed socioculturally as process of achieving fluent mastery in Discourse. This concerns the fact that becoming fluent in a Discourse is best achieved through processes of learning inside the Discourse. But the more effective this learning is, the less critically reflective the learner's perspective on the Discourse will be. The more effective learning inside Discourse is, the more deeply 'indoctrinatory' it is likely to be. As Gee notes, Discourse cannot countenance criticism from within, since that would invite their own demise or transcendence. [518]

Lankshear states that this dilemma, which also illustrates the power of habit and participation, necessitates creating experiences for different, competing and divergent discourses.[519] A Deweyan geography would seem to challenge the simple notion of what is external and internal to a discourse, seeing instead that democratic possibilities emerge from community as discourse and practice about communal matters of concerns can be occupied by diverse communities, groups, and members with very different subjectivities.

(3) Techniques of the self: Revisiting Dewey's warranted assertibility as 'truth' for self-knowledge. The KPS scholars' philosopher –historians-ethnographers-sociologist is an individual with New Literiacies who as reconstructive agent is hoped to desire or will simple create, by being part of demographic changes, equitable changes in society at large.

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[518] Lankshear, C. (2003) The Home-School Digital Divide in Curriculum and Pedagogy, Children's Literacy and Popular Culture ESRC Seminar Series, School of Education, University of Sheffield [Online], Available: http://www.shef.ac.uk/literacy/ESRC/pdf/papers/lankshear.pdf [Accessed 19th September 2006] p. 9.

[519] Habits are second nature 'adaptive structures' founded on the many ways we 'live by means of the environments' we encounter in the world. See, Dewey, J. (1938) Logic, the theory of Inquiry. Henry Holt and Company: New York, p. 25.

One can sense the past and future tense of New Literacies; the past, as stated before, is the bracketing of some associative action into New Literacies, the future is that the individual agent of change will desire to do or will bring about some positive change. So, where is the present tense to this transformative pedagogical product? Where or how does the student, objectified through pedagogy and curriculum, begin to see themselves as this new 'self,' self-possessing new social abilities and powers?[520]

Furthermore, how do we work towards changes in action instead of just changes in desire? Part of the answer is that we become the practices we participate in, we are always changing and growing as our associations, experiences, self-reflections, habitual disruptions and connections with each other in the world change and relink.[521] This is a reiteration of inquiry as pedagogy in chapter 2 and Dewey's individuality introduced in chapter 3, self-connected to community. The other part of the answer lies in how our existential experiences with techniques and other mediations with means serve to identify, govern and constitute us as individuals. This is a main tenet of Dewey's work on warranted assertability that I will loosely link up to M. Foucault's and R. Sennett's general questions and observations in their discussion about the "technique of the self" to help us envision thinking explicitly geographically about our experiences in using means to socially mediate problematic situations in regards to identity formation.[522]

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[520] Personal power or active qualities involves the understanding of social relationships, and being disposed to self-determined and directed action towards desirable and ethical ends. Tanner, L. (1997). Dewey's Laboratory School. Teachers College Press: New York, pp. 20, 50.

[521] Boisvert, R.D. (1998). John Dewey: rethinking our times. SUNY Press: Albany, pp. 66-7.

[522] Foucault, M. & Sennett, R. (1982). Sexuality and solitude. In Humanities in Review, volume 1, Cambridge University Press: Cambridge, p. 10. Also see, Foucault, M. (1982). "Technologies of the self," transcriptions of Foucault's public lectures to the university community on "The Political Technology of Individuals," at the University of Vermont, accessed on 5 September 2006 at http://www.sp.uconn.edu/~en109vc/Old/S2002/Technologies.pdf

Foucault and Sennett discussions deal with a history of sexuality. This subsection is by no means any attempt to offer a comprehensive view of their ideas. Instead I try to pick out and highlight one of their main ideas; that there are real and consequential power relations in the 'techniques of truth' or 'seismograph of our subjectivity' a society makes available to individuals and communities in that by these 'techniques of truth' individuals derive truths about themselves.[523] The relevance here is in the ways that the pedagogical experiences we create provide 'techniques of truth' for students and how these techniques contributing to their constitution of self. Regardless of how radical the intention we may be shocked to see how many of our pedagogical offerings may negatively frame students' self-knowledge. Most relevant for the concerns of this dissertation is what Dewey's idea of truth, warranted assertibility, gives students by way of 'techniques of truth' that are explicitly placed in the community of inquiry and question what is truth and what is self. Either way the important point for educators is that the sensual, holistic experiences with naturalistic inquiry, and the creation of use with means is equally if not more important than the selection of specific means, who we are is directly related to not only to tools we use, but how we use them.

Pedagogy and curriculum can be seen as a collection of techniques for various goals that "permit one or [an organization] to determine the conduct of individuals or to impose certain ends or objectives."[524] These are techniques of domination and they work hand-in-hand with techniques of the self. Sennett and Foucault describe techniques of that self as:

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[523] Ibid. p. 11.
[524] Ibid. p. 10.

> In all societies there is another type of technique [other than domination] techniques that permit individuals to affect, by their own means, a certain number of operations on their own bodies, their own souls, their own thoughts, their own conduct, and in this manner so as to transform themselves, modify themselves, and attain a certain state of perfection, happiness, purity, supernatural power. Let us call this kind of technique technologies of the self. [525]

That these techniques, in relation to techniques of domination, are self-perpetuated or seem to result in positive equilibrated states, by no means ensure they are emancipatory.[526] There is an interaction between the two techniques and a power relation. That power relation is that the techniques of domination, among other things like being able to bodily take you and lock you up, frame sets of truth obligations.

> This self technology implies a set of obligations: learning what is truth, discovering the truth, being enlightened by truth, telling the truth. All of these are considered important either for the constitution or the transformation of the self.[527]

We know this intuitively and explicitly in our educational research. For example, ability tracking and educational measures informs, makes legible, and gives a cultural truth legitimized by science, particular student identities. As the student takes exams or uses means in day-to-day schooling (worksheets or rich AP curriculum), which are evaluated

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[525] Ibid.
[526] There is much feminist work that informs my concerns here of internalization and resistances, for example structural double consciousness. See, Ferguson, A. (1997). On conceiving motherhood and sexuality: a feminist materialist approach. In Feminist Social Thought: A Reader, (ed.) Diana Tietjens Meyers, Routledge: New York.
[527] Foucault, M. & Sennett, R. (1982). Sexuality and solitude. In Humanities in Review, volume 1, Cambridge University Press: Cambridge, p. 10.

some 'truth' about her or him is revealed every class, day, and year. For example there is currently in the U.S. a huge gap in civic engagement between upper-middle class students and poor students including poor students from non-white communities.[528] This gap in civic engagement, connected to the upper-middle classes domination of civic engagement overall, is directly related to various communities' relationships to American schooling, how schooling experiences inform schooling identities, and to the differential geographical schooling experiences between students and communities.[529] In other words, who receives access to politically relevant geographies of knowing and participation, and who has the social capital to actualize them?[530]

In my personal experience speaking with students I have found that students in informal or formal tracked schools 'know,' who, including themselves, are smart or dumb. This is directly related to how their academic 'selves' have been objectified through authoritative pedagogy and curriculum. The pedagogy may have chosen the educational measure, but they the students used the means in embodied ways, they took the exam, they live day-to-day in years of tracked pedagogy all of which informs them about themselves. Conversely, students I spoke with in progressive schools with more holistic curriculum had more complex notions of intelligence, different intelligences, and described all or most

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[528] Goldstein, A. (2006). Civic involvement tied to education: high school dropouts unlikely to vote. Washington Post, Tuesday September 19, 2006, page A19.

[529] See, Fine, M. (1993). [Ap]parent involvement: reflections on parents, power, and urban public schools. In Teachers College Record, Volume 94, Number 4.

[530] For democratic societies children should have qualities of intellectual initiative and independence of judgment. They should be educated for leadership as well as obedience, must have powers of self-direction, directing others, and abilities in administration and to assume positions of responsibility. See, Tanner, L. (1997). Dewey's Laboratory School. Teachers College Press: New York, pp. 32,41. Access to anything is relational and may be most productively thought of as heterogeneous socio-technical networks or assemblages. Access forms may be specific to particular artifacts, skills, and knowledge but are always distributed in bodies, places, and social structures.

students in their school as smart.[531] I am not insinuating that our selves are so fragile that one event defines us. My point is pedagogy and curriculum constructs some very powerful techniques of truth and truth obligations for students, and that these techniques of truth reside in our experiences with and in using means in intentional ways. Mike Rose's example of the 'worksheet' remedial life of lower track students is an additional example.[532] Our experiences in using means, creating use, and working collaboratively with others is the 'architecture' of who we are in action, what we do, what is our relationship to ourselves, to others which is of critical concern for efforts such as Knowledge Producing Schools.[533] This 'self' is no less habitual, distributed or self-reflective than previously discussed, in fact it reinforces that we are what we do.

"An assemblage is never technological; it is the opposite. Tools always presuppose a machine, and the machine is always social before being technical."[534] Schooling is and is embedded within vast assemblages. As previously discussed, the social need and use of American schooling has largely been exploited by the middle and upper classes, parents who also indirectly control much of the inquiry into schooling, to their advantage. For example, it is mostly upper and middle class parent who sabotage efforts to detrack schools.[535] The schooling assemblage mediates the use of curriculum, pedagogy, educational measures, and policies for school funding to functionally interact and classify children and communities in a way that preserves upper class privilege. We have seen that the student identities specific assemblages of schooling make legible, for example in

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[531] The progressive private schools that I visited are more economically and racially diverse than the public schools in the same and surrounding counties.
[532] Rose, M. (1989). Lives on the boundary. Penguin books: New York.
[533] Foucault, M. & Sennett, R. (1982). Sexuality and solitude. In Humanities in Review, volume 1, Cambridge University Press: Cambridge, p. 20.
[534] Deleuze G.& Parnet C. (1987). Dialouges. Pp. 70-1.
[535] Wells, A. & Serna, I. (1996). The politics of culture: understanding local political resistance to detracking in racially mixed schools. In Harvard Educational Review, vol. 66, no. 1, Spring.

tracking, over-representation in special education, or with educational measures, reflects the values of those able to control the inquiry of schooling. In other words, the "organic attitudes [of those who control the inquiry] become a powerful assemblage."[536]

Dewey knew the potential power involved in students, teachers and communities having participatory access to inquiry into the assemblages of which they were a part and in which they are defined would enable participants to negotiate and become more self-defining. Dewey was explicitly connecting doing and knowing, "the need to gain as individuals practical and intellectual control of such methods of work and inquiry" that will enable them to "realize results" for themselves.[537] For Dewey it is non-contrived participation in warrant assertibility that creates participation to facilitate "intellectual control of such methods of work and inquiry" for individuals and public intelligence for communities.

In KPS this logic seems reverse as if the tool or operations, as in New Literacies, yielded by individuals creates the connections and unity of the assemblage, versus the negotiated functional needs of the community fulfilled in social inquiry. The creation of use as in working within the contexts of inquiry is implicit in KPS case studies.[538] Regardless, Bigum does implicitly see KPS as an assemblage.[539] This is clear in Bigum's

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[536] Dewey, J. (1929/1958). Experience and Nature. Dover Publications: New York, p. 170, emphasis mine.
[537] See, Tanner, L. (1997). Dewey's Laboratory School. Teachers College Press: New York, pp. 140, 228. Tanner cites from Dewey, Elementary school records, identified as 1900d in her references.
[538] "[The] pedagogy; [is the] focus [is] on ways of learning and teaching through community partnerships underpinned by the use of technologies i.e. how rather than what." See, A productive pedagogy focus: in enterprise projects, a 'enterprise education' document generated from the KPS research from the Happy Valley State School access from the KPS web site http://www.deakin.edu.au/education/lit/kps. Document name: Productive Pedagogy Focus.doc. Enterprise education refers to "connectedness, engagement, resilience, self-efficacy and ethicality" p. 2.
[539] Chris Bigum expresses an interest in Actor-Network -Theory (ANT) on his personal website. For example see, Rowan, L. & Bigum, C. "Actor network theory and the study of online learning: new perspectives on quality." Accessible at http://www.deakin.edu.au/cbigum/plants/171.html. ANT embraces and develops method for way to make parts of assemblages or networks legible. I could have just as easily referred to the

statement that "KPS is all about relationships."[540] Chris Bigum's comment refers to his view that the biggest impact of new technologies is in how those technologies offer new modalities for communication and organization.[541] Likewise, Bigum's comment, in regards to globalization, refers to the importance he places on the need for communities' to develop explicit and public points of view stating that "communities will need to become experts in themselves."[542] The KPS scholar Colin Lankshear explicitly states providing an additional example that KPS is based on a view where the whole community is responsible for education.[543] KPS scholars' are also deeply committed to the view that the community should provide expertise.[544] KPS scholars' are in a manner of speaking implicitly mapping out the geography of knowing in both their attraction to how tools are used in day-to-day practice and the connections they seek to maintain between schooling experiences, local expertise, and needs of the community to make schooling experiences with tools relevant. Implicitly, these scholars are showing that there is no absolute ground for pedagogy- they are mapping out where acts with tools have consequence.

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work of Bruno Latour or John Law in my conversation of assemblage. See, Latour, B. (2005). Reassembling the social: An introduction to Actor-Network-Theory. Oxford University Press: USA.

[540] Rowan, L. & Bigum, C. (2005). Transforming frameworks: new approaches to CCTs and the pursuit of educational equity. Deakin University, Geelong. Paper presented at the Australian Teacher Education Association Conference, Gold Coast, July 2005 and at the British Educational Research Association Conference, Glamorgan, September 2005.

[541] Bigum, (2003). "Rethinking schools and community: the knowledge producing school," Faculty of Education, Deakin University, Geelong, Victoria, Australia at http://www.deakin.edu.au/~cbigum/plants/rethinkschlcomm.html. Also see, Bigum, C "Knowledge Producing Schools" Faculty of Education, Deakin University, Geelong, Victoria, Australia: http://www.deakin.edu.au/education/lit/kps/index.html.

[542] Ibid. It may be productive to remember that globalization is a geographic process. "In the current phase of profound shake-up of geographical processes, 'globalization' is often invoked as a shorthand to summarize processes of deterritorialization and reterritorialization but in a way that renders them a-spatial or a-geographic and as such profoundly disempowering." Swyngedouw, E. (2000). Authoritarian governance, power, and the politics of rescaling. In Environment and planning D: Society and space, Vol. 18, p. 64.

[543] Lankshear, C. (2003) The Home-School Digital Divide in Curriculum and Pedagogy, Children's Literacy and Popular Culture ESRC Seminar Series, School of Education, University of Sheffield [Online], Available: http://www.shef.ac.uk/literacy/ESRC/pdf/papers/lankshear.pdf [Accessed 19th September 2006] p. 13

[544] Ibid. pp. 13-4.

Warranted assertibility creates a very different 'truth obligation' for self, community, and self-knowledge. This is critically important because different truth obligation create different conditions, and as such different geographies, for students to make sense of themselves – their self-knowledge. Likewise, in thinking of pedagogy in spatial terms, since warranted assertibility places the burden of truth and self on the on-going, locally concrete inquiry, of which students participate, of the community schooling experiences can no longer be easily bound to authoritative measures or placed in traditional schooling locations. This is implicit in KPS scholars' focus on relevancy, inquiry, and point of view and explicit in Dewey's warranted assertibility. In other words, in both Knowledge Producing Schools and Dewey's pedagogy of inquiry or warranted assertibility there is, implicitly or explicitly, a sensibility that an act or 'knowing,' is located wherever it has consequence.[545] My intention here is to describe what that means for pedagogy in spatial terms or geographies of participation, introduced in chapter 3, because for pedagogy to remain consistent to the basic tenets of Practice theory or a socio-cultural understanding of knowing it must remain local, concrete, and distributed. Likewise, students and communities must have experiences with each other and the use of means that cultivate dispositions to act and respond in particular civic ways that serve the interests of their and other communities.

