The impracticality of practical knowledge and lived experience in educational research

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Sayings about the practices of classrooms from American «urban» teachers

I begin with excerpts from ethnographic field notes with teachers in American urban and rural schools (Popkewitz, 1998). The teachers were involved in a national teacher education program to bring recent non-education graduates from elite American universities into some of the poorest and underserved areas of the US. The teachers were highly committed, motivated, intelligent, and thoughtful in learning to be teachers that correct social wrongs. I use the quotes, then, not to question their integrity in talking about their classroom experience but to pursue the adequacy of talking about «experience», and its corollaries of «voice» and «practical knowledge» when thinking about school reform and correcting social wrong. My argument, so not to have any suspense, is naturalizing what teachers say, to talk about practical knowledge and
experience is to conserve the very systems of reason that need to be challenged in relation to social commitments.

For most of the participants in the teacher education program studied, it was their first experience teaching and facing the social and psychological conditions that they saw affecting not only the children but their homes and communities. It was in response to these conditions that one teacher said: «I want [the classroom] to be a non-stressful, friendly, encouraging community» (Popkewitz, 1998, p. 71).

A different teacher reflected on the conditions in which the children of her classroom lived. She compared differences of urban children from her own and family experiences:

I didn’t realize the background my kids came from…I didn’t realize that my background was where I had a safe place where I could go home and study as much as I wanted. Whereas these kids, they’re lucky if they can sleep at home, let alone do anything else… All they do when they’re home is have their parents yell at them and have their parents blow smoke in the face from their cigarettes and things like that. They can’t study…there’s so much pressure not to learn…there’s so much pressure not to do what’s expected of you that the best that most of these kids can hope for is to get through here without being permanently scarred. (Popkewitz, 1998, p. 37)

The teachers’ reflections about their experiences and planning embodied distinctions and categories of difference that were not only of the school. They are found in social and educational research, media and policy. The categories around which education is organized evoke a trilogy when speaking about urban and rural schools. That trilogy focuses on the characteristics and qualities of child, family and community.

What was interesting in the study of these teachers was that the distinctions to differentiate and divide the children, family and community in both the urban and rural schools were the same and historically related to change in the city. The «urban» trilogy was and is a story of difference and the objects of change. The intersection of the family, child, and community form a system that tells about the possibilities of school success and failure through interrelating in a grid of psychological categories and social qualities. The psychological categories tell about the inner characteristics of what the child lacks; motivation, self-esteem, and efficacy. The psychological qualities are assembled with social characteristics of differences expressed as, for example, family disorganization, single parent families and «fragile families». These distinctions were connected with notions of community expressed as its moral disorder. The latter related to sexuality, delinquency and crime. The psychological and social characteristics served as markers about the causes of low school achievement that require remediation programs to rescue the child and enable future personal success.

While not readily apparent in the curriculum models of schooling, the classifications that connect the urban trilogy of child, family, and community order how children’s learning is acted on. If I take a commonplace of an early primary class teacher lesson on spelling test and another about mathematics, the normal and commonplace models are made sense of in relation to the distinctions that classify the urban child. In teaching children how to spell, the teacher says:

Okay, we’re going to have our spelling tests. I’m going to say the word then say a sentence, then say the word again. No talking during the test though. Number one is «hedge». The hedge around the house needs to be cut. (Then the
A different primary teacher talked about the mathematics curriculum as preparing children to master the skills necessary for their learning:

What you have to do for them … in everything you teach them is break it up into very small bits. Like if you’re going to do prime numbers, you have to break it into these numbers and these numbers… Everything these kids do needs to be broken down so simple…(and) they need to emphasize those simple terms before they know what they are doing. (Popkewitz, 1998, p. 93)

The classroom lessons are given as reasonable not only through its overt objectives of learning prime numbers or spelling. The school «content» is made possible in a complex network of different social, cultural and psychological principles that come together to make possible what the teacher «sees» as the child who is learning in the classroom. Teaching was a way of giving children an orderly and rationally organized process that was not only about learning but about the conduct of life. The academic problems of learning how to take notes in science, for example, was to learning how to place phenomena into an hierarchical order that was to be seen as encompassing the knowledge of science and understanding. As one teacher said: «The students want explicit – directions – the page number, the paragraph to read so they can know exactly where they can find it. (Popkewitz, 1998, p.75)