Warranted Assertibility and geographies of participation

Dewey creates a new and explicit geographical and pedagogical relationship with warranted assertibility as truth. Warranted assertibilty explicitly changes the traditional techniques of self knowledge and self-technologies in schooling, thereby creating an

[545] Dewey, J. (1929/1958). Experience and Nature. Dover Publications: New York, pp. 199 – 200, fn. 3 p. 200.

opportunity for schooling to facilitate for students a very different relationship with themselves, the school, their peers, and the community. Before specifically looking at how warranted assertibility changes the spatial-social aspects of schooling experiences, I will first briefly revisit geographies of participation.

If you recall from chapter 3, geographies of participation are social-spatial and temporal geographies of knowing, which are 'modes or forms of living individual experience' in spatial-temporal locations where a particular knowing has consequences. Using the subject of geography as an example, Dewey states,

> Geography is not only a set of facts and principles, which may be classified and discussed by themselves; it is also a way in which some actual individual feels and thinks the world. It must be the latter before it can become the former.[546]

At first blush we may interpret Dewey's statement to be something akin to New Literacies such as mind set, assimilations of abstracted expert perceptions, but the important difference is that Dewey is describing expert perceptions in fields or the explicit development of a distributed intelligence in the contexts of ecological subsystems. Perceptions in fields that remain quasi-stable yet flux and change due to the geography of knowing; what places, experiences, communities, ideas, instrumentalities, and artifacts does that historic body of knowing take you. The subject geography is situated in a geography of current and historical experiences, social meanings, and activities that constitute 'geography.' Intellectual and social activities that have purpose are emergent from a community's communications, and inquiry and are 'places' where things or object

[546] Dewey, J. (1897). The psychological aspect of the school curriculum, pp. 360-1, cited in Tanner, L. (1997). Dewey's Laboratory School. Teachers College Press: New York, p. 44.

gain significance.[547] Activity therefore is never for its own sake but for specific and generative "outcomes in view."[548]

In light of this, I am looking at pedagogical phenomena as geographical assemblages and therefore geographically, in that how we use means, our relationships with means, and each other in relation to social capital, as in chapter 3, directly serves to identify, govern and constitute us as individuals connected to communities. A pedagogy such as KPS, concerned with knowledge construction especially as it relates to critical activity and equity, needs to be very concerned with the existential experiences of mediating means with others in the associative action of schooling. Experiences with means-ends influence conduct, and identity. It is far less about a operation or thing associated with new technology that needs to be explicit operations for students than it is a need for pedagogy and schooling assemblages to facilitate the students' development of habitual relationships with using means for their interests and purposes, which emerge from the communities they participate in.[549]

In revisiting Dewey's ideas about warranted assertibility, and its actualization in the classroom practice and schooling structures that facilitate inquiry, we also revisit his concepts of knowing, as in embodied knowing. Embodied knowing, discussed in chapter 3, is in fact an assemblage. Distributed in bodies (habits, identities, predispositions), social structures (practices, tools, customs, traditions, relationships related to capital), and places (repositories, hubs, traditional locations, existential experience of place) knowing is the process of associative doing and creating where knowledge is but a product. Experience, perception and activity cannot be separated.

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[547] Tanner, L. (1997). Dewey's Laboratory School. Teachers College Press: New York, pp. 50, 84.
[548] Ibid. p. 73.
[549] Tanner, L. (1997). Dewey's Laboratory School. Teachers College Press: New York, pp. 44-5.

Traditional views of knowledge, such as Justified True Belief, discussed in chapter 1,were pedagogically lifeless for Dewey because they had little to do with naturalistic inquiry, what people conduct in real situations to solve problems.[550] Dewey states that warranted assertibility

> is preferred to the term belief or knowledge – it is free from the ambiguity of these later terms, and it involves reference to inquiry as that which warrants assertion. When knowledge is taken as a general abstract term related to inquiry into the abstract, it means "warranted assertibility." The use of the term that designated potentiality rather than an actuality involves recognition that all special conclusions of special inquirers are part of enterprise that is continually renewed, or is a going concern.[551]

There is in warranted assertibility no obligation to fixed universals and is completely dependent on social inquiry. As such, warranted assertibility is focused on knowing and not knowledge. Knowers must state how they know. Knower and knowing are descriptive of the social action involved in developing warranted judgments, defending claims, grounding meanings and assumptions. Knowing is used to meet and negotiate the needs, desires, wants and interests of communities and people facing problematic situations in their day-to-day lives. Knowing may be relatively stable but always in flux, open to change and never producing universal facts or an end to inquiry.

Warranted assertability, if you recall from chapter 2, is Dewey's substitute for truth. Dewey distinguishes existential truth from logical truth. Logical truth is communal

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[550] Boyles, D.R. (2006). Dewey's epistemology: an argument for warranted assertion, knowing, and meaningful classroom practice. In Educational Theory, Vol. 56 Issue 1, pp. 57-62.
[551] Dewey, J. (1938). Logic, the theory of inquiry. Henry Holt and Company: New York, p. 9, emphasis mine.

truth, which can be imagined as how a community manages truth or the universal truths the community of inquirers comes to agree upon and use. Logical truth can in fact be seen as a community's technology of truth be it customs, norms, doctrine or diagnosis. I will have much more to say in regards to logical truth. Existential truth can be seen as our experiences solving real world problems, our experiences with our community's universal truths and as such with self-technologies. My concern is with the relationship between logical and existential truth and what warranted assertibility affords as a spatial pedagogy in this regard.

With existential truth, we experience an intended state of affairs, and ultimately a restoration of harmonious functioning. My experience with the lactation consultant is an example. In other words, the hypothesis works in our practical existential experience. Dewey defines truth as existential in Experience and Nature:

> Sometimes the use of the word "truth" is confined to designating logical property of propositions; but if we extend its significance to designate character of existential reference, this is the meaning of truth: processes of change so directed that they achieve an intended consummation. Instrumentalities are actually such only in operation; when they operate, an end-in-view is in process of actualization.[552]

Truth here is existential operations or what works in our day-to-day life via stable and recursive operations that consistently yield the same consequence. The community comes into agreement (action), e.g. logical truth, about many existential operations. An example, keeping with my breastfeeding concerns is the recent suggested WHO legislation that would require restrictions on the advertising of infant formula, the regulation of health

[552] Dewey, J. (1958). Experience and Nature. Dover: New York, p. 128.

claims on infant foods (due to issues of absorption) and the requirement for infant formula companies to put warning labels on infant formula stating formula is not a congruent substitute for breast milk. Much of these realizations came from formalized research of what was specifically in breast milk, but much came from pediatrician and Ob/Gyn noticing and documenting the differences in breastfeeding and non-breastfeeding groups, breastfeeding advocacy, not to mention the grassroots efforts created to offset corporate interest.[553] Agreements of logical truths change as different interests, problems, and consequences of operations are ascertained and negotiated by the communities involved. The means we use to solve problems and resolve conflict have no essence in and of themselves. As Dewey states, "means as such are neither true or false, truth-falsity is not a property of propositions. Means are either effective or ineffective."[554] Means or operations only have value in how they facilitate the process of actualization. Truth for Dewey involves the success or failure of operations (symbolic as well as existential) of a given social practice to secure sought after consequences. As such it should be ideal for the kind of practice-oriented epistemology and pedagogical relationship that KPS scholars advocate; in that both truth and who were are in relation to that truth is constantly created and recreated in ongoing inquiry.

Dewey's definition of logical truth, already implied, was borrowed from Charles Sanders Peirce.

> The best definition of truth from the logical standpoint which is known to me is that of Peirce: "The opinion which is fated to be ultimately agreed to by all who investigate is what we mean by the truth, and the object

[553] Grassroots efforts or publics are independent or quasi-independent public entities that are the basis of alternative inquiry, in this case offsetting corporate interests.
[554] Ibid. p. 128.

> represented by the opinion is the real." Op. cit,. Vol. V, p. 268. An additional statement is the following: "Truth is that concordance of an abstract statement with the ideal limit towards which endless investigation would tend to bring scientific belief, which concordance the abstract statement may possess by virtue of the confession of its inaccuracy and one-sidedness, and this confession is an essential ingredient of truth."[555]

Logical truth is communal agreement regarding some logically universal principle of coordinated action. Of course all agreement is not active, we do not actively agree upon all the logical truths into which we are born and participate. The key to Dewey's logical truth and its relationship to existential truth is that no agreement is considered closed or permanent. Logical truth may define existential truths, but likewise existential truths not only concur but may challenge existing logical truths when the operations the logical definition defines fail.

There is no ideology of certainty in Deweyan truth and as such both self and truth may be questioned in a community free from an ideology of certainty. In warranted assertability we have a flexible relationship between the management of truth, e.g. technology of truth, and self-technologies, e.g. existential truth, where members can challenge and inform communal truth based on their life consequences, experiences, and diverse subject positions. Inquiry is accessible and made public to all member of the community and so existential truths can morph a community's logical truths by creating new trajectories in inquiry that also calibrate its self-technologies. Warranted assertability can potentially be an infinitely flexible technology of truth that can be sufficiently

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[555] Dewey, J.(1938). Logic, the theory of inquiry. In Jo Ann Boydston (ed.) John Dewey: The Later Works, Volume 12. Carbondale: Southern Illinois University Press, pp. 394-5.

adaptable to cope with future development because of the deeply interdependent and public relationship it maintains between logical and existential truth.

Dewey creates a new and explicitly spatial pedagogical relationship with warranted assertibility as truth. Warranted assertibilty explicitly changes the authoritative techniques of domination and of self in traditional schooling creating an opportunity for schooling to facilitate for students a very different relationship with means, themselves and their teachers, communities, and peers. If you recall, Dewey states clearly that knowledge is not the goal or focus point, nor is the production of some knowledge, but instead warranted assertibility.

> Warranted assertion (assertibility) merge truth and inquiry together in such a way that correspondence to an external world is no longer the point. The point, instead, is the interdependence of truths and the processes of inquiry: the temporal satisfaction of solved problems in a world that is not set apart for the knower's use(s) of the world or place(s) in that world. [556]

How we know, or the quality of our knowing in comparison to others' knowings, historical knowings, and ongoing inquiry matters and informs truths, which in turn informs self-knowledge. So how the community explicitly goes about knowing is crucial to our identities and the actions we see as possible for ourselves, which is why warranted assertibility as it informs specific schooling practices and structures is relevant to Knowledge Producing Schools.

The socio-cultural realities of naturalistic inquiry or emergent intentionality, discussed in chapter 2, where only half of Dewey's concerns in thinking about warranted

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[556] Boyles, D.R. (2006). Dewey's epistemology: an argument for warranted assertion, knowing, and meaningful classroom practice. In Educational Theory, Vol. 56 Issue 1, p. 61.

assertibility in regards to pedagogy. Dewey was also concerned with the quality of that inquiry and how inquiry related to social processes vital to facilitating democratic communities; both these concerns explicitly necessitate a community aware of itself.

If you recall from chapter 3, democracy for Dewey is a mode of associated living – democracy is in fact an understanding of community life, so to support the conditions of democracy is to support the conditions that facilitate public social inquiry, warranted assertibility.[557] The community explicitly uses means-ends and passes judgment on existential, logical and imagined courses of actions as the community inquires into and negotiates the formation of the problem and solution. Participants ground or warranted their assertions into how to solve problems and acknowledge consequences of concrete action.[558] Problem resolution is also explicitly temporal – other problems or conditions will arise, other consequences will become known, better solutions will be presented.[559] The result is a member, participant or "knower who will have direct access to mediated knowledge, where knowledge is not understood in semantically detached terms."[560] In other words, by experiencing real time judgments "about consequences of action in solving actual problems," we have "knowers who are concretely and dynamically embedded in the world."[561] By actually and explicitly engaging in and reflecting on inquiry participants develop habitual capabilities to act, are dispose to assert, and imagine future consequences and themselves acting, inquiring, and judging in regards to issues of concern.[562] Therefore schooling experiences must become not only sites of inquiry, such as we have seen with

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[557] Dewey, J. (1927/1984). The Publics and its Problems. In Jo Ann Boydston (ed.) John Dewey: The Later Works, Volume 2 (235-372). Carbondale: Southern Illinois Press, pp. 326-332.
[558] Boyles, D.R. (2006). Dewey's epistemology: an argument for warranted assertion, knowing, and meaningful classroom practice. In Educational Theory, Vol. 56 Issue 1, pp. 63-65.
[559] Ibid.
[560] Ibid. p. 64.
[561] Ibid.
[562] Ibid. pp. 64-5.

Knowledge Producing Schools case studies, but also places where students must "make knowledge claims at the same time they are engaged in inquiry" in diverse groups. [563] In doing so the community of inquirers create 'epistemic responsibility.'[564]

Epistemic responsibility describes the responsibilities of participants and the community's interactions in building knowledge. Knowing requires explicit, social and public inquiry and justification.[565] Individuals are expected to say what and how they know something and what is the consequence of that knowing. This is no just a young adult or adult capacity. If you recall in the description of Knowledge Producing School cases studies in chapter 1, year 1 students were, as a group, asking other peers how they used or what they did in specific places to determine what made place. Year one students were also discussing the criteria of place based on what the place was made of, i.e. human-made, or natural. Those year one students were collecting data, interpreting it and stating on what basis they knew what they concluded from the activity. They are truly making knowledge as a result of their inquiry and they are constituting identities in using means as active researchers.

The community of inquirers also has an epistemic responsibility. The community has an obligation to not control students' trajectories regarding what the community sees as acceptable inquiry. The community of inquirers, with the participation of students, teachers, communities, and school, determine a working criterion for relatively, stable 'truth,' the appropriate guidelines for discussion and etiquette for group inquiry, and

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[563] Ibid. p. 65.
[564] Boyles, D.R. (2000). Students as knowers: an argument for justificatory social epistemology by way of blind realism. In Social Epistemology, Vol. 14, No. 1, pp. 39-40.
[565] Ibid. p. 33. "Deweyan views state that knowing necessarily reveals itself to be a justificatory social process that does not end in static knowledge claims separate (or separable) from the community of knowers from which those claims, emerge, change, and re-formulate."

expectation for participants to state why or how they know or believe what they know or believe. Communities of inquirers situated in inquiry and warranted assertibility are 'mutually participative' communities aimed at understanding and the support of unique individuals connected to the community.[566] Knowing explicitly contextualized in and mediated by the inquiry of the community is expected to be publicly challenged, confirmed or changed by the unique experiences of participants, creating a very positive environment for self-knowledge – capable individuals supported in and challenged by an inquiring community to question truth, self, and consequences of action. Students and communities who have traditionally been researched on or consumers of research become capable of doing and creating local communal supports for their own research.

The potential knowing of this 'mutually participative' community situated in inquiry and warranted assertibility defies institutionalization creating new roles for teachers, students, communities, traditional schooling locations, and Schools of Education. A new assemblage emerges as what is mediated by the ongoing assemblage morphs changing the geographies of participation and as such the social relations and superstructure between all the actors (human and non-human). Schooling facilitated by a curriculum guided by inquiring into relevant problems makes political life part of the organic day-to-day life of school-community. The distinctions between schooling and community become so blurred that schooling seems to dissolve into community.

This chapter has further extended and developed the ongoing ideas in the previous chapters of embodied social pedagogy into terms of spatial relations and geographies of participation. With Dewey we see how the relocation of socio-cultural change efforts into public social inquiry and warrant assertibility contexts helps to support and create

[566] Ibid. p. 41.

communal conditions and mobile resources that facilitate democratic communities and able publics. Likewise, Knowledge Producing Schools case studies and vignette show a mapping out of the geography of knowing with specific techniques and tools and the schooling restructuring this entails. Combining both to create a KPS-Deweyan hybrid can illustrate some powerful sensibilities in thinking about how schooling, pedagogy and curriculum frame student and community self-knowledge and their ability to act and create as public entities. In the next chapter my focus will be to apply geographies of participation to concrete examples. In other words to put flesh on what it means to think of pedagogy and curriculum in spatial and relations terms. I will illustrate this in concrete examples from Dewey's lab school, KPS case studies, and KPS scholars' vignettes of non-contrived schooling possibilities. In looking at concrete examples of both Dewey's lab school and Knowledge Producing School case studies I will analyze how the various roles of teachers, students, administrators and community members and schooling structures overall change as a result of changes in particular patterns and ways of producing and organizing schooling experiences. Before closing this chapter I will revisit assemblages again to discuss briefly some of the methodological issues in researching spatial pedagogical context especially in regards to ICT.