The teaching was not only about the content of learning but about learning moral responsibility through engaging «the soul» of the child expressed in the inner beliefs, feelings, motivation, and responsibility. As another teacher said, «I want to assist them in developing a code of morality for themselves – of fairness, kindness, tolerance.» (Popkewitz, 1998, p.51)

This focus of this article is on the grid of historical principles that are connected and constitute the practices of these «everyday experiences». I use the notion of «urban» and its trilogy to explore the historical inscriptions that shape and fashion «experience». The «urban» trilogy, I argue, embodies principles about who the child is and should be that are historically produced. They circulate in schooling to give intelligibility to what constitutes experience and practice.1

The first section explores this historical sense of lived experience through focusing on urban schooling as embodying a double «I». That double is the autobiographical I of the teacher who speaks of her experience. And circulating in the autobiographical is the historical I that provides the rules and standards of the reason that orders communication and action. The significance of these rules and standards is explored in the second section through focusing on cultural theses generated about the particular kinds of people that teachers are to act on and change. The urban, gifted, adolescent, at-risk, and socially disadvantaged child are such kinds of people that become the origin of teachers’ «experiences» and which give intent and purpose to classroom practices.

The third section focuses on the urban kind of child as dual gestures. It inscribes the hope of schooling to make certain kinds of people for the future that simultaneously orders a particular comparative style of thought about the child who lacks these qualities. The double gestures that excludes and abjects in the efforts to include children is explored in the exemplars of teaching in mathematics and science.2

The historical qualities of reason of the «I» of schooling entail its paradox. The projects that valorize experience and practical knowledge conserve the principles of the
present and restrict the zones of freedom rather than challenge the frameworks of the present. I conclude with historically thinking about the reason as a method to problematize the notion of practical knowledge and experience as an object of research and its notion of change.

Historicizing the reason of «urban» life: The double «I» in practice

If I play with the teachers’ statements and view them as historical artifacts about what is possible and not possible to say, the experiences of everyday life is the intersection of a double I. As I suggested above, there is the autobiographical I of the teachers as they say and do things with children. This is not meant to be minimized. But how things are said and given as practical and experience are made possible through the assembly and connection of different historical events that predate the teacher’s entry into the classroom.

To explore the historical qualities of experience, I first explore the teachers’ comments about the urban child, family and community as embodying particular kinds of people or human kinds. The categories of the urban trilogy, I argue, embody cultural theses about how people live and should live that I discuss in American Progressive reforms at the turn of the 20th century and its contemporary concerns with urban education today.

Ordering experience: The urban trilogy as human kinds

The experiences of the urban teachers described above entail a complex set of principles that are not just there, for the teacher to enact ways to correct social wrongs associated with poverty and race in, for example, studies of the hidden curriculum. The category of urban embodies cultural theses about who the child is, should be, and, as I discuss later, the qualities and characteristics of the child excluded and abjected. I use the notion of cultural theses to direct attention to the experiences that the teachers describe above as inscribing principles about modes of life in which the qualities and characteristics of the child intersect with those about family and community. These urban qualities of life are the objects of social work, education, medical interventions, and political programs to change people recognized as different.

The urban trilogy was embodied in the teacher who talked about her brother and her home as having different modes of living when compared with the children from her school. In the interview, the urban child was described as different from the teacher’s own family background where there was «a place to study» and «pressure to learn». The asymmetry of the generalized urban child with the personalized comparison of the teacher’s brother embodied cultural theses about differences. The characteristics of the comparison were unspoken but related the brother to family life that did not need naming or have any author as everyone knows what is being talked about.

This comparison brings into view that urban is not a geographical concept about where someone lives. It is a cultural thesis about how people live and should live. Children living in the city who go to private schools are not urban. The distinction of «urban» is used to refer to children who live in the suburbs and towns. The urban trilogy is about particular kinds of people who are recognized for inclusion but different and in need of remediation to be rescued and saved for the future.

The making of kinds of people and its cultural theses that I now turn to in exploring the historical I of experience. What today is taken as the urban experience can be
briefly located in narratives of the city that are visible in the European enlightenments of the 18th and 19th centuries and its (re)presentations at the turn of the 20th and 21st centuries

**Making the urban trilogy:**
**A brief excursus into the historical «I»**

The city had a particular cultural and social presence in the European enlightenments of the 18th and 19th centuries. It was both the center for human progress and the concern with the moral disorder and economic upheavals that become the focus of The Social Question. The latter at the turns of the 20th and 21st centuries concerned the debilitating effects of industrialization, urbanization, migrations and economic dislocations on particular groups of people. I sketch these historical processes to think about particular distinctions and classification given to the urban trilogy and which today are taken as natural to order and constitute experience.

The city had a double meaning in the European and American enlightenments. The city was testimony to the applications of human reason for human progress. It was the center of the enlightenments’ cosmopolitanism. Its urbane kinds of people were the enlightened citizenry who provided for the advancement of the political, social and cultural qualities of civilization. The urbane cosmopolitan kind of person gave testimony to the growth of science, the flourishing of literature, the thriving of artistic creativity, and the increased bounty provided by technology and commerce.

Against this city of enlightenment was the urban city whose qualities became the object of the urbane cosmopolitan citizen. With the emergence of social science and the modern welfare state to care for its population in the long 19th century, another urban kind connected with the urbane. The former was feared as a danger to the future of the cosmopolitanism and its principles of the common good and progress.

That fear was given expression as The Social Question. The effects of industrialization, urbanization, and immigration gave focus to the unhealthy physical, economic and moral conditions of the city. The unsanitary qualities of housing and the lack of public transportation, for example, intersected with social questions. Social reformers, state projects, and the new disciplines of sociology and psychology on both sides of the Atlantic directed attention to changing particular kinds of people defined through populational categories about poverty, immigrants, and racial groups in the U.S.

Legislative, social and educational reforms provided the basis of what is known as American Progressivism. The problem became one of social interventions to administer society. One central question of the reforms was directed to the dangerous populations of the city whose modes of life entailed family disorganization and breakup, crime, juvenile delinquency, and sexually transmitted diseases.

Social planning in the different programs, policies, and new social sciences gave attention to those populations that did not or could not embody the cosmopolitan qualities. In literature, arts and theater was the idea of society as The Melting Pot where different social groups came together as one civil and political society. That society enabled republican virtues and its thesis of the pursuit of happiness (Popkewitz, 2008).

The very recognition for inclusion and its «melting pot» had its irony. The classifications to recognize urban populations for inclusion defined kinds of people as different and dangerous. The dangers were embodied in modes of living feared as unlivable in the republic.

The new human sciences were part of the grid in which the reforms to change society
were ordered and enacted. The social and education sciences focused on urban populations to identify but also to conceptualize and theorize the causes and remedies that would redeem the morally fallen populations.

The sociologies and psychologies investigated and were to make visible the processes that order social and human growth and development. This moved in two related directions. One was to find the sites for intervention where rational action and administration could occur. This idea of intervention is itself crucial to the possibilities of the welfare state. Second and ironically in liberalism, the interventions to administer change were to enable agency and thus liberty and freedom.

New classifications and styles of thinking made possible different ways of thinking and acting on particular populations as kinds of people. The urban trilogy was theorized, conceptualized and mapped through child studies and community sociology. The domestic sciences, for example, redesigned the urban home to provide social, health, and moral guidance to parents. The home was to be rationalized for producing sanitary conditions, family nutrition, a fiscal order for a wage economy of the home, and physical and moral standards for childrearing that gave the urban mother responsibilities for the future of the child. Categories of adolescence, community, and motivation were (re)visioned into scientific discourses. The distinctions and differentiations about children attitudes, motivation, and behaviors provided ways to think about their modes of living (Popkewitz, 2008).