Some methodological considerations: researching spatial pedagogical contexts

Publics are constituted in "geographies of enablement and constraint" which preference particular emergent structures.[567] As such, assemblages maintain social order and in most cases use. The use of tools or technology, especially Information Communication Technology (ICT) is never placeless or just place-routes but are places and

[567] Sheller, M. (2004). Mobile publics: beyond the network perspective. In Environment and planning D: society and space, vol. 22.

assemblages of use. Sociotechnical networks or assemblages describe two main thoughts in making sense of technology. The distinctions between the social and the technical are not stable nor are they unproblematic. The social constructs technology and technology shapes society – society and technology co-evolve and always have. Accepting this, the study of technology also means understanding the conditions and activities that support its use within specific fields. [568]

A theoretical frame of reference that can inform an analysis of KPS-Dewey hybrid schooling projects is the relational view of Actor-Network-Theory (ANT). ANT accounts for social phenomena as assemblages, i.e. people, events, organizations, knowledge, technology and objects as constellations of social processes and practices distributed across human and nonhuman actors situated in time and place (i.e. networks or sociotechnical networks). Assemblages form a deeply interconnected network. Human and nonhuman actors constitute a network, including schooling assemblages through social relations, flows of information, and abilities to act. In regard to new communication modalities such as in KPS vignettes, the dense on and off-line interconnections that make up the material-social-biological geography of knowing is an assemblage of individuals, groups, organizations, resources, technologies and objects, or in other words a sociotechnical network.

Two main issues key to researching geographies of knowing in regards to Information Communication Technologies (ICT) are the embeddedness of online in offline and the variations in the use of ICT across regions, scale, and location. The connectiveness

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[568] See, Callon, M. & Law, J. (1989). On the construction of sociotechnical networks: content and context revisited. In Knowledge and Society, (8) pp. 57-83. Also see, Callon, M. (1986). Some elements of a sociology of translation: domestication of the scallops and the fishermen of St. Brieuc Bay. In (ed.) J. Law, Power, action and belief: a new sociology of knowledge, Routedge: London.

and interdependence of online and offline sites has been overlooked by most ICT research.[569] This is due in part because ICTs create information spaces that seem partially framed off from the world yet online is fully embedded in day-to-day life, so the two cannot be separated.[570] The impact and use of ICT cannot be fully understood if they are conceptually divorced from the day-to-day practices and power relations of everyday life. The interdependence of offline and online sites provides context for the sense making of both sites and therefore one cannot be studied with out the other.[571]

Variations refer to the continuum of regional nodes, national nodes, identities and networks that run within and/or across the schooling assemblages. The Sociotechnical networks that make up the rich projects or geographies of knowing in spatial pedagogy are made up of continual processes taking place on multiple levels and places in day-to-day life. The variations in the schooling assemblages can be seen in the different roles that group plays, and the numerous roles various individuals play in groups. Outward public appearances of schooling sites and projects such as website, news stories, community action, put forth an appearance of consensus on how the group and its resources are used. But what action is taken and can be taken by which actors? How do particular localities and actors use ICT and act in regards to the group activities and inquirers?

The role of ICTs in schooling assemblages creates a challenging field to study. To "get at" what my questions may pose I must first make visible the social, geographical, political, and technical links, as well as the relationships and alternative relationships,

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[569] See, Heath, D., Koch, E., Ley, B., Montoya, M. (1999). Nodes and queries: linking locations in networked fields of inquiry. In American Behavioral Scientist, Vol. 42, No. 4. Also see, Green, N. (1999). Disrupting the field: virtual reality technologies and "multisided" ethnographic methods. In American Behavioral Scientist, Vol. 42, No. 4.

[570] Green, N. (1999). Disrupting the field: virtual reality technologies and "multisided" ethnographic methods. In American Behavioral Scientist, Vol. 42, No. 4.

[571] Heath, D. et al. (1999). Nodes and queries: linking locations in networked fields of inquiry. In American Behavioral Scientist, Vol. 42, No. 4.

which are part of schooling assemblages and their related spatial geographies. When these online and offline links and relationships become visible, what they constitute can be investigated.

Since ICTs and other communication modalities makes possible links that are socially, spatially and temporally disperse, the fields that these technologies, and the social relations ICTs facilitate and constitute are referred to as disperse. Disperse fields are multi-sited, and composed of an "array of social, institutional, political and technological locations."[572] For example, in the KPS vignette. In the vignette individuals (i.e. teachers, parents, educational researchers) with similar general interests (i.e. oral histories in the community) link up to inquire, discuss, share information and/or war stories, and organize online and offline action to construct the oral histories. In this way the project archive, the student access to various resources, and the knowledge produced by the group's inquiries into the community's oral histories plays a role in constituting a group, within the project's network, of actors with shared interests and identities.[573] It becomes a group that "thinks, that remembers, that expresses itself and sometimes invents."[574] Fields involving ICTs are heterogeneous systems that are geographically dispersed, use a wide array of technology, and are made up of numerous social relations.[575] Thus the research of these fields "requires flexible multi-sited methodological approaches."[576]

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[572] Ibid. p. 451.
[573] Nip, J.Y.M. (2004). The relationship between online and offline communities: the case of the queer sisters. In Media, culture, society, Vol. 26, no. 3.
[574] Bingham, N. Holloway, S. Valentine, G. (1999). Where do you want to go tomorrow? Connecting children and the Internet. In Environment and Planning D: Society and Space (17), p. 252.
[575] Green, N. (1999). Disrupting the field: virtual reality technologies and "multisided" ethnographic methods. In American Behavioral Scientist, Vol. 42, No. 4, p. 412.
[576] Ibid. p. 409.

Multi-sited research (i.e. multi-sited ethnography) adapts traditional modes of ethnography for complex disperse fields such as spatial schooling assemblages.[577] In multi-sited ethnography "connections become the object of study and the unit of analysis."[578] Researchers uncover links:

> (A)round chains, paths, threads, conjunctions, or juxtapositions of locations in which the ethnographer establishes some form of literal, physical presence, with an explicit, posited logic of association or connection among sites that in fact defines the argument of the ethnography.[579]

Multi-sited ethnography traces, maps, and make sense of the "circulation of cultural meanings, objects and identities" as it is spread out across a network of people, dialogues, objects and locations.[580] Circulations are made visible as connections, associations, and relationships between people, objects, meanings and flows of information are uncovered. Selections of sites, people, and objects emerge because relationships within and between online and offline cannot be known beforehand.

Multi-sited ethnography has been of great service to studies concerned with the use and impact of new modes of technology. Nicolza Green, University of Surrey incorporates multi-sited ethnography in her study of how virtual reality (VR) is embedded in the larger social context.[581] Deborah Heath, Lewis and Clark College, relies on multi-sited

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[577] Marcus, G.E. (1995). Ethnography in/of the world system: The emergence of multi-sited ethnography. In Annual Review of Anthropology, (24).
[578] Green, N. (1999). Disrupting the field: virtual reality technologies and "multisided" ethnographic methods. In American Behavioral Scientist, Vol. 42, No. 4, p. 413.
[579] Marcus, G.E. (1995). Ethnography in/of the world system: The emergence of multi-sited ethnography. In Annual Review of Anthropology, (24), p. 105.
[580] Ibid. p. 96.
[581] Green, N. (1999). Disrupting the field: virtual reality technologies and "multisided" ethnographic methods. In American Behavioral Scientist, Vol. 42, No. 4.

ethnography in her study of how the relationship between on-line and off-line sites relates to knowledge about specific heritable diseases.[582] Green and Heath highlight several general strategies they use to map connections between people, objects, sense making, and their own positions as researchers, as put forth by George Marcus, in their discussion of methodology specific for ICT sites.[583] These four strategies develop points of entry into the day-to-day practices that construct a disperse field.

(1) Following the movements of particular subjects.[584] Heath in her study of heritable diseases made contact with a woman, Karen Davis after coming across her web site resource for Epidermolysis Bullosa (EB). [585] Heath does online fieldwork of Davis' website and follows Davis offline into the lab where she maintains the site, the EB organizations she is involved in, and the doctors she knows in the course of receiving treatment. Davis became an entry point into a specific network of EB. Likewise, I plan to follow students and others involved in KPS-Dewey hybrid projects by joining the informal and formal meetings, which makes up the group for them. The meetings and activities which make up the groups reliance on, for example the teacher-resource person or university research person in a specific project may not be the same activities that student using these resource places, and people to do inquiry envision making up specific projects. Each person is entry into a specific network and a variation on the intersections they share with others within networks.

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[582] Heath, D. et al. (1999). Nodes and queries: linking locations in networked fields of inquiry. In American Behavioral Scientist, Vol. 42, No. 4.
[583] Marcus, G.E. (1995). Ethnography in/of the world system: The emergence of multi-sited ethnography. In Annual Review of Anthropology, 24:95-117.
[584] Ibid. p. 106.
[585] Not her real name but the name Heath uses. Heath, D., Et al. (1999). Nodes and queries: linking locations in networked fields of inquiry. In American Behavioral Scientist, Vol. 42, No. 4.

(2) Tracing the circulation of objects, events and/or knowings.[586] An event, object or discussion can be followed much like a person. Our interactions with people, objects (i.e. documents, websites, reports) and events gives us limited access to the networks to which people and things belong and are formed from. Therefore following events, objects or discussions can help trace out the various actors and networks that constitute the thing itself and also give insight into how information flows, connections, and relevant objects are constructed. Events co-exist in online and offline activities. These events can be online coordination for offline activity such as how students use online project repositories and blogs or the unfolding event can be the blooming complexity of online discussions of a specific issue that informs offline enactments. Green enacts a type of social reverse engineering by tracing specific VR systems.[587] Starting with specific companies that made particular systems Green then traces the production and distribution of VR systems. She talks with engineers, programmers, marketers, and follows the systems to where they are used (i.e. cafes and entertainment centers) and who uses them. Following end users Green investigates user groups and associations. Along the way Green is able to construct a narrative of how these VR systems are embedded within the larger social context.

An example relevant to the inclusion of "knowing" is the idea of following a specific groups inquiry into something. How do thing, objects, and ways of doing things become significant over the course of the inquiry? Knowing changes as diverse participants, educational researchers, educators, teachers, parents, community members shared their knowledge, life experiences, conceptual connections, and questions about the

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[586] Marcus, G.E. (1995). Ethnography in/of the world system: The emergence of multi-sited ethnography. In Annual Review of Anthropology,(24) p. 107. Also see, Appadurai, A. (1986). The social life of things. Cambridge University Press: Cambridge.

[587] Green, N. (1999). Disrupting the field: virtual reality technologies and "multisided" ethnographic methods. In American Behavioral Scientist, Vol. 42, No. 4.

topic. These conversations are important for several reasons; some of which are, they provide participants with dynamic information, both factual and conceptual, that are beyond the means of any one participant to furnish for her/his self. Also the discussions give important scope to unfolding problems. How these discussions connect to offline negotiations and actions in regard to these issues, and what is unique about how expertise serves these conversations can shed light on the role ICT is playing in facilitating communities of inquirers.

(3)Tracing consistencies and conflicts in metaphors and narratives.[588] Green refers to these consistencies or communal frames of reference as "stories".[589] Stories are connections between people and the discourses associated with specific objects, situations or things. Green's question in this vein is "how is VR culturally discussed and defined, and how are these (frames of reference) transfer(red) and maintained."[590] Two research issue stem from conflicting metaphors, narratives and stories: what are the specific local and national stories being told, and how is the inquiry of the local schooling assemblage a vehicle across the powerful and dense network to challenge National and State or general normative metaphors and stories. Key to the use of ICT in these projects is its role in facilitating communities involvement in social movements for educational reform- a timely question given the scale shifting of Educational policy and reform.

(4) Researcher as "circumstantial activist."[591] George Marcus describes the researcher as a circumstantial activist; opportunities for activism are specific to the

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[588] Marcus, G.E. (1995). Ethnography in/of the world system: The emergence of multi-sited ethnography. In Annual Review of Anthropology, (24), p. 108.
[589] Green, N. (1999). Disrupting the field: virtual reality technologies and "multisided" ethnographic methods. In American Behavioral Scientist, Vol. 42, No. 4., p. 414.
[590] Ibid.
[591] Marcus, G.E. (1995). Ethnography in/of the world system: The emergence of multi-sited ethnography. In Annual Review of Anthropology, (24), p. 113.

researcher's location within the research. Heath describes this as "participant collaboration," researchers collaborating with subjects.[592] For example, Claire, one of Heath's subjects who suffers from Marfan Syndrome, is explicitly validated and supported by Heath when her life experience, i.e. knowledge of Marfan, is marginalized by the expert knowledge of doctors, insurance companies and science. [593] Heath consciously supports Claire in her efforts to negotiate her knowledge with the expertise of medical knowledge. Green points out that collaboration between the researchers and researched is unavoidable since participants enact fields with researchers.

The ethnographer here is, as all actors are, part of the on-going co-construction. This means that the researcher's trajectory in making specific link legible is interconnected with and dependent upon the entry points that make up her or his participation in the overall community. As Mervi Hasu states in reflections upon experiences in ethnography of activity systems: "tracing an emerging trajectory of artifact use is a clear example of fieldwork in which the process of construction is inescapably shaped by the conceptual, professional, financial, and relational opportunities and resources accessible to the ethnographer." In ongoing activity the researcher is continuously renegotiates her position in multiple sites.[594]

I intend to be a full participant in these projects and to fully disclose my research intentions. In incorporating the strategies of multi-sited ethnography I intend to participate in participating schools and communities local activities. Using ethnographic observation, i.e. field notes and interviews, I will participate offline and online in local gatherings,

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[592] Heath, D., et al. (1999). Nodes and queries: linking locations in networked fields of inquiry. In American Behavioral Scientist, Vol. 42, No. 4, p. 462.
[593] Not her real name but the name Heath uses
[594] Hasu, M. (2005). In search of sensitive ethnography of change: tracing the invisible handoffs from technology developers to users. In Mind, Culture, and Activity, 12(2), pp. 90-112.

informal and formal meetings. I also plan to contextualize my participation and observation with the archives created and used (i.e. listservs, websites, repositories, blogs and documents) for the project team and the community. Field notes, archival analysis, and formal and informal interviews will aid the formation of detailed online and offline descriptions of people, places and things involved in accomplishing everyday tasks relevant to the inquiry of these groups. Personal interviews will include parents, teachers, students, community members and those identified with necessary expertise, clients and educational researchers involved in these project groups.

I would like to put these methodological concerns in the broader contexts of the concerns of this dissertation: Educational reform as social movement. "Get-information – get better" has been the ongoing assumption about the schools utilization of ICT.[595] There has been little research focused on how ICT, in specific day-to-day situations, may facilitate public inquiry, communal and students dispositions with specific means, access to resources and opportunities that relates to one's ability to negotiate. Thus strengthening the ability to participate in and influence policy.

In line with Jennie Oakes concerns regarding educational reforms as social movement, a concern very compatible with KPS scholars' own concerns, there seems to be a large gap between the discourse of educational policy decision-making and those affected by the policies made.[596] Public deliberation tends to be geared toward opinion-formation.[597] Influencing the decision-making processes of policies, legislation and

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[595] Galusky, W. (2004). Virtually uninhabitable: a critical analysis of digital environmental anti-toxics activism. Unpublished dissertation, Virginia Tech, Science and Technology Studies, Blacksburg, VA., p. 121.

[596] Oakes, J. & Rogers, J. (2006) Learning power: organizing for education and justice. Teaching College Press: New York.

[597] Fraser, N. (1999). Rethinking the public sphere: a contribution to the critique of actually existing democracy in (Ed.) Calhoun, C. Habermas and the public sphere. MIT Press.

reforms is usually reserved only for actors who participate in the discourse of the State and National scale[598]. These actors, by and large, come from government, corporate interest, private foundations and academics. For example, educational policy and reforms, such as Virginia SOLs and National Science instruction, has increasingly become the domain of actors on the State and National scale. There is little political scaffolding that supports citizens', who have little access to the National scale, understanding of or influence in the decision-making processes between government, corporate interest, private foundations and the academics, which develop national educational reforms. [599] NCLB (No Child Left Behind), the most significant restructuring of Education since the 1964 Secondary Education Act, is an example of this. Outside of well-orchestrated special interest, there was little force of public opinion that contributed to the form that NCLB took in the decision-making processes of the Clinton and Bush administrations. The public was not, and still is not well informed about the issues of NCLB, and teachers had little or no direct influence on the policy.[600] NCLB can be seen then as an example of little dialogue or accountability between the authoritative actors on the National and State scale who produced NCLB, and those who could not readily participate in the formation of the policy but are directly affected: the public, students, and teachers on the citizens' scale. Therefore a necessary investigation is how does ICT facilitate citizens' "self-management" (i.e.

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[598] I use State and National scale as a blurred distinction. State and National scale describes "a political construct, the site of state power." This scale polices the borders of all lower spatial scales, and the legitimacy of the social organization making up the National scale is rarely questioned. See, Smith, N. (1993). "Homeless/Global: Scaling Places." In Jon Bird et. al. (eds) Mapping the Futures. Local Cultures, Global Change. London: Routledge, pp.. 110-1.

[599] "Scale is an active (forefather) of specific social processes. In a literal as much as metaphorically way, scale both *contains social activity* and at the same time *provides an already partition geography* within which social activity takes place." See, Young, I.M. (1990). Justice and the politics of difference. Princeton University Press, p. 101, emphasis mine.

[600] Rose, L., Gallup, A. (2003). Poll of the Public's Attitudes Toward the Public Schools. Phi Delta Kappa/Gallup Poll, September.

understanding of, and influence on the decision-making processes of the policies that affect their lives).[601] Furthermore, which citizens tend to benefit or "jump scale[602]" through collective action facilitated by ICT?

Having discussed possible entry points into what ICT's do; the question that follows is who specifically do these resources help? Design of resources with and collaboration through ICT implicitly implies and defines a public. Different technologies produce different publics. This can be seen in how the combination of the Internet, wireless Internet nodes, and mobile media influences new forms of social organization.[603] Usually we function with a sense of public "as open or accessible to all."[604] This "single, all encompassing we" actually renders invisible the plurality of different, competing, and "differentially empowered" publics.[605] Equity of participation and accessibility of places, spaces and resources cannot be assumed. Therefore, an issue for a public resource is how use of the resource is distributed among different publics of which public schooling is a powerful resource. Framing usage as an investigation into how different publics, and actors, all of whom are members of many different publics, use a specific online public resource will serve the development of an awareness of how to design public resources with explicit publics in mind.

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[601] Fraser, N. (1999). Rethinking the public sphere: a contribution to the critique of actually existing democracy in (Ed.) Calhoun, C. Habermas and the public sphere. MIT Press, p. 92.
[602] "(J)umping scale allows (actors) evitees to dissolve spatial boundaries that are largely imposed from above and that contain rather than facilitate their production and reproduction of everyday life." Smith, N. (1993). "Homeless/Global: Scaling Places." In Jon Bird et. al. (eds) Mapping the Futures. Local Cultures, Global Change. London: Routledge, p. 90.
[603] Rheingold, H. (2003). Smart Mobs. Basic books.
[604] Fraser, N. (1999). Rethinking the public sphere: a contribution to the critique of actually existing democracy in (Ed.) Calhoun, C. Habermas and the public sphere. MIT Press, p. 88. Ibid. p. 82. "This conception assumes that a public sphere is or can be a space of zero-degree culture, so utterly bereft of any specific ethos as to accommodate with perfect neutrality and equal ease interventions expressive of any and every cultural ethos."
[605] Ibid. p. 89.

Chapter 5: Geographies of Participation: Making places for bodies to do things and make meanings

A Pedagogy that is internally consistent with socio-cultural views of literacy places educators undeniably in the realm of geographies – a situation, especially in regards to application that has, ironically, little or no institutional position. By this I mean that educational researchers usually look to individuals or stable group characteristics as the locus of application. Although research efforts in the field of education have been duly influenced by geographical work, applying those geographic sensibilities to pedagogy and curriculum is underdeveloped in reference to research application. The geographies of participation in the schooling assemblages imagined and created by Dewey and KPS scholars' create places and spaces occupied, desired, and imaginatively co-created by children and adults. The adult and children geographies in the schooling assemblages to be discussed in this chapter are partly created by the children themselves as well as their communities, as they play, inquire, form and perform identities and slowly become adult citizens.

Thinking in terms of geographies of participation captures some part of the geography of knowing; material-social geographies that constitute ways of cooperation, association, and action in the actual living and knowing resulting from and embedded in ongoing inquiry. Ongoing inquiry includes things produced, control of the environment, solving problems of living based on current conditions, or questions of identity and truth. Academic and occupational fields are in fact geographies of knowing. For example, agriculture using plow, beast or tractor has been addressing similar problems for eons: a controllable, reliable, and consistent source of food. New agricultural technologies bring specific problems or conditions such as pesticides or genetic modification, and knowledge

does accumulate and is also lost but by and large similar problems are addressed over time in diverse ways based on the conditions, and resources specific to a particular point in human history. By stating that a spatial pedagogy of geographies of participation tries to capture some part of the lived geography of knowing I do not mean to evoke cognitive constructivism. Cognitive constructivism may acknowledge that the student creates knowledge in a context, but does not acknowledge fully the co-creation of that knowledge with others actors, nor the problems with teachers providing problems and pre-defined contexts. Thus, Cognitive constructivism seems to advocate an attempt by teachers to reconstitute intentionally context rather than making explicit the functional holism of social intelligence.

If you recall from chapter 3, KPS scholars' discussed a community's point of view, a community's expertise in itself to negotiate consequences, which is facilitated by Knowledge Producing Schools (KPS) as an appropriation of public schooling by the community. The school in KPS can potentially become an independent institutional base of inquiry for the local communities. Social intelligence is a resource for a public when a geography of knowing forms into a public entity via shared consequences and acts as a public via social inquiry and action to redirect, ameliorate or contest specific consequences. I have just described the formation of a public as discussed in chapter 3. If you recall in that chapter, I stated that Dewey defines a public as a group that deals with and recognizes a specific shared consequence(s).[606] The "means to be a public" or the social function of a public refers to action that can be taken, and capital galvanized to negotiate or redirect the consequences affecting the community.

[606] Dewey, J. (1927/ 1991). The public and its problems. Swallow Press: Ohio University Press, p. 98.

I have accumulated several self-created definitions thus far, and would now like to revisit them. Specifically, I will revisit assemblages, geographies of knowing and geographies of participation. If you recall from chapter 4, assemblages are patterns of human association. Assemblages, arguably as old as human associative action, constantly flux and change as actors (both human and non-human) link, re-link, and unlink, environmental conditions changes, and problems arise. In other words, assemblages are the spatial compositions and interpretive organizations of durable associative action. This means that assemblages shape use, and are shaped by use, since the unity of assemblages is functional; a set of mediating relations are unified by some functional need to serve some social purpose. This is precisely how contexts are transformed as problems are solved, as in Dewey's emergent intentionality. An assemblage has emerged and a use is made durable, as a problem has been solved. Thus, changing and becoming part of all the various distributed locations the assemblage resides, i.e. bodies, place, and social structures and situations.

Geographies of knowing refer to all the places and ways a given act of inquiry has consequences. An assemblage has an infinite number of possible actions, uses, and entry points – its unity is functional, e.g. continual needs, desires, wants. A knowing serves a specific set of ends in view and are operational when a problem arises. Knowing is embodied and therefore distributed among bodies, places and social structures, and as such geographical. Knowing is the in situ, active participation of communal functioning. Knowing resides in a community for some purpose, it is durably historical, e.g. artifacts, techniques, values and customs, currently engaged, as in ongoing, and used for diverse purposes.

Where assemblages and geographies of knowing describes phenomenon of associative action and cultural durabilities, geographies of participation means developing an explicit and intentional spatial pedagogy. Geographies of participation contribute to social-spatial and temporal geographies of knowing, and as such serve to guide sensibilities for spatial pedagogies, such as, schooling as a social community and other social and material resources. Geographies of participation, discussed in this chapter describe the effort to scaffold, and support students entry into the material-social geographies of knowing, the communal skills of inquiry and the social reconstruction with available means. A spatial pedagogy then is an effort to give students entry into the existential and logical truths possible in the experiences afforded in being part of the material-social geographies, e.g. assemblage, of on-going inquiries, e.g. fields or geography of knowing.

Some very important observations derive from the Dewey lab school experiments and Knowledge Producing Schools (KPS) case studies and vignettes. These observations form from these researchers experiences, explicitly and intuitively, with geographies of participation and knowing which point to why pedagogy and curriculum must remain spatially relevant. Intelligence is functional. As such, a student's development is enculturation in particular aspects of participation: societies customs, traditions and rules that create guidelines of acceptable ways for specific actors to function and know themselves.

Since we are revisiting the spatial compositions that facilitate public social inquiry I will take a moment to revisit the aspects of Dewey's theory of inquiry that are at work in this chapter. Dewey's theory of inquiry and warranted assertability were introduced in

chapter 2, and the connections between warranted assertability and geographies of participation were presented in chapter 4.

If you recall Dewey's theory of inquiry depicts how the transformative processes and actors (human and non-human) of durable social creations are used to solve the problems of life. These social processes put forth a continuous loop from individual impulse to habit to the significant meaning-making and larger systems of inquiry in the community and back to the individual impulses and habits. This loop does not return the individual or community to some previous state. Actors and contexts are transformed as inquiry solves problems, that is, restores functioning.

We begin and end with the community; there is no duality between what individuals create in action and the communal values, beliefs, and customs they embody through dispositions that guide action. The community or family, which is a small community, is the interpretive and emotional participation in which we dwell. We are, as discussed in the previous chapters, what we participate in (habits and predispositions) and the tools we use. Habits are not neutral responses; they are embodied predispositions that structure impulses into organized emotions and actions that inform our responses and our sense making of others.[607] We must successfully function in our community to get our social and biological needs met. Therefore the practices of the community become our frames, values, indexical relationships, and objects for our interpretation and organization for co-creation.

We learn our forms of intelligence (e.g., intelligent inquiry) from the communities we participate in as we progressively develop practical and intellectual control over

[607] For example, beliefs are habits that merge judgments, views, emotions and action forming general dispositions to act in specific ways in certain contexts.

inquiry. The forms of intelligence or inquiry we are involved in are intimate as in my inquiry with the lactation consultant, and can also be very public as in the communal negotiations of truth and meaning that take place in warranted assertability, such as an oral defense. Regardless, inquiry is a historical, deliberative, existential experience. By historical I mean that the community always has some previous experience (either inscribed in participants or existing in linguistic meaning, artifacts, or tools) that can provide some stating context to make sense of the factual conditions of the problematic situations we find ourselves in. In many cases historical inquiry provides operations.

Operations, you may recall from chapter 2, are things we do in the process of implementing means to inquire into solving problems. There are operations that are performed with existential material, such as expressing breast milk, and operations performed with symbols or abstractions, such as Algebra. Regardless whether an operation is symbolic or existential, both refer to something being performed in existential conditions to yield possible consequences.

Our intimate existential experiences with solving problems and consequences provide self-knowledge that is framed within larger communal systems of inquiry. There are communal negotiations of truth, and meaning that frame our experiences with self-technologies. Warranted assertability resides in the social arts of the community to make thing common. In chapter 4 warranted assertability was discussed as a geography of participation where the communal management of truth along with epistemic responsibility allowed individuals to more freely question both self and truth. This means that the individuals experiences, shared and deliberated by the community, could potentially change or transform the community has much as the community forms the individual.

In Dewey's theory of knowledge the natural direction of knowing is from the way children naturally see things toward greater abstraction, they way adults see things and then back to everyday lived experience.[608] We are acculturated into and towards ways of knowing such as iconic or phonic languages and the roles associated with differentiation of labor. The social mechanism of enculturation is participation, which is also functional. We must successfully participate to be able to functional interact in the biological and social matrices we are born into. How we function defines who we are. As with all living creatures, we must be dynamically and functionally co-dependent if we are to survive. Adaptation describes the biological and social mechanism by which living creatures that are functionally dependent remain functional and therefore alive. Because we are a living function, we are defined by what we are functionally dependent upon and what we functional provide, often symbiotically. For example, as I mentioned in previous chapters, the mother (provider) and infant are functionally co-dependent, they are an assemblage embedded in a vast social assemblage, and from that assemblage social identities, roles, and intentions emerge. Meaning and value are the manifestations of our transactions with our biological and social environment. To render different political and social landscapes we need to become functionally different.

What a spatial pedagogy brings to schooling experiences is an explicit focus on the active participation in communal functioning, or 'community skills' rather than individual skill. The more explicit and aware both educators, teachers, students, and parents are about what active participation in communal functioning means for us as individuals and the various communities we are associated the better we can self-determine ourselves and self-

[608] Tanner, l. (1997). Dewey's Laboratory School: Lessons for Today. Teachers College Press: New York, pp. 9, 82.

mange our communities. When educators become aware of 'community skills,' and dispositions then schooling experiences can nurture children, who influence their families and communities, into becoming better masters of their own habits, and identities. We have allowed atomistic individualism to co-opt the characteristics and qualities of the community. We must stop endowing individual, atomistic ability with the power and authority to carry on ameliorative social and political efforts alone and begin to think about 'community skills,' experiences, and participations that facilitate participative democratic dispositions.

This final chapter offers some of the practical forms or the executions in practice of the pedagogical theory discussed so far. It is important to point out that in many ways the sequence of chapters in this dissertation are reverse, historically; for Dewey, chapter 5 would be first. Dewey's educational theories, ideas, and views were deeply grounded and emergent from his experiences in the Laboratory School (1896-1904) at the University of Chicago.[609] The lab school was in fact thought to have "an organic functional relation" to his theoretical work.[610] This chapter does not offer a history or comprehensive overview of the lab school. Likewise, if you recall in the chapter 1 introduction to KPS, the practical forms for KPS case studies and vignettes are deeply grounded in the experiences of teachers and concerns of community organizations. I will highlight some of the main pedagogical components of 'community skills,' and communal resources in what was done at the lab school weaving this into the compatible pedagogical practices of KPS. Both Dewey and KPS scholars' see the restructuring of schooling (i.e., educational reform), as a spatial sensibility, and both put forth specific place-making and forms of organizational

[609] Ibid., pp. 9, 83.
[610] Camp-Mayhew, K. & Camp-Edwards, A. (1936/1966). The Dewey School. Atherton press: New York, p. v.

structure in their schooling that are focused on student learning and students' identities instead of a primary focus on teaching. Specifically I am concerned with curriculum and schooling structures that facilitate:

- Projects of intelligent group deliberation
- Occupational responsibility
- Intimate personal contact
- Spontaneous interaction with diverse members of the community
- A view that the most important elements of schooling are obtained outside of traditional schooling locations.[611]

In both the Lab School and KPS the school is "society-oriented," focused on active participation instead of "child-centered."[612] Teachers provide experiences of disrupted social functioning, e.g. problematic situations and cultivate group deliberation for problem and solution formation along with the use of means to solve real problems. In this type of schooling structure there is continual growth as students, teachers, and communities continually reconstruct experiences in their on-going inquiry into matters of concern.[613] In fact the skills are skills of reconstruction with available means versus an essential knowledge. Methods of intelligence are explicit in the Dewey lab school, for example how warranted assertability informs schooling practices and structures. The material-social geographies of knowing and structures of support for relationships between the school and the community are explicit in KPS. Together a Dewey-KPS hybrid gives a place to start in

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[611] Tanner, l. (1997). Dewey's Laboratory School: Lessons for Today. Teachers College Press: New York, pp. 13-5.
[612] Camp-Mayhew, K. & Camp-Edwards, A. (1936/1966). The Dewey School. Atherton press: New York, p. vi.
[613] Tanner, l. (1997). Dewey's Laboratory School: Lessons for Today. Teachers College Press: New York, p. 42.

imagining, creating and researching spatial pedagogies that facilitate local community self-management and self-definition.