The corporate mission and community «experienced»
The very Progressive sciences to change urban conditions and changed people were never only about science. The theories and methods of the social sciences embodied secular and revelatory forms of knowledge to shape and fashion urban studies of the trilogy of community, family, and childhood (see, e.g., Tröhler, 2011; Popkewitz, 2008). The community sociology developed at the University of Chicago is a case at point. It was driven by Calvinist reformism and enlightenment notions of cosmopolitanism. The idea of «community of believers» and the Puritan notion of «the city on the hill» were (re)visioned into a new covenant of the nation as the beacon for all the world to watch. In psychology, the «mind» replaced the religious language of the soul to talk about how the inner soul and corporate mission can be joined (see, Tröhler, Popkewitz & Labaree, 2011).

Urban sociology is an exemplar to consider the fabrication of the urban trilogy and the historical construction of what is constituted as experience. It emerged at the turn of the 20th century and was linked with social work and education. One focus was on the primary interactions and interpersonal/symbolic interactionism of the family and immediate social networks to think about how collective norms and belonging could be achieved among urban populations. Attention to the interactions and communication patterns of the family were to compensate for the abstract and anonymous conditions and qualities of industrial and urban «society» (Gesellschaft). The linking of individuality and collective norms was embodied in the concept of primary group introduced by Charles Cooley (1909), a prominent member of the Chicago School of Sociology and founding member of the American Sociological Society (later the American Sociological Association).

The notion of primary group gave attention to the family and immediate social interactions to emphasize how shared and close personal and enduring relations are produced. The concept of the looking glass self
instantiated a particular kind of person regulated through the relation of primary group values (love, honesty, ambition, loyalty, kindness, hope) with social and institutional values given expression in American Progressivism. The primary groups of the family, children’s play and childrearing were viewed as crucial for the development of the inner sense of the self and the formation of morals, sentiments, and ideals.

The urban sociology gave expression to the nation’s corporate mission as the transcendental republican image of government and its citizen (see, e.g., McKnight, 2003). Community was a strategy of forming collective belonging through the intimate and communicative processes of face-to-face interactions. The previously rural Lutheran pastoral image of German social theories about the alienation of the abstract relations of modern society and the pastoral image of the rural community was transported and translated into American sociology with its Calvinist Congregationalist reform values about face-to-face interactions to create narratives of an urbanized community.

I focus on American Progressive reforms, science and education to think about how the narratives of the common school and what constituted its lived experience are told. While Progressive reforms are often told as the rapid expansion of schooling in the making of democracy, that expansion was given intelligibility through a particular system of reason. The making of this memory of the school provides a system of reason through which the urban kinds of people were given visibility as something to experience and act on as cultural theses about modes of living.

Today, the notion of community that emerged in Progressivism is reassembled and given new connections in the making of the commonsense by which experience is told about the child and family. Contemporary social reforms give a renewed visibility to The Social Question and the urban trilogy. If the Social Question is examined in Sweden, for example, between the 19th century and today, its focus has shifted. Earlier was the concern with reform as philanthropy to the urban trilogy. Today the Social Question and community are distinctions invested in the whole society as a population-at-risk and potentially dangerous (Peterson, Olsson & Krejler, in press). Sociology and the learning and cognitive psychologies in U.S. reforms compete to redesign notions of collaboration, participation and problem solving that (re)vision secular and revelatory notions of community in constituting difference in urban populations.

As the literature about urban education is read over-time and connected to the comments of the teachers that began this article, it becomes apparent that the «lived experiences» of the «urban» teacher is not adequately understood as biographical or as contextually defined. The trilogy of the community, family and child that intersect in the teachers’ practices not just there, as natural ways of thinking and acting. To say that children are learning, satisfied, motivated, and achieving as ways of expressing experience required complex historical processes through which these ways of communication were given possibility.