I have divided community skills, community resources and organizational structure into two forums: making places of use and forms of organization in schooling. In the first discussion, making places of use, I will look into the curricular and community-building issues of an inquiry-focused pedagogy. In forms of organization in schooling I discuss the restructuring and support necessary, especially with school administration and teachers, to form and sustain an inquiry-focused pedagogy. I end this chapter with a vignette of a possible KPS-Dewey hybrid project.

Making places of use

If you will recall from chapter 4, an assemblage is a functional organic whole. For schooling assemblages we see organic holism when they are cooperative forms of community life embedded and engaged in matter of shared concern relevant to the communities constituting the schools. Organic holism not only refers to authenticity, but continuity and functional unity. KPS scholars implicitly address organic holism through authenticity and community; by keeping things concretely grounded, they are in fact keeping things functional. These scholars' do not attempt to create or reconstitute some context instead they see the need to create authentic and local links, such as between schools and community and between students and communities of experts, capable of organic growth. In the lab school organic holism is explicit. Schooling in the lab school was seen as a cooperative society, a form of community life. Explicit in the lab school was the pedagogical principle that the development of intelligence was cooperative and has

such culture is the broadest of all human creations.[614] Both KPS and the lab school developed function-oriented themes to sustain the organic holism of their schooling assemblages, of which I will have more to say later. Before elaborating on themes I want to briefly introduce some of the goals and purposes of the lab school since organic holism was an explicit concern.

The lab school was to be an organic whole from Kindergarten through University.[615] With the lab school we see the pedagogical organization of schooling as a form of community life geared towards human relationships and primary skills or systematic knowledge as the natural outgrowth of communal activities to solve problems.[616] In the parent brochure for the lab school Dewey stated, "because of the idea that human intelligence developed in connection with the needs and opportunities of action the core of school activity are to be found in occupations, rather than in what are conventionally termed studies."[617] Inquiry was seen as the natural outgrowth on the continual mastery and problem solving of occupational activities. The goal of the lab school was,

> to preserve the investigative attitude and the creative ability of the growing child in socially directed expression. Day by day he gains both in his skill to control situations and to direct his own activity to further and more desired ends; he also becomes gradually conscious of his gain. This results in an integrated child, able to work more and more on his own initiative and

[614] Camp-Mayhew, K. & Camp-Edwards, A. (1936/1965). The Dewey School. Atherton Press: New York, p. 5.
[615] Ibid. p. 3. It is interesting to note how far removed from this most current educational offerings are.
[616] Ibid. p. 5.
[617] Ibid. p. 5.

> under his own guidance – a child who is maturing, who is both educating and being educated, and whose education continues throughout his life.[618]

The purpose of the experimental school was "to discover in administration, selection of subject matter, methods of learning, teaching, and discipline, how a school could become a cooperative community while developing in individuals their own capacities and identifying their own needs."[619] In other words, problem solving that emphasized the social role of people in community. Laurel Tanner states: "The theory behind the lab school was a school as a small cooperative society where children of any stage of development can solve problems."[620] The curricular focus for the school was community and occupation where children could be educated in the problems of living together (large aspects of human concern and occupation) and the need of others.[621] All cultures socially address the ongoing problems of technologies of cooking, shelter, clothing or adornment, child rearing, healing, art and forms of expression.

The school then as a social community or social institution involved in relevant problems becomes the organizing frame from which a unified curriculum flows.[622] Holistically unified, relevant, rich and not abstracted. Geographies of knowing then is the curriculum, the many ways that the mapping out of knowing e.g. solving problems, happens, which is anchored by rich on-going themes such as occupation, being a public or other problems of living intentionally brought into schooling settings and experiences. For example, the lab school made the operations involved in "human occupations" such as

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[618] Ibid. p. 18.
[619] Tanner, L. (1997). Dewey's Laboratory School: Lessons for Today. Teachers College Press: New York, p. xii.
[620] Ibid. p. xi.
[621] Ibid. p. 2.
[622] Ibid. p. 23.

weaving and cooking the activities that lead towards, richly anchored, understanding of organized knowledge such as math.[623] For example, the children in the lab school would develop tribes using anthropological resources to understand the historical conditions of the time and then work out all the core issues of surviving and living in close proximity to other tribes.[624]

With KPS, knowledge production becomes a sort of occupation in globalization – the problem is the access to knowledge production to have some agency in a post-modern world. With KPS we see an organization of schooling that is geared towards a deep interdependence between the school, the community, and expert practice. In the KPS organization of schooling the public institution of schools, and the institutional focus of schooling inquiry, become more influenced and owned by the local communities. Likewise in KPS, a community having a point of view, e.g. expertise in itself, allows a better possibility for the negotiation or redirection of consequences the community suffers from conditions it may not be able to control. Investigation or projects are geared toward purpose. I see four key concerns in unified curriculum. I will discuss each and offer some concrete examples of how Dewey's lab school and KPS scholars' have addressed these concerns. For geographies of knowing to be a curricular force, students (1) must have access to the historic inquiry into the ongoing functional challenge, e.g. problems of living, they are dealing along with (2) experiences in public social inquiry and resources for communal problem solving. Furthermore, (3) the curriculum must be flexible, adaptive and (4) explicitly integrated to have continuity and respond to the students' inquiry trajectories.

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[623] Ibid. p. 2

[624] The children, all about seven years old, were working on a one yearlong inquiry in the Bronze Age. Camp-Mayhew, K. & Camp-Edwards, A. (1936/1965). The Dewey School. Atherton Press: New York, pp. 108-114.

(1) Access to the historic inquiry. For schooling experiences to be inquiry-based knowledge must be explicitly viewed as a product of and resource for inquiry. Problems have temporary answers until new problems, conditions or consequences arise forcing communities to revisit specific investigations. Fields are rich histories of individuals, groups and communities deliberating on problems and solutions. In this way, knowledge (warranted assertability) becomes a beginning context for problem and solution formation and a resource for action. In the lab school students developed historical understandings along with investigative ones. It is important to note that there was little distinction made at the lab school between history, technological evolution, and ongoing inquiry. For example, 9 yr. olds studying colonial history developed insight into the issues relating to isolation that the colonists dealt with by studying transportation in historical journals.[625] The students go on to imaginatively develop understanding of the social consequences of isolated communities, the issues and conflicts of interests surrounding solutions to transportation during colonial times, the conditions and technological constraints of the time and how transportation issues are ongoing. An additional example is a yearlong study conducted by 6th graders into the Chicago 1830's water famine, which evolved into an on-going class deliberation on issues of municipal versus private ownership.[626] Most of the time the students in the lab school actually experienced solving historic problems, for example a group of seven yr. olds in a yearlong Bronze Age projects were organized in tribes and solved all the core issues of living. For example, one tribe discovered clay and

[625] Tanner, l. (1997). Dewey's Laboratory School: Lessons for Today. Teachers College Press: New York, p. 70.
[626] Ibid. p. 70. This was an issue of local concern since the school was located in Chicago.

worked out all the issues related to using clay from finding it, harvesting it, forming the clay into usable pots and building a kiln.[627]

In looking at the work of KPS scholars' we see a similar scaffolding of students' access into historical inquiry via their access to specialist communities. When we link up with expertise, such as when I went to go see the lactation consultant, we gain access not only to what they do but what they know about their field. Here, students' interaction with relevant historical inquiry for KPS case studies is embedded and becomes legible in the students' interactions with actual experts, and existential experiences with methodologies and tools, which are guided by experts. For example, in Lankshear's vignette for a KPS project involving students developing oral histories of migrant groups in their local community students' link up with researchers to do authentic research.[628] The students' are provided an entry point into the material-social geography of being the researcher. With the guidance and support of three university history professors, a university research partner (graduate student), and a teacher coordinator (from their high school) the students identify participants, develop interview protocol, do interviews, and download data. Various ICTs assists in keeping the students in contact with their network of support, allows them to have centralized locations for data and discussion, and give them a way to make their findings public. Though well supported, these students are working out the core issues of research. Both the lab school and KPS examples illustrate students using historical knowledge for current inquiry. These historical examples, regardless of being located in text-oriented histories, experts, or methodologies give students existential

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[627] Camp-Mayhew, K. & Camp-Edwards, A. (1936/1965). The Dewey School. Atherton Press: New York, pp. 108-114.

[628] Lankshear, C. (2003) The Home-School Digital Divide in Curriculum and Pedagogy, Children's Literacy and Popular Culture ESRC Seminar Series, School of Education, University of Sheffield [Online], Available: http://www.shef.ac.uk/literacy/ESRC/pdf/papers/lankshear.pdf [Accessed 19th September 2006], pp. 13-16.

experiences and living examples of the political realities involved in and functions of inquiry – to solve and negotiate the problems of living.

(2) Experiences in public social inquiry and resources for communal problem solving. Student participation in actual, consequential inquiry has already been alluded to. I will further develop the key issues of student inquiry here. In visiting the many schools in my county as a substitute teacher I have seen many variations within schools, such as tracks, between schools, such as funding, and between mainstream and alternative county schools, alternative schools run by the county usually serve the highest at-risk students. The differences are glaring and need to be address, but one observation relevant to the discussion here is that all the students I see are working alone and never together.

Students take turns, work on separate projects, work for hours on numerous worksheets and puzzles, work at separate computers, raise their hands in class to converse only with the teacher or compete with each other in test review games, but they rarely work <u>together</u> building interdependent relationships with their peers, nor do they, as a <u>group</u>, use primary sources to see where the knowledge they are forced to memorize is produced and discussed. In other words, the students in the various schools I have observed do not and in many cases are highly uncomfortable with deliberating, collaborating, cooperating, negotiating and depending upon each other to create and complete consequential things, e.g. understanding, projects, courses of action, use or performances. They have had few experiences in doing so.

It is important to note that doing inquiry with someone, such as research with a colleague, requires trust. The interdependent relationships required for group inquiry and as such the formation of publics, and how those relationships facilitate dispositions of

action together is grossly overlooked in our fixation of individuals and groups with critical skills.

An inquiry-oriented pedagogy is not a series of 'projects,' it is a spatial pedagogy because it is an effort to give students entry into the existential and logical truths possible in the experiences afforded in being part of the material-social geographies, and their assemblages, of an on-going inquiry, e.g. field. As such, curriculum in the lab school was not limited to projects there were also discussions, field trips, writing activities, lab experiences, experiences in the practical and fine arts.[629] The difference, as Chris Bigum stated about KPS, is all about relationships – inquiry is always social, even with a lone investigator, and knowing is always in some community for some purpose. In summing up how the lab schoolteachers' described teaching at the lab school, Laurel Tanner, who researched the archives of the lab school, which included teachers' daily and weekly reports, states:

> Drill aside, the point of importance is that the teachers began with the subject field and planned children's activities that called for progressively more complex understandings. They did not begin with the activities and try to extrapolate ideas from the subject field.[630]

Those complex understandings required experiences of deliberation with and dependence on peers in the course of inquiry, along with access to primary sources and locations, a few examples are in order. In the lab school photography was used for the study of light. The students were directly involved with university researchers, in this case a primary location,

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[629] Tanner, l. (1997). Dewey's Laboratory School: Lessons for Today. Teachers College Press: New York, p. 64.
[630] Ibid. p. 48.

to inquire into the related issues of light.[631] The students experienced the labs and the instruments used to study light, and were included in the on-going questions in regards to light. In the lab school seven yr. olds in a yearlong Bronze Age projects used anthropological journal, in this case a primary source, to get information about nomadic people to inform their research into the Bronze Age.[632] Graduate students at the University worked with the children at the lab school on problems that related to their research.[633] As we have seen in KPS case studies and vignettes the teachers at the lab school were very concerned with keeping schooling materials and experiences real[634]

Epistemic responsibility involves social relationships and challenges identities. We learn about ourselves as we learn about others in their own terms. In the existential experiences of epistemic responsibility in a community of inquirers we can overcome nonproductive attachments and form new attachment as relationships form and new identities are considered in the communal deliberation of things that matter to us. Anyone who has been involved with students in the investigation and discussion of relevant issues, such as sex, inequity in education or anger management, knows that cooperative and collaborative investigation into things that matter requires some measure of trust and safety and sometimes evokes painfully growth or changes in our ideas and ourselves. These relationships should be develop and cultivated over years of schooling where students are involved in inquiry and epistemic responsibility, publicly stating how they know what they know, slowly developing their own voice and becoming accustom to diverse views, concerns, and even conflict. Instead we expect these relationships, which are not well

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[631] Ibid. pp. 52-4.
[632] Ibid. p. 69.
[633] Ibid. p. 55.
[634] Ibid. p. 31.

supported in students' day-to-day experiences, to be unemotional or conflict-free, and to develop in a semester or school year. We have unlearned or lost what the teachers, administrators, parents and students of the lab school knew well: that the community component of inquiry was incredible important.

In the chapter 4 discussion of community of inquirers epistemic responsibility was described as the responsibilities of participants and the community in building knowledge. For Dewey warranted assertability explicitly frames the day-to-day practices in schooling and communities from which epistemic responsibility emerges. The epistemic responsibilities of individuals and communities is implicit in KPS case studies and vignettes and can be located in some of the structures these projects create. For example, KPS case studies and vignettes use various types of peer review, both public and private. To provide a public statement on "community service/collaborative-cooperative dispositions" KPS projects develop websites to conduct and display peer review.[635] For example communities review the projects that the school does for the local area, client post reviews of projects, students post public reviews of community experts and clients. Likewise, students have an intra-peer review of team members working on projects. The various peer reviews, both public and private are designed to hold members accountable to how they serve the community and support each other. Peer review also helps the community develop a new perception of the role of schooling in the community.[636] There can develop a deeper sense of public life and public education.

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[635] Lankshear, C. (2003) The Home-School Digital Divide in Curriculum and Pedagogy, Children's Literacy and Popular Culture ESRC Seminar Series, School of Education, University of Sheffield [Online], Available: http://www.shef.ac.uk/literacy/ESRC/pdf/papers/lankshear.pdf [Accessed 19th September 2006], pp. 14-16.
[636] Bigum, C. (2002). Design sensibilities, schools, and the new computing and communications technologies. In I. Snyder (ed.), Silicon Literacies. Falmer-Routledge: London, p. 139.

KPS scholars' implicitly acknowledge the need for members in the community to publicly warrant and ground how they know what they know. For example, Chris Bigum discusses the need for KPS project and presentation forums where students, teachers, researchers and community members present and defend findings, projects, or courses of action.[637] Likewise, teachers involved in on-going KPS projects at the Waraburra State School discussed issues involved in partnerships among the various stakeholders involved in projects. The teachers acknowledge the deeply political nature of legitimacy and credibility. In discussing this issues the teacher suggest that the community of members involved in projects must ask who benefits from specific research and projects, and must also develop a shared sense of reality through the mutual trust that develops over time in the working and negotiating together on shared problems with various stakeholders.[638]

The various ways the community supports and makes public its collaborations also produces some long-term community resources, that is cultural, cognitive, and economic capital. With the use of ICT in KPS projects the registering of community expertise was not only a resource for KPS projects but also for community members and non-profit groups. In a similar vein, KPS blogs that served as central locations for data and discussion also documented the students research process, patterns of data, and become public statements to the community in regards to the projects relevance to the local community,

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[637] Bigum, C. (2000). Managing new relationships: design sensibilities, the new information and communication technologies (ICT) and schools. Presented at APAPDC National Online Conference, week 4: local school management. Accessed at http://www.apapdc.edu.au/2002/archive/ASPA/conference2000/papers/art_4_29.htm.