**Kinds of people: The comparative division in the making of «lived experience»**

I have been talking about the urban trilogy of the child, the family, and the community as particular human kinds. By human kinds, attention is directed to particular determinant categories that order the qualities, characteristics, and capabilities of people into what seems as a unity (Hacking, 1986). The urban child and family are such human
kinds. Prior to the long 19th century, children were little adults whom parents did not worry about moral development and cognitive growth. That way of thinking and acting toward children changed. The child was given an interior whose characteristics and capabilities could be studied and administered (Steedman, 1995).

The emergence of the social and psychological sciences in the 19th century embodied the interest of planning, with much of its programs directed to urban life and The Social Question. New sets of distinctions and classifications were invented to describe, explain and provide solutions to the problems posed in urban settings and by new populations enrolled in the school.

Earlier this was discussed in the inventions of concepts of primary group and looking glass self in sociology. The concepts of community embodied a universalism about collective belonging but its universal was to serve as a technology of the self. Finer sets of distinctions were produced about the development of the interior of the child that related to the Social Question.

The development of mass schooling during American Progressivism, for example, involved new kinds of urban children that prior psychologies and pedagogies were not adequate. School failures were previously talking about through the psychological primary categories of «fatigue» and backward. The new scientific psychologies of child study, connectionism, among others, produced new distinctions from which to order the administration of teaching and learning with greater nuance about motives, interests, needs, and desire (see Danziger, 1997). These classifications moved into the everyday life of schooling as way to express not only teachers’ planning but as attributes of the child who «experienced» success and failure.

While these earlier psychological concepts have been (re)visioned in contemporary schooling, they perform to order and classify the human kinds that the teacher is to act on and plan in forming the experiences of schooling. They entail the hope of creating the moral child. The moral responsibility of teaching as making a particular type of child was expressed in different contexts such as:

I want to assist them in developing a code of morality for themselves—of fairness, kindness, tolerance (Popkewitz, 1998, p.51.

Differences are spoken about through the psychological categories about the child who lack of motivation, esteem, and/or efficacy. The urban child in the study of urban schooling discussed was spoken about as «aspiring» and indifferent (Popkewitz, 1998, p. 39), not prepared and not hard working (Popkewitz, 1998, p. 61). The categories are connected with the social causes of low achievement, school drop-outs, and social dysfunctions of families and adulthood.

Today entails a new set of principles organizing teachers’ experiences related to the New Public Management. Drawing on an econometric language, effective teaching is described by the abstraction of «value-added» qualities of teaching. No longer about «fatigue», the research enterprise is to search for the variables that contribute to children’s achievement beyond what would be otherwise statistically expected. The measurements of success are related to psychological and family indicators, such as children’s motivation and their engagement. The notion of value-added qualities of teaching have also leached into school administration and teacher education to provide distinctions for organizing and assessing what is done.

If I summarize the argument to this point, experience is not there to naturally recoup as a method of change. Experience embodies particular sets of historical principles that are
assembled and connect to make possible what is seen, talked about, and acted as on experience. I explored this through thinking about the making of the urban trilogy as particular kinds of people for policy and research to act on and for people to think of themselves as actors. It is within this historicizing that the auto-biographical I is made possible with its zones of freedom. But as I will discuss later, this is not a deterministic world but where agency and change are possible. But that possibility requires taking into account the historicity of subjectivity and what Foucault considered as «the effects of power».

Differences and exclusions in the impulse for inclusive «practices»

One of the difficulties of thinking about experience, as I argued, is its double I. If I return to the teachers’ talking about their experiences, the classroom distinctions are assembled in a grid of social and psychological categories. The successful classroom thought of as a non-stressful, friendly, encouraging community that removes the scars produced in the community and family embodies this grid. The distinctions join the pathos with the hope to rescue and make healthy the social and individual body. The pedagogical juxtaposes the urban trilogy with the pathological and normal. It is this double gesture of the pathological and normal as historically inscribed principles of «reason» that I want to explore here in constituting the experiences of schooling.