[638] Cooling, C., Graham, T., Moore, T. & Walker-Gibbs, B. (2003). (unpublished report) Building interactive relationships: the risk, dilemmas and learning initiatives associated with partnerships with 'real' purpose. Waraburra State School and Faculty of Education and Creative Arts, Central Queensland University. Accessed at http://www.deakin.edu.au/education/lit/kps/index.html.

and the community's own point of view.[639] In the lab school students kept journals documenting and expressing their own advance and growth in what they could do. These journals substituted for grading or a system of marks and could also become part of student's portfolios.[640] The lab school also had courses for the parents to help them understand the pedagogy and curriculum of the school.[641]

(3) Flexible, and adaptive curriculum. Usually in schooling day-to-day teaching practices are calibrated to the curriculum.[642] The curriculum rarely if ever is adjusted; students, teachers and schooling events adjust to predefined curriculum. In both the lab schools and in KPS case studies we see the exact opposite. Curriculum remains flexible and adaptive to fit the needs of spontaneous and serendipitous discoveries – the focus is "learning consequences," not outcomes.[643] It is important to note how grounded this is –the curriculum is responsive to the actual, local learning taking place.[644]

Themes, for example the theme of occupation in the lab school, provide some criteria.[645] The key difference is that since these organizing themes are functional, i.e. serve social purposes, they can easily support all schooling-inquiry experiences. For example, the large organizing themes in both the lab school and KPS are occupational. Additionally in KPS is the community's point of view, which serves to easily intertwine schools, communities, economies, and student identities in day-to-day matters of concern.

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[639] Lankshear, C. (2003) The Home-School Digital Divide in Curriculum and Pedagogy, Children's Literacy and Popular Culture ESRC Seminar Series, School of Education, University of Sheffield [Online], Available: http://www.shef.ac.uk/literacy/ESRC/pdf/papers/lankshear.pdf [Accessed 19th September 2006].
[640] Camp-Mayhew, K. & Camp-Edwards, A. (1936/1965). The Dewey School. Atherton Press: New York, p. 376.
[641] Ibid. p. 4. James H. Tufts contributed to these classes.
[642] Tanner, l. (1997). Dewey's Laboratory School: Lessons for Today. Teachers College Press: New York, p. 62.
[643] Lankshear, C. & Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, p. 191.
[644] Tanner, l. (1997). Dewey's Laboratory School: Lessons for Today. Teachers College Press: New York, p. 97.
[645] Ibid. p. 85.

Teachers in both the lab school and KPS have concepts they want students to learn and planned activities according to organizing concepts. The difference is that the curriculum is open to students becoming part of the social doing of what they are to learn. In other words, the curriculum is open to what activities locally provide by way of opportunities for use, i.e. investigating concepts, collecting data, and experiences with expert practice for a particular group of students at a specific time. The curriculum of the lab school was adaptive – constantly rearranged and adapted to the students and situations.[646] In schooling assemblages a spatial pedagogy means students are involved in emergent configurations of mediation or use. The curriculum, e.g. the students participation in and access to social-material geographies, must be able to morph and change as the inquiry unfolds and opportunities reveal themselves.

The collaborative nature, cooperative spirit, and the division of labor of KPS case studies and vignette resists a rigidly pre-defined curriculum. In KPS case studies we see room for curricular adaptations in "curriculum on the fly," the lack of pre-defined curriculum for the projects, outside of some general objectives.[647] As Lankshear and Knobel state in their description of what curriculum needed to be for KPS projects, such as the Yanga Headlands case study: "It is not preplanned, and it does not cover predetermined ground. Rather, it uncovers new ground that produces 'coverage' of an entirely different kind from the conventional curriculum coverage, and that can be extremely rich and fruitful."[648] If you recall from the previous chapters the Yanga Headlands case study involved boys, all about 14 years of age, that were classified as at-risk and as having

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[646] Ibid. pp. 7, 50.
[647] Lankshear, C. & Knobel, M. (2003). New Literacies: changing knowledge and classroom learning. Open University Press: Buckingham, p. 193.
[648] Ibid. Emphasis the authors.

problems with literacy. The boys were placed together as a group to work collaboratively with teachers and researchers (1:1 ratio adult to student) to create and produce something with ICTs, and to also help teachers understand better how to teach related skills to other students. The boys agreed upon an on-line motorbike magazine and to also help teach a "tools and technology" class the following semester.[649] That this project was collaborative, cooperative, and required the negotiation of task, e.g. a project of intelligent group deliberation, necessitated an adaptive curriculum.

The researchers and teachers that created the Yanga Headlands case study could only start with a broad task. The members collaboratively worked-out not only what the project would be, a motorbike online magazine, but also what the project meant, i.e. relevance. It was not up to the teacher to provide relevancy to the students, that the project was relevant in some way to the participants was a natural out growth of negotiating what the project would be.

The participants also worked cooperatively. Tasks and schedules were negotiated among the boys, as were daily problems. The boys also helped the adults learn some of the software used. The cooperation in doing the project and addressing the challenges that came up created a mutually supportive environment that valued and also held a certain expectation for everyone's participation.[650] Working cooperatively also resulted in a different division of labor. The teachers, researchers, and boys were equally involved in directing what was done along with depending on each other to do required tasks. Intentionality in inquiry is emergent, it is no surprise that Lankshear and Knobel state the curriculum for KPS projects must serve to uncover action rather than predefine it.

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[649] Ibid. pp. 182-185.
[650] Ibid. pp. 180, 188.

(4) Curriculum that is explicitly integrated to have continuity and respond to the students' inquiry trajectories. Schooling experiences involved in matter of concern that originates from real life and community purpose must have a broad unity for project based instruction. Unity has already been addressed, for example in the lab school's use of occupational themes from which the school's curriculum radiated. In this same vein, I group some of the additional curricular concerns and decisions of lab schoolteachers into three general categories: developmental concerns, vertical and horizontal relations of learning experiences, and interdisciplinary or holistic curriculum.

Situating students in inquiry is naturally functional and reflective. As such the lab schoolteachers saw developmental concerns as fitting with developmental aspects of curriculum. In Dewey's theory of knowledge the direction of children's learning is from unity the way children natural see things, toward greater abstraction, they way adults see things.[651] The young child recognizes the photograph of the cat but may not see the cat in a minimalist pen drawing – she gradually goes from richer, or more information to greater abstraction as she develops a greater understanding of the meanings of her culture; this is in fact functional thinking, e.g. the various ways things gain significance, just as in all inquiry.[652] In other words, intelligence is functional, inquiry, problem solving and thinking are all congruent. Knowing is also accumulative and rest upon cultural knowings. Thinking is then seen as functional social skills (social habits); the concreteness of such is deeply embodied.[653]

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[651] Tanner, L. (1997). Dewey's Laboratory School: Lessons for Today. Teachers College Press: New York, p. 2.
[652] Ibid. pp. 84-5.
[653] Ibid.

Keeping this in mind, the teachers at the lab school grouped children by interest and social compatibility, which tended to be children of the same age but not necessarily. These teachers had observed that social interaction with peers serves as an interpretative frame for practice and that this in turn could serves as a means in learning.[654] Even though the lab school was focused on communal projects it was of great concern to the teachers that students were not made sense of only as groups. Their aim was not to adjust individuals to fit unreflectively into social institutions but rather to cultivate students connected to communities who could be members of active publics able to work toward and organize for their interest. To do so the teachers saw their aim was to deepen and broaden social contact, interaction, and creation so their students' future social interactions would be fruitful.[655] In other words, these teachers were equally concerned with students' relationships to each other in the schooling community as they were students' mastery of using specific means and operations for inquiry. Students therefore, were treated as unique individuals and not 'just' group members.[656]

The teachers at the lab school were very concerned with "having each successive experience build upon the preceding one but to go more broadly and deeply into the matter involved."[657] To facilitate learning communities where experience could build in this way the teachers collaborated together to create vertical and horizontal relations of experiences to reinforce learning experiences. Vertical relations of learning referred to their efforts to create continuity through grades. For example, all of the students schooling experiences

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[654] Camp-Mayhew, K. & Camp-Edwards, A. (1936/1965). The Dewey School. Atherton Press: New York, p. 376.
[655] Ibid. p. 466-7.
[656] Tanner, L. (1997). Dewey's Laboratory School: Lessons for Today. Teachers College Press: New York, p. 52.
[657] Ibid. p. 56.

emerged from inquiry into the problems of living. Many of the lab school students, upon reaching the age of 13 or 14, were deeply involved in individual research. The students' deeply interdependent prior communal research experiences facilitated them into become very independent, yet connected, researcher in the older grades.

Horizontal relations of learning refer to the continuity of subjects or inquiry through subjects in a grade. An instance given by Tanner is: "In science for example when students test for the purity of water systems in their own and other communities, they learn facts and concepts in mathematics, political science, communications and geography as well as science."[658] The teachers at the lab school found that vertical and horizontal relations of learning experiences produced a powerful rich learning climate for children, and since the children were not being taught abstractions this climate enabling them to observe concepts in action, grasp and use ideas, means, and associations traditionally seen too advanced for their age.

Activities as the means of synthesis, meant children's introduction to systematic knowledge could be much earlier because that introduction was via rich, constructed activities.[659] One lab school parent speaking in regards to their 6 year-old child's ability to add, subtract, and multiply fractions wrote, "because they were taught arithmetic concretely not abstractly, they were able to accomplish feats in mental arithmetic which to me were phenomenal."[660] The teachers also realized that this interdisciplinary approach required much teacher cooperation and expertise. Teachers needed to be specialist in the

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[658] Ibid. p. 82-3.
[659] Ibid. p. 49.
[660] Camp-Mayhew, K. & Camp-Edwards, A. (1936/1965). The Dewey School. Atherton Press: New York, p. 75 fn2.

field to conduct inquiry and discuss findings with children.[661] Since teachers needed specialist knowledge in the concepts and methods that constituted that field there were no 'all around teachers,' at the lab school. Even the early grades were seen as needing specialist.[662] KPS scholars address similar concerns in discussing the need for schools to link to specialist communities and out-of-school practices.

Interdisciplinary curriculum for the teachers and students at the lab school did not mean that there were no distinctions between subjects. Subjects or fields were in fact distinct trajectories of on-going inquiry. Inquiry itself was interdisciplinary because the course of inquiry or the intersections between subjects was dependent upon the conditions, situations, and problems people found themselves in. For example Dewey states,

> Take a square mile of territory for example; if we view it from one interest, we may have trigonometry; from another standpoint we should label the facts regarding it botany; from another still, geology; from another mineralogy; from another, geography; from still another historical material. There is absolutely nothing in the fact, as an objective, which places it under any one head.[663]

The square mile is viewed in specific way in regards to the need of the inquiry. When subjects relate to the problems of living in the world, then intersections or correlations between subjects and fields emerge in the course of investigations and relate to some need or use. Correlation can be defined as "an effort to develop certain common relationships

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[661] Tanner, L. (1997). Dewey's Laboratory School: Lessons for Today. Teachers College Press: New York, p. 58-60.
[662] Ibid. p. 98.
[663] Cited in Tanner, L. (1997) p 45. Dewey, J. (1897). "The psychological Aspect of the School Curriculum," pp. 361-362.

between or among two or more subjects and still retain the usual subject division."[664] Correlations emerge when a teachers organizes a subject so that it relates to the world and problems of human experiences because problem of living have always been investigated and solved using various subjects or fields as a resource. Interdisciplinary therefore is not contrived, but functional.

The teachers, parents, and researchers involved in the lab school observed many benefits emerging from their children's experiences in the school community. The school provided experience in and expected community service, collaboration and cooperation to nurture these dispositions and habits in children's ways of doing, being, and perceiving. Students' work contributed to communal purpose and was also respected by the community as a unique creation. The school community brought diverse communities together, not only among the children but also the adults and adults working with the children. This community of diverse individuals developed shared interests in the course of investigating things together. Cultural pluralism was not an abstract concept, but instead an explicit part and resource of intelligent group deliberation. Furthermore, in doing things together in various locations spontaneous interaction with diverse members of the community could occur. The community also provided experiences in occupational-community responsibility. KPS peer-reviews and the classroom practices of warranted assertability created support, collegially relationships, and expectations of students and teachers knowing. The curriculum was not the only support for inquiry and project-based instruction. Support was also to be found in the organizational structure of the teaching staff and administrators. Education change is a reform of the habits and practices of

[664] Tanner, L. (1997). Dewey's Laboratory School: Lessons for Today. Teachers College Press: New York, p. 79.

schooling that includes students, teachers, administrators, educational researchers, parents and the community's view of education.

Forms of organization in schooling

Geographically dispersed pedagogy as well as geographies of participation are sustained not only in curriculum, but equally important is the organizational structure of the school itself – the schooling assemblage. Dewey believed that the organizing structures that served the lab schools' pedagogy and curriculum for students should equally serve the organizational structure for teachers and administrators at the school. In fact that the schools' pedagogy, faculty, and staff organization was closely calibrated was an issue of integrity to Dewey. The school must be a democratic social community to be able to nurture students into participatory and democratic dispositions and perspectives: "The school cannot take up the question of the development of training for citizenship in a democracy while the teachers are still segregated in two classes, as are the citizens in an aristocracy."[665] Thus, cooperative social arrangements applied to the teaching and staff body of the school as well as to the student body.[666]

The cooperative social arrangement facilitated at the lab school encouraged and supported the exchange of information and ideas among teachers, parents, administrators, and university researchers to continually improve and adjust schooling practices in the lab school community. This cooperative also distributed authority, for example, in the lab school the "teachers cooperation functioned as a substitute for the kind of supervision based on levels of authority in an organization."[667] Therefore, functioning in a similar way to peer review in KPS projects, this cooperative, the social arrangement of teachers,

[665] Ibid. p. 95.
[666] Ibid.
[667] Ibid. p. xiv, 96.

faculty, researchers, staff and parents, created a supportive and accountable climate for curricular and faculty development and teaching-craft reflection. The cooperative association and exchange among all these various groups making up the organizing structure of the school served as a "distributed substitute for what was usually top-down or highly centralized supervision, critic teaching, and technical training."[668]

Some examples of the forms these cooperative faculty, staff, and research arrangements took are in order. In the lab schoolteachers, administrators, researching university faculty and graduate students, worked together to developed curriculum.[669] Teachers daily and weekly write up (classroom observations and reflections) were treated as field notes for the cooperative to use in adapting curriculum. Teachers wisdom and lived-experiences in adjusting their teaching practices and trying to meet the specific needs of particular students was highly valued and seen as necessary in understanding how to adjust curriculum and sustain the continuity of the school's pedagogical focus. Teachers and researchers met in weekly meetings to discuss issues of learning, the goals of the school and the experiences of the teachers. The researchers explicitly offered support and assistances to the teachers in their efforts to develop and understand schooling experiences.[670] As stated before, the lab school focused on subject expertise with teachers versus teaching all subjects. Many of the teaching assistants were graduate students who included students and teachers in their on-going research efforts.

In the cooperative social arrangements among faculty, staff, and researchers, teachers explicitly became part of the generative research relevant to their students, classrooms and subject. In fact, the adaptive curriculum of the lab school necessitated

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[668] Ibid. pp. 96, 97.
[669] Ibid. p. 64.
[670] Ibid. pp. 44-46, 55.

teacher-researchers, teachers explicitly involved in the researcher of their classrooms, schools, and subjects. One of the goals in doing this was to facilitate teacher-researchers who would incorporate into their "mental habits, working tendencies of observation, insight, and reflection where these principles will be automatic."[671] Teachers' experiences in researching their own schools and classrooms would help teachers to be "thoughtful and alert student[s] of education;" whose knowledge of the subject field, and "psychological and ethical philosophy of education" would become part of who they were as teachers.[672] Teachers as researchers much like students engaged in inquiry means there is a focus on intellectual responsibility versus "mechanical proficiency."[673]

This community of inquirers, the cooperative among faculty, staff, and researchers at the lab school, also had an epistemic responsibility. Knowing was explicitly contextualized in and mediated by the inquiry of the whole community and was expected to be publicly challenged, confirmed or changed by the unique experiences of participants. The epistemic responsibility of those involved in the lab school cooperative was described in terms of intellectual freedom. Tanner, in describing intellectual freedom compares it to professional autonomy:

> A teacher with professional autonomy may follow ways of teaching that have become habits and through her [or his] emotion have become untouchable. Or a teacher's autonomy may be limited to finding ways of helping students to do well on standardized test. Teachers may have choice

[671] Ibid. p. 72.
[672] Ibid.
[673] Ibid. pp. 72-73.

> in content and instruction but no time or assistance. Autonomy can fragment as each teacher does their own thing.[674]

The intellectual freedom in the lab school cooperative describes the expectation for members to publicly ground and warrant their curricular adaptations and teaching decisions to their peers in the cooperative community of the school. In the lab school pre-service teachers, doctorate students, research partners, administrators, and teachers used the classroom reports as data for problems, studies, and discussion at informal weekly conferences with other teachers, and university researchers in university classes and seminars. The classroom was a field without the top down hierarchy of primary investigators.[675] Teachers used this field knowledge for curriculum modifications to calibrate instruction to the opportunities in the classroom since they could control their curriculum. The key difference here is that along with the freedom of controlling classroom adaptations teachers and others were required to justify their decisions and views in a community made up of their peers and other stakeholders involved in communal inquiry.[676] The lab school community strived to be internally consistent in the actions that constituted a democratic community. There was in the school a deep understanding that democratic community is not an abstract idea taught to individuals for some future application, but instead democratic community is a day-to-day participation in a experienced and lived value. In other words, the community of the lab school held a deep wisdom in knowing that the values, interests, perceptions and desires experienced in communal life are the embodied particularities of individuals and that these embodied particularities produce and organize tendencies in events. In thinking ahead of what it may

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[674] Ibid. p. 68.
[675] Ibid. p. 65.
[676] Ibid. pp. 66-67.

mean to create, facilitate, and research day-to-day participation in democratic schooling communities I will turn my attention to what a KPS-Dewey hybrid may entail.

Possible Application: A vignette of a KPS-Dewey hybrid

The previous accounts of spatial pedagogy provide a springboard for the following conceivable KPS-Dewey hybrid vignette. It is an expression of the kind of application I see my dissertation making possible. Specifically, I am envisioning grants to begin to work towards developing research-teaching communities to investigate spatial pedagogy. I start with a descriptive narrative of a day in the life of the students, teacher, coordinators, and partners who would be involved in such an initiative. I do this to illustrate the intelligent group deliberation, personal contact, spontaneous interaction, non-contrived possibilities, and time an initiative such as this demands. Following the narrative I describe some of the details, roles, and issues such an undertaking would present. I close this chapter by briefly revisiting the major ideas of this dissertation (embodiment, assemblages, geographies, Dewey's theory of inquiry, warranted assertability,) and briefly mention where they are at work in my vignette.

Keesha, Paul, Sally, and Luis, all juniors in high school, are in their second year of working as a cohort in the three-year water research program at Mountain High School. The students' class schedule was adjusted according to the specific focus of their project. For example, last year the cohort did not attend their English and technology sessions since they were compiling information and resources, writing, and creating project blogs for this second year. In this second year the students do not attend their science sessions but instead works on projects with Sam, a science teacher from their school, and Betty, a subject science coordinator for this year from a local university. Sue, the university

research partner for the year, is a doctoral student from a local university and is here today to help with the bacteriological analysis of some additional raw samples of the New River. Sandi, one of the project researchers, is visiting this cohort today to take field notes and make observations about their work and to interview Betty later this afternoon.

Betty pulls the school van off to the side of the road. As the group slowly makes their way to the bank of the New River, Sam's cell phone rings. One of the other teachers in the project calls him to confirm his cohorts chosen sites for new raw samples of the river. Each school is trying to collect samples at different sites. Each student brought with them today a sample of their home tap water. After collecting some raw samples at threes sites along the New River the group will return to the school to analyze the water samples.

Keesha has been doing some research on the affects of mining, dumping, run-off and sewage on the New River. In the course of her research she came across new articles reporting on EPA violations in regards to the mercury dumping of PPG Industries in West Virginia. Keesha asks if anyone knows if that dumping affected the New River. Sue who has done much research in regards to the New River tells Keesha and the other students that the New River is a tributary of the Ohio River, so the dumping did not directly affect the New River, as they understand it. While the group collects raw samples and looks around, Sue goes on to say that she understands that river systems are difficult to understand, and that she will show the cohort where to locate maps of river systems on the Web when they get back to the school lab. On they trip back the group talks about the New River. The students learn that the New River is the oldest river in North America, and that it flows from Southwest to Northeast.

Back at Mountain High the students begin to analyze the water samples. Sam, Betty and Sue work closely with the students, almost 1:1, to help them determine and understand the composition and bacteriological analysis of the raw and tap water samples. James a math subject coordinator is in the lab to help with the analysis. Sue will be back tomorrow so the cohort will finish any of the samples they do not get to today. Sue gets on a computer to shows Keesha and Sally where to find and how to use the maps of local river systems. Luis posts his composition results of his home tap water on the project web site table. Other cohorts from other schools in the county have begun to post results. Luis points out to his cohort that his home tap water from Blacksburg has the highest amount of Haloancetic acid. Paul helps Luis, while James looks on offering help from time to time, with the math to determine how significant the higher amount in Haloacetric acid is compared to the other posts. Keesha points out the elevated amounts of copper and lead in some of the Shawsville residential tap water samples posted on the table. Sam wonders out loud if they have well water. The students ask Sam to explain what well water might have to do with the elevated levels of copper and lead.

With a few minutes remaining in their allocated project time, Betty and Sam call the cohort together and ask about observation, and thought in forming interests for their reports for the project forum. Keesha states she is still interested in the problems of mining, sewage and dumping in the New River. Luis sates that he is going to look into information about Haloancetic acid. Paul says he is unsure about what he is interested in though the issues of private versus public ownership of water, and American versus English law reviewed in last year's historical overview was of interest. Betty asks Paul if he has anyone to follow up with. Sue states that she knows a Professor on campus that is involved in

policy regarding the use and rights with water. Sue looks up the professor from the projects on-line registry for the community's available experts. Paul asks Betty about arranging an interview with the professor. Betty accompanies cohort members on interviews and helps with transportation. Sally states she would like to come along since she has not done an interview and transcription yet. The group decides quickly who will be responsible to post what on the project blog to describe their actives, questions, and actions for today. The students quickly grab their things and go on with the rest of their day.

Sam, Sue, Betty, Sandi and James review the day and talk about tomorrow. James states he can be at the school tomorrow morning but will be helping the Campbell High students with their lab results tomorrow afternoon. Sue leaves to return to campus, and Sam gets ready for a class. Betty stays behind to post some daily notes in the Cooperative blog while Sandi sets up the microphone for their interview.

Opening pedagogical options

Before going on to present some details regarding some of the roles, locations, and issues a project like this would present, I will briefly pause and, using the previous descriptive narrative, state how I envision a project such of this and a few of the unique challenges it presents. Usually when educational researchers and teachers think of the social aspects of learning or learning as a socio-technical process they see process, participation and practice almost metaphorically creating short-term or supplemental situation, usually assisted with Information Communication Technologies (ICT), that are to help reconstitute some intentional context, and deposit information, performances or abilities in individuals. The very important distinction here, which effects the scope and duration of a project such as the above narrative, is that a spatial pedagogy consistent with

socio-cultural views of learning does not see process, participation and practice metaphorically, but as functional realties of social intelligence. Authenticity for Dewey and KPS scholars emphasizes the social roles of people in a community solving the problems of living. People in a community that build relationships, trust, try on different identities, and sometimes have conflicts of interest. This is why the pedagogies both Dewey and KPS scholars present to us entail the restructuring of schooling and not just some selected or contrived social experiences bounded to the classroom. Schools must be social communities explicitly intertwined with local communities and engaged in matters of concern. Students must have participatory access into the on-going inquiry of the schooling assemblages of which they are a part and by which their academic identities are partially defined.

The foregoing vignette concerns itself with the support and facilitation of schooling assemblages, functional social communities that develop and use social intelligence in participatory ways to solve the problems of living. For my vignette the functional-oriented theme is the day-to-day problems of living in regards to water. The students, teachers, experts, and coordinators are in cooperative, empathic, participatory, accountable and open social roles in a community trying to understand and offer solutions to the many problems their investigation into water brings up to the community. The charge of the teachers, coordinators, and partners are the support the students' generative entry and schooling experiences into the material-social geographies of experts' problem and solution formation into relevant matters of concern to the community.

An instructional and social community such as described in the previous chapters and the above vignette necessitates some serious demands in regards to scope and duration.

Students, teachers, coordinators, and the community must have time to develop relationships, with each other, with research, with primary sources, with diverse perspectives, and with the demands of stating how the know what they know, e.g. epistemic responsibility. Students must direct activities while being well supported by members of the cooperative. Students must have time to revisit ideas and problems to develop expertise and work through complexity and deep connections. Students must have many opportunities to talk about, imagine, and work out issues on-going in their projects and teams. The project should not be designed to be doable in some preconceived way of easy, efficient, or scope. The scope of the project is necessary to research the issues relevant to schooling as a communal undertaking. Problems such as funding, student mobility and attrition, and coordination are realities of social communities and need to be experienced and researched to be addressed.

The cooperative here, as in the lab school, is the grassroots-type collaborative community of teachers, parents, researchers, administrators, experts, graduate students, and pre-service teachers who serve to support the students and engage with them in communal inquiry. The cooperative will be engaged in weekly meetings to share teaching observations and weekly write-up to discuss the on-going progress of the students and relevant curriculum adaptations. To support students' generative inquiry the cooperative will offer teachers and students subject expertise, access to local expert, help with research efforts, and information technologies. Members of the cooperative would also help with students weekly meetings to discuss their projects and team collaborations. To support an adaptive curriculum teachers, partners, and coordinators will be involved in the generative research of the cohorts they support.

I envision a 3-5 year grant that involves all the high schools in Montgomery County. This project will be segmented into three phases and track the same cohort groups from years 10-12. To cultivate an instructional community within and between the schools the cohort should be representative of all residential locations and academic tracks. Likewise, the distribution of project resources should strive to equalize disparities between communities and schools in regards to equipment, transportation, staffing support, subject expertise, and students at home technology.

In regards to the Cooperative, the instructional community becomes a research-teaching field for pre-service teachers, Instructional Technologies and Educational Technologies graduate students, doctoral students, and project researchers. The teaching-researching communities, and various experts are not isolated but interdependent in the development, facilitation, and research of the community.

List of locations, roles and the project phases

School locations (The Montgomery County High Schools)

Eastern Montgomery High, Elliston, VA.

Blacksburg High School, Blacksburg, VA.

Auburn High School, Riner VA.

Christiansburg High School, Christiansburg, VA.

University involvement:

Virginia Tech

Radford University

Cooperative roles:

- Project researchers- qualitative researchers for the project

- Equipment coordinators- project and student equipment needs
- Cooperative coordinator- Coordinates, provides documentation of all meetings and conversations (including weekly and bimonthly meetings, teacher reports, coordinators write-ups) archives, posts and maintains the Cooperative blog.
- Schoolteachers – teacher coordinators from the school who work with the cohorts
- Pre-service teachers – school-subject coordinators who assist and support teacher coordinators and cohort students
- Educational technologies team coordinators - E.T., and I.T. graduate students who support cohort teams with the development and maintenance of on-line resources.
- Doctoral students – university research partners from various departments who help cohorts with specific research and resource needs[677]
- Community expertise – community partners, University professors and members of governmental and non-governmental groups who assist cohort and individual students on a as-needed basis with their research. Members of this group may also serve members of the cooperative as guest-speakers or field trip guides
    - Governmental groups – national partners
    - Non-governmental groups – non-profit and other relevant non-governmental organizations

I have segmented the project into 3 phases (set up, enactment, public offering). I see these phases as academic years, envisioning a 3-5 year grant that tracks relatively stable student and cooperative member cohorts over three years (10-12 grade). This inquiry-

[677] Subject Expertise of the project could potentially include: Math, Communication Technologies, Political science, Natural science, Engineering, Geology, Public policy, History, Public health, Social studies, GSI – medical geography, Agricultural, and Applied Economics.

project creates many possible points of entry by developing rich and broad entry tasks, and by supporting students' generative research.

Phase one (Set up)

Historic inquiry

Students' are introduced to some of the on-going problems of living in regards to water. These historical inquiries are discussions, case studies, field trips, writing and research activities, and lab experiences. The goal is to give students some orientation in the on-going inquiry they are entering, the many issues that entail water use, an introduction to the community expertise, what experts do, and of where to find resources, and the beginning experiences of working as a group deliberating issues.

Students begin to generate questions about water – where does the water in our county come from, how much and in what ways do we use water, how does the water get from wherever to the sink, shower, or faucet? For example, water in VA is primarily groundwater in porous rock. The treatment plants in our local Blacksburg, Christiansburg, Radford area, BC & VPI water authority, RAAP & Radford city all withdraw water from the New River.

Students will work collaboratively and cooperatively with members of the cooperative to identify organizations, government agency, and local sources of expertise. Along with this students identify the many fields involved in various problems of living in regards to water. For example:

- Public health – water purity and safety
- Urban affairs and planning – unresolved legal issues of water use and rights (e.g. English versus American rules)

- Geology, hydrogeology, and groundwater engineering – development and management of groundwater, groundwater and contamination from surface activity, and droughts
- Groundwater policies for the county –water supply, planning, allocation and dispute resolution.
- National issues – privitatization of water utility companies, water pricing, and environmental acts such as the 1972 Clean Water Act.

Our students will use a host of organizations along with local experts such as

- Dr. Thomas Burbey, Professor of Geology V.T., who is involved in monitoring local groundwater levels
- David Nelms, groundwater specialist for the VA district of the USGS (U.S. Geological Survey)
- Dr. Jesse Richardson, Professor, Dept. of Urban Affairs and Planning V.T., who is involved in groundwater history.

Technology

Students will use the general issues uncovered, the introductions to various relevant fields, and identified experts and organizations to create their own centralized on-line project resources. Their activities will be supported, collaboratively and cooperatively by the cooperative. For this centralized on-line resources:

- Students will create on-line resource registries [expertise, organizations and other resources]

- Students will create an on-line generic table for the data from the water composition and bacteriological analysis. This table will show comparisons with the other school locations.
- Students will creation a project blogs [for discussion, and additional data downloads]
- The Cooperative will create it's own blog [discussions, observations, write-ups, meeting transcriptions]
- Students and the Cooperative will be involved in creating online peer and project reviews

Phase two: (Enactment)

Students begin to more intimately enter the material-social geographies of experts to uncover and develop their own interest.

Data collection

- Students' test raw and tap water samples to determine the composition of their home and community tap water.[678]
- Students' determining the type of pipes used in their home
- Students' contact their local water utility company requesting information about the company and obtaining a consumer confidence report.
- Students' look at a residential and local business water bills discussing water pricing in their area

[678] Example of things water samples would be tested for: Mineral content (e.g. magnesium, calcium), Pesticides, herbicides (e.g. atrazine, lindana), other agricultural run-off, Disinfection Byproducts (DBPs, haloacetic acids), Turbidity (particles and microorganisms), Lead, fluoride, Nitrate, MBTE (gas additives), Copper, Mercury, Arsenic, Feces (e.g. parasites, such as Cryptosporidium, Giardia, fecal coliform bacteria), Trihalomethanes and other toxic by-products and chlorine interactions.

- Students' download the data for their area in the main project web site, which shows a generic page comparing data from the five schooling areas.
- Intra-school teams: research and use of expertise – school teams will generate, using relevant expertise and follow-up research, possible relevant issues for further investigation. The students and cooperative members at the school will have student forums to discuss issues, generate by students, and their justification for the issues. When the students feel they had developed a problem to investigate their problem summaries will be posted, with justification statements, on-line.

Phase 3: (Public offering)

- Students will choose, based on interest, problems to research by signing up for the problems offered on-line. Each project problem will necessitate a specific number of students. Signing up in this way will also create some inter-school teams. Thus far, projects have been intra-school cohorts.
- Project problem teams will conduct interviews with experts, and do research to produce a public forum report, outlining the problem and possible solutions along with suggested action to take, and possible community resources.
- In this final year, the project reports will be presented in a public forum and made public for all the communities involved by way of a final project web site.
- The students, experts, members of the cooperative, and community at large will be asked to provide feedback via peer and project reviews.