The double gestures of the normal and pathological travel in the notion of the adolescent. The category of the adolescent is a human kind that is taken today as «natural» and what the child is! Children are given as having this universal stage of development that marks the transition to adulthood. But this was not always the case. While the word adolescent is an old distinction, its particular use in schooling becomes visible with the Child Study movement at the turn of the century. G. Stanley Hall (1924), an American leader in the Child Study movement, proposed adolescence as a way to respond to the difficulties confronted with populations of children who had never attended school before.

Adolescence was cultural theses about different kinds of people. There was the urbane male child, the female, and then the urban children who were different. Hall’s title of his study expressed a particular grid of principles from which adolescence was understood. The title was Adolescence: Its psychology and its relation to physiology, anthropology, sociology, sex, crime, religion, and education (Hall, 1924). The study of adolescence was as much about social and moral norms as about science itself. The psychology was to change and rectify the lives of the urban trilogy. Hall said that «The momentum of heredity often seems insufficient to enable the child to achieve this great revolution and come to complete maturity, so that every step is strewn with wreckage of body, mind, and morals» (Hall, 1924, p. xiv).

Adolescence today has an independent and ontological existence in thinking about the child. In contemporary educational and psychological literatures, the adolescent is the human kind that various institutions related to childhood acts in the hope of producing some desired future. Often the adolescent is cast as «the lifelong learner». This cultural thesis is an individual who thinks through high levels of abstractions, participating in the never-ending processes of making choices, innovation, and collaboration (see, e.g., Fejes & Nicoll, 2007; Popkewitz, 2008).

But within this hope of the future and ordered simultaneously are the modes of living of the child who is not the lifelong learner.
That «other» has characteristics of the dangers and dangerous populations. The comparative reason that embodies both the adolescent as the lifelong learner and its other is expressed in a text about Developmental Appropriate Instruction for the middle school child (Manning, 2002). As a sign of hope of the future, «Early adolescence years may be the best time to provide intervention strategies that» to help the child make a smooth transition to adulthood.

But this narrative also entails principles generated of fears of youngsters who do not have the dispositions of the lifelong learner. Adolescences is to be prepared for through appropriate instruction to «avoid academic failure and behaviour» (Manning, 2002, p. 52). The kind of human who fails academically is not merely about test scores. It is about the young adolescent who experiment «with sexual activity, often leading to sexually transmitted diseases and early pregnancy, use of cigarettes and/or marijuana and other illicit drugs; lower school grades and dropping out, and delinquency and criminal offenses» (Manning, 2002, p. 52).

The identity of the dangerous adolescent of urban youth has moved into contemporary research on the teen brain and neuroscience (Lesko, in press). The focus is on the biological imbalance between social-emotional arousal and capacity for cognitive control. This actuarial imaginary of neuroscience revisions the distinctions and differentiations that order educational experience that naturalizes the urban trilogy as questions of biology and redefine how the objects of schooling are thought about and acted on.

The distinctions and classifications that order the experiences of schooling entail the assembly and connections of complex movements that produce human kinds as the origins of problems that cross ideological lines. If I take a contemporary research project designed to radically undue inequality in urban inequality, the ordering and classification of the urban trilogy are re-inscribed as the starting point of reform. The reforms are to combat the social psychology of «fear, despair, and negative valuations of self» that immobilizes the poor and racialized. Embodied in the hope of change are the inscriptions of difference to change those represented as different. As with the developmentally appropriate instruction, the hope is to combat the pathological. The urban teachers are «change agents» to right social wrongs of the community (Anyon, 2005, p.181). The different narratives offer a language of empowerment that is generated with different intents but through principles that recognize differences by inscribing the urban trilogy as origin of experience.

While focusing of the limits of lived experience and the naturalizing of the present as a strategy of research and change, it is not to argue against the commitment to correct social wrongs. The issues-at-hand are how intent and purpose are historically produced and thus ideological pronouncements are perhaps necessary but not sufficient.

Curriculum as making of «experience»: the «alchemy» of school subjects

In the opening section, the teachers spoke about spelling tests and «breaking things up into very small bits», as the ordering procedures of ordering experience into a taxonomical hierarchy. I return to these comments to think further about the complexity of «experience» a grid in which human kinds are produced that is now considered in the enactments of the curriculum. The ordering of school teaching «content» (spelling, the breaking of knowledge into «bits» and note taking) is made possible through the psychological and social distinctions about how knowing is possible.
At one layer, the practical knowledge about the curriculum in the teachers’ comments embodied a realism. Realism in the sense that the teaching of school subjects of the spelling or history assumes that knowledge represents the objective structures of the world. The «bits» curriculum is to break the structures (called the content of the curriculum) into its analytical component or parts that are to be learned. Effective and efficient teaching is developing deductively the knowledge of the parts that become a way for children to have contact and understand the world they live in. And this learning prepares for children’s development as a citizen, worker, and parent.

This realism circulates in subtle ways beyond the spelling lesson and the bits curriculum of the teacher’s experience. The historical models of curriculum that translate mathematics, science, history, and other disciplines into school knowledge embody that realism. Curriculum is teaching «bodies of knowledge» that become part of present teacher education reforms about learning more subject matter content to improve the quality of teaching. The content of the disciplines are taken as having fixed qualities that children learn, internalizing the processes of how to access the knowledge and thus provide ways to solve real world problems. Studies of children’s scientific misconceptions and conceptions, for example, are to guide children to learn the correct essence of scientific conceptions. Conceptions are assigned as representing the unmitigated, fixed and consensual boundaries of thought in a disciplinary field. To rid children of misconceptions is to bind them to the paths that identify what is known as true and thus what becomes useful for their problem solving in everyday life.

The «realism» enters into everyday life of schooling in subtle ways about problem solving and inquiry. Research about eighth graders learning to generalize through mathematical modeling, for example, focus on children learning solutions described as «real-world» problems (Jurow, 2004).

This research in the field of mathematics education is innovative and thoughtful. Yet this research can also be considered as possible within the grid that makes possible the experience experienced. The psychologies of social interactions are the process to apply mathematical modeling so children can test their experiences but in fact make what constitutes experience through the modeling technologies. The real world problems are not things natural to the world but manufactured through the particular rules and standards of the reason applied as «mathematical modeling». Mathematics is inscribed as the ordering and classifying the objects to be seen as «the real world».

The curriculum as a process of manufacturing human kinds and its external world that is modeled entails an alchemy, that is the translation of the disciplinary practices of mathematics, science, and the humanities into what is taught. The alchemy is an analogy to the medieval alchemists who sought to transform base metals into gold. Modern curriculum transports and translates the different disciplinary cultures and disciplinary fields of knowledge into a specialize knowledge for schooling. The translation tools are the learning psychologies about the child that shape and are shaped in institutions forms that organize classroom designs.

As all translations, the technologies of the alchemy are never mere copies of the disciplines but new creations. Important in this creation is that the psychologies were never about knowing about the disciplinary processes and cultures. The psychologies are historically governing practices that generate cultural theses about modes of living, such as those earlier discussed about the adolescent and urban trilogy (Popkewitz, 2010).
The alchemy of school subjects defines the boundaries that constitute experience and enters the forming of standards, assessment, and accountability. OECD’s Programme for International Student Assessment (PISA) is an example. Drawn on the idea that outcomes can be assessed through the New Public Management of benchmarks and «best practices», PISA is to monitor and assess school system performance as indicators of the modernizing that promote quality and rectifies inequality.

The key to PISA is ranking educational systems on «the practical knowledge» in science, mathematics, and literacy that children need to know for the future. The measures of the practical knowledge are assembled through the models of the curriculum alchemy and taken as the meaning of practical knowledge. That the practical scientific and mathematical knowledge of the future is already known is an empirical absurdity does not seem to matter. And what is considered as practical knowledge entails no empirical knowledge of the sciences and mathematics.

The practical knowledge is in fact an abstraction invented to link the technologies of the alchemy with the psychological distinctions and differentiations about human kinds. The abstractions are then placed in search of empirical data through items to assess their magnitudes. The magnitudes related to particular psychological and social qualities. The tested knowledge is connected to children’s capacity to solve and interpret problems, and motivation to learn, their beliefs about themselves and their attitudes to what they are learning.