Post-project years 4 and 5

- Documentation, archives, and research related to the project

- Exit interviews of participants
- Year 4 follow up interviews with students
- Sustainability of community and pedagogical results
- Presentation and publication

Connecting to SOLs

All of the task described and alluded to connect to systematic subjects area and as such the SOLs. For example: the historical inquiry, public policy, water history and issue generation in phase one could correlates with Social Studies SOLs – 7.4, 7.5, 10.15, 12.6, 12.8, 12.9, 10.2, 10.9, 10.15. The data collection from water samples, and discussions of hydrologic (water cycle) and geology relevant to this communal inquiry would correlate with life science =ls and Earth science = es SOLs, for example ls.12, es.7, ls.12, es.6, es.7, es.8, es.9, not to mention general math SOLs related to comparisons, percentages, and statistics.

The creation of on-line resources, use of communication technologies, writing demands of interviews, transcriptions, blog postings, project forums, and use of expertise and primary resources would correlate with communications, composition and other writing skills, public speaking, and local history. Other examples include, but are not limited to: Engineering (issues of waterworks and groundwater engineering), Astronomy-geology (issues of how impact craters affect groundwater flow and quality), and Agricultural & Applied Economics (water pricing).

My vignette and this dissertation offer a beginning trajectory in my thinking about the development, research, and continual refinement of spatial pedagogies. What starts out rough, refines with experience and research, meaning I do not think that what I present

here is not without possible problems or cul-de-sacs – it is just a beginning of what I believe could be a long-term research-teaching effort. I will close this chapter by briefly revisiting some of the major ideas of this dissertation in regards to spatial pedagogies (Dewey's theory of inquiry, warranted assertability, embodiment, assemblages, and geographies) and briefly mention where they are at work in my vignette. These major ideas are of course distinctions of each other and as such will overlap.

This position of this dissertation is acutely concerned with embodiment. This has been an ongoing theme, so I will focus on what a concern with embodiment means for theories of learning and therefore pedagogy. Embodiment means a rejection of atomistic individualism, mental constructs, and the rejection of essential knowledge and abstractions. Embodiment means, as in Dewey's theory of knowledge, that knowing is enculturation, developmentally and in an on-going sense, the social mechanisms of which are participation and co-creation. Our participatory experiences are necessary to survive, emotional, inform our self-knowledge and inscribe the body by way of habits, predispositions, and perspectives. Dewey's theory of logic brings to light the transformative processes of social humans creating durable use and therefore knowledge. By fully developing the pedagogical potential of Dewey's theory of logic we not only facilitate the habits and predispositions of public social inquiry, but we create social mechanism for individuals to explicitly contribute to the communities they belong to, which also serve to enculturate them. This is why, as simple as it may sound embodiment demands a pedagogy of people explicitly and reflectively doing things that matter with others. If we are what we participate in then participation, not individuals are the focus and activity, not mental constructs, are synthesis. The big question to bring to schooling

assemblages then is what are people doing and with what and whom are they doing it. Education, I believe, makes the grave error of thinking content is the focus of knowing instead of experience.

In the vignette, as in the KPS case studies and Dewey's lab school this plays out in specific ways. Keesha, Paul, Sally and Luis are involved in a relevant inquiry of water. Their perspectives, understandings, and experiences of their life-world are relevant, influencing the trajectory of the group's inquiry and contributing to others perspectives. For example, the project is concerned with the specific difference in their home and community water samples, problems unique to their community, and their individual interests. These students and those that support them are actively and jointly participating in this inquiry. They are deliberating, collaborating, cooperating, negotiating and depending on each other to create and complete things of consequence. For example, Paul helps Luis with the math to figure out if the differences in his residential water sample are significant.

The student-cooperative cohort also shares the epistemic responsibility to warrant and back how they know what they know, i.e. warranted assertability. They do this in various daily meetings, spontaneous exchanges, and in formal public forums and peer reviews. Since our student-cooperative cohort is doing things together, for example lab analysis, field trips for samples, group meetings, and creating and providing resources they can have productive spontaneous exchanges. Much of what the student learned about the New River and the resources they needed came up in inquisitive conversations. These participatory experiences support productive dispositions towards others, knowing and using knowledge.

Member of the cohort are dependent on each other and collectively figure things out; they are working together. Equally important, is that the members of the cohort are working on a 3-year project. They have time to develop significant relationships with each other. They have time to progressively develop practical and intellectual control over inquiry. Here, knowing is explicitly inquiry and not performances associated with essential knowledge; they are involved in the interpretation and reflection of what things like data mean. Since the cohort in my vignette has as a community that has explicitly provided and made public the social means for epistemic responsibility, by way of warranted assertability, the members are experiencing the social expectations of backing and warranting what they believe they know.

The assemblage is the social community and its mediating relationships to continue to meet its functional needs. This vignette maintains a functioning-oriented theme with the water research. The social community includes all the cohorts, cooperative members, experts, and relevant communities. Since assemblages are on-going inquiries into maintaining some function our cohort members are explicitly participating in the inquiry of the assemblage of which they are also members. Students contribute and sometimes direct the trajectory of the investigation. There is room for students to be experiential and playful.

The support of the cohort's inquiry is emergent. The vignette's cooperative specifically supports an adaptive curriculum. Experts are available resources as things come up. Blogs and various web site serve to share information for comparisons between the different cohorts in various schools. These comparisons provide a context for generative inquiry.

There is also an internal consistence in this schooling assemblage. The cooperative is engaged in teaching and researching the community. The organizing structures that served the pedagogy and curriculum for student cohort groups equally serve the organizational structure of the cooperative. Researchers, experts, and teachers work together to create the adaptive curriculum and also make sense of the community in their analysis. All members are in constant dialogue and present to each other, in weekly and daily meetings, ideas and justifications for curriculum adaptations.

Assemblages and geographies of knowing describes phenomenon of associative action and cultural durabilities and as such serve to guide our sensibilities for curriculum. If you recall, geographies of knowing refer to all the places and ways a given act of inquiry has consequences. In terms of the vignette the cooperative scaffolds the students entry into the social-material geographies of specific knowings that historically and currently make up the inquiry of the assemblage. For example, the students are not provided with samples. They do not learn in lecture the common concerns and composition of tap water. The students go out to their local water sources, raw and tap, and collect samples, analysis samples, post data, notice differences from other locations, access maps of river systems. They are supported by their community's local expertise, such as our doctoral students Sue and James, but they go through the lived-experiences and ambiguities of researching.

Some other relevant ways these vignette students enter the geographies of inquiry relevant to the schooling assemblage is that they construct their own resources. The introduction provided to them is one that overview the historical inquiry into water, and they have a community of experts that they can utilize, but the students created the blogs, web sites, list of experts, post data, contribute to discussions. They, in fact, have created

capital for themselves and other peers involved in similar inquiries. Furthermore, the utilization of resources is not passive, but active. For example, Sally and Paul make arrangements to interview a local professor, and Keesha discusses with Sue the difficulty of making sense of river systems. Likewise, the final product of this community is a public resource. The public resource entails cohort research reports, and the resources they have created for the project, which in turn can serve the community.

As mentioned before, we begin and end with the community; there is no duality between what individuals create in action and the communal values, beliefs, and customs they embody through dispositions that guide action. We must make the effort to fully understand what this means to be able to even begin to tap into what our socio-cultural knowledge means and can do specifically in regards to pedagogy and curriculum.

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CURRICLUM VITA

Sandra Beth Schneider

Home:
506 Fairview Avenue
Blacksburg, Va. 24060
Home: (540) 951-3746 cell: (540) 449-9375
E-mail: saschne3@vt.edu

Education:
Virginia Polytechnic Institute and State University

Doctoral degree: received December 2006
Department: Education Curriculum and Instruction
Dissertation: "A Deweyan Perspective on Knowledge Producing Schools: Re-creative Technologies for Communities of Inquirers."
Advisor: Jim Garrison

Master's degree: received May 2000
Department: Instructional Technology
Masters Thesis: "The Denied Affective: A Deweyan Perspective on Disequilibrium"

Bachelor's degree: received August 1998
Major: Communication Studies, Minor: English

Teaching and teaching-relevant experience:
Substitute teacher and aide, Montgomery County Public Schools
September '06 – Present
Substitute teacher, aide and administrative assistant for the county.

Course Development for alternative licensure (ALPS), Dr. Ken Potter & Miriam Larson
Summer '06 – August '06
Office of Educational Research and Outreach, Virginia Tech
Duties:
I served to help create an on-line module for Schooling in America, the 5104 Social Foundations course offering. My role in this was as the Subject Matter Expert and assistant to the course developer.

Graduate Teaching Assistant, Virginia Tech, EDCI, Social Foundations
Fall '03 – Summer '06
Taught two sections of the graduate-level Social Foundations 5104, Schooling in American, Spring 2006, and first summer session 2006.
Taught nine sections of the under-graduate-level Social Foundations 3024.
Taught discussion sessions and facilitated cohort research and presentation assignments.
Evaluated students assignments including required reading, which I selected, research papers, journal entries and dialogue partner papers. I evaluated cohort groups' class

moderation and presentation and also incorporate peer reviewed.

Graduate Teaching Assistant, Virginia Tech, Department of Communication Studies
August 1998 – August 1999
Taught five sections of Public speaking.
Taught lecture class and lab component. I evaluated students' speeches and also incorporated peer reviewed.

(Total teaching hours 48)

(Other non-teaching related academic experience is listed.)

Publications:

Submitted work:

Garrison, J. & Schneider, S.B. (2006) "Deweyan Reflections on Knowledge Producing Schools." Submitted to Teaching College Record. Columbia University:

Book chapters:

Garrison, J. & Schneider, S.B. (forthcoming/2006) Book chapter – "Democratic Myths and Democratic Vistas: the possibility of democracy" in Second Edition: Knowledge and Power in the Global Economy: The Effects of School Reforms in a Neoliberal/Neoconservative Age. Edited by David Gabbard. Lawrence Erlbaum Associates, Inc.: New Jersey

Nespor, J. with Schneider, S.B. (2006) Book chapter – chapter five "Seeing Teaching as Work" in Nespor, J. Technology and the Politics of Instruction. Lawrence Erlbaum Associates, Inc.: New Jersey

Nespor, J. with Schneider, S.B. (2006) Book chapter – chapter six "Making Disciplinary Objects Visible: Pathology on CD-ROM" in Nespor, J. Technology and the Politics of Instruction. Lawrence Erlbaum Associates, Inc.: New Jersey

Nespor, J. with Schneider, S.B. (2006) Book chapter – chapter seven "Making Students' Difficulties Visible: The Math Emporium" in Nespor, J. Technology and the Politics of Instruction. Lawrence Erlbaum Associates, Inc.: New Jersey

Refereed Book Reviews:

Jim Garrison & S. B. Schneider (forthcoming/2007) book symposium **–** Educational Philosophy and Theory (EPaT) Symposium on O'Loughlin, Marjorie (2006) Embodiment and Education: Exploring Creatural Existence. Springer: Netherlands

Book Reviews:

Schneider, S.B. (2004) Book review – Philosophical tools for technological culture: putting pragmatism to work. Hickman, L.A. (2001) in Educational Studies vol. 37-3.

Presentations:

Presented at the 2006 American Educational Studies Association (AESA) Annual meeting, Sandra B. Schneider & James Garrison
Paper submitted: "Deweyan Reflections on Knowledge Producing Schools"

Presented at the 2006 American Educational Research Association (AERA) Annual meeting, John Dewey Society, S.B. Schneider & Jim Garrison
Paper presented: "Some Deweyan reflections on Knowledge Producing Schools."

Presented at the 2006 American Educational Research Association (AERA) Annual meeting, S.B. Schneider
Paper presented: "Managing the tensions between sociocultural perspectives on literacy and traditional schooling practices."

Presented at the 2005 American Educational Studies Association (AESA) Annual meeting, S.B. Schneider
Paper presented: "The problem of individualistic literacies: the radical unrealized potential of public education to serve the formation of public(s)"

Presented at the 2002 American Educational Research Association (AERA) Annual meeting Dr. Jan Nespor & Sandi Schneider
Paper presented: "Techno-angles and Managerial Professionals: Transformations of 'teaching' in the push for online education."

Presented at the 2001 Association for Educational Communications and Technology (AECT) International Conference, Todd Ogle, Sandi Schneider, Hope Liu, Berlinda Saenz, Pete Macedo, Greg Sherman, Inez Farrell
Paper and research findings presented: "Examining the Socio-Cognitive Relationship between Context and Performance" Published in the AECT conference proceedings, Volume #1: Proceedings of Selected Research and Development Paper Presentations

Presented at the 1999 Society for the Study of Symbolic Interaction (SSSI) Annual meeting, S.B. Schneider
Autoethnography presented: "Understanding self and other in an online classroom."
Organizer and Chair: Dr. Annette Markham (Virginia Polytechnic Institute and State University)

Manuscript Reviewer:

Reviewer for the John Dewey Society, 2007 annual meeting at American Educational Research Association (AERA)

Other Academic Experience:

CEUT (Center for Excellence in Undergraduate Teaching), Dr. Terry Wildman
Summer '00 - Spring '03:
Workshop Coordinator

- Coordinated the schedules and duties of 5 undergraduate assistants
- Cover the setup and breakdown of all CEUT workshops
- Produce the CEUT final report, and Certificates for the Year-End Celebration
- Produce the CEUT's monthly mailer and Spectrum information.
- Processing CEUT grants

CEUT web site:

- Responsible for CEUT website changes and Filemaker database needs.
- Redesign and creation of the UWP web site.
- Communicated with EdTech for CEUT server needs and problems.

Facilitated a Faculty Study Group (FSG): (FSG was awarded a 3 year - $655,000 NSF grant)

- The FSG I facilitated used the FSG to provide structure to work on a NSF grant proposal. This group included Dr. Megan Boler, Dr. Carole Burger, Dr. Elizabeth Creamer, and Dr. Peggy Meszaros. My duties included:
- Research and proposal of helpful theoretical frames providing theoretical summaries and copies of articles
- Documentation of all meetings and proposal conversations
- Coordination of meeting time, place and materials needed
- Coordination of communication with grant consultant.

BEV (Blacksburg Electronic Village), PI: Dr. Andrea Kavanaugh
PTFP Implementation grant – awarded Spring '02
Spring '99 – Summer '00:
I was involved in creating a needs assessment to flesh out an implementation proposal.

- Going out to client's locations to research city and nonprofit organizations as possible partners for the PTFP implementation.
- Researching the potential partners relationship and service to the end user for the PTFP grant [minority and disadvantaged groups in rural areas].
- Documenting potential partners needs and wants
- Documenting potential partners current IT [Information Technology] capability.
- Coordination of meeting time, place and materials needed for the PTFP team and clients.
- Documentation of all meetings and proposal conversations
- Production of a need assessment document and progress reports for the PTFP program officer

Housecalls, Virginia Tech, Educational Technology Lab, Dr. John Burton
Summer '99 – Fall '99

- Part of the technical support team for CHRE faculty and staff
- Support faculty with specific technology and graphic design needs

Teaching Interests:

- Social Justice and Equity in Education
- History of American Schooling
- Instructional Technology (Information and Communication Technologies) ICT and social inquiry
- Critical pedagogy and Deweyan reconstruction
- ICT and professional development in Education
- Embodied Intelligence

Professional Memberships:

American Educational Research Association (AERA)
Philosophical Studies, Special Interest Group (SIG) membership:

- John Dewey Society
- Holistic Education

American Educational Studies Association (AESA)

Employment References for Sandra Schneider

Dr. Jim Garrison
Professor, Foundations of Education
Department: Teaching and Learning
School of Education
Virginia Polytechnic Institute and State University
400 War Memorial Hall (0313)
Blacksburg, Virginia, 24061
(540) 231-8331
wesley@vt.edu

Dr. John Burton
Professor, Educational Research & Outreach
School of Education
Virginia Polytechnic Institute and State University
115 War Memorial Hall (0313)
Blacksburg, VA 24061
(540) 231-7020
jburton@vt.edu

Dr. Rebecca Scheckler
Education Technologist
Waldron College, Heath and Human Services
Radford University
Box 6970
Radford, Virginia 24142
(540) 831-7663
rscheckle@radford.edu