Through the analogy of the alchemy, it is possible to return to the historical I in the lived experiences of the teacher and the child. The historical and autobiographical I’s are constituted through a myriad or grid of social, political and cultural events. The alchemic process that inscribes mathematical modelling to test reality, the PISA miracle of knowing the future, and the spelling tests and the bits curriculum embody cultural theses about who the child is, should be, and who does not fit into the spaces of normalcy. New Educational research (as the social sciences) order and classify the representations of people as human kinds. The abstractions given as the kinds of people of schooling become the design processes of making of kinds of people to act on and for those people to act themselves in its spaces of freedom. The urban child and the trilogy are played within this grid as psychological and social characteristics.

**Reason and historicizing experience**

My argument has continually focused on the reason of schooling that historically orders and classifies what is given as experience and its practical knowledge. I discussed this historical quality that circulates in and makes intelligible the practices of schooling as the double I. The historical I was concretely discussed in inscriptions of the urban trilogy. Particular kinds of people were placed in a symbiotic relation for differentiating the causes of school success and failure. Models of curriculum, didactics, and the psychologies of the child were connected in administering the human kinds who were the objects of teaching.

At this point I want to pursue the notion of reason of practice as political; political in interning, enclosing and policing possibilities within its own rules and standards. To approach the political, I want to further think about the teachers’ organization of the world of schools as associated with the European and North American enlightenments. It is a complicated historical trajectory but one that is implicated in the story of schooling, its making of human kinds, and the
comparative divisions of exclusion and abjection in the impulses to include (Popkewitz, 2008).

In a schematic way, the enlightenments of North America and Europe entail the separation of human history from nature and God to give Humanity its own trajectories. The possibility of change becomes the responsibility of a particular human kind called the cosmopolitan. Change is given direction and purpose through the good works of the cosmopolitan whose independence (inalienable rights), agency, freedom and liberty become the motor change and its possibilities of progress. Tempered by observations of the empirical world that orders nature, the mind is to comprehend and develop knowledge to plan for change. This cosmopolitan who acts with reason and rationality, all humanity is given as transcendent; yet related to a particular historical formation that is inscribed in the notion of the citizen and schooling (Popkewitz, 2008).

Modern pedagogy is a major exemplar of the teaching of cosmopolitan reason in the hope of producing human kinds in the new republics – the citizen, worker, family, society. The contemplative, cosmopolitan individual is what the school is to design through its theories of learning and instruction. It is a kind of person who rationally organizes events, to make apparent the essential elements as human and natural systems that enable interventions and change, and then act on life itself through the principles given as reason.

Agency becomes one of the distinctions in this invention of Humanity. Although centuries apart, variations and (re)visioning of the reason of planning for change get continually (re)visioned and assembled to provide principles about the curriculum and learning expressed in the mathematical modeling of children, the bits curriculum, and the practical knowledge that PISA is thought to measure. The kind of person who orders and calculates the paths of the present to the future in organizing biography will bring individual and social happiness and progress. Experience as an autonomous knowledge of the self is embodied in the grid of principles.

This ordering of experience that binds the self to collective norms is political. The political is exemplified in the differences in Aristotelian and Modern Romanticism in poetry (Rancière, 2004). Often posed as different genres, the experiences embodied in the two forms of poetry entail the conjunction between a certain type of individual and a certain place of speaking or not speaking. Poetry for Plato was an art of composing fables that represented the union between the ethos of the citizens that told about «a certain type of individual that should or should not be imitated and a certain place of utterance that is or is not suitable to political experience of the nomoi of the city and.» (Rancière, 2004, p.11). The connection of the individual and place were non-representing and signifying. Attention was directed to the status of their identities and the conformity of their action with their status. The poem embodied a mimesis, the imitation of life or nature. The correspondence to the physical world was a model for beauty, truth and the good.

In the 19th century, a different way of seeing and thinking about the self and world is possible. Modern poetry opens a different space between the poet as subject and the subject of the poem. A perceptual space establishes the poet’s subjectivity as a traveler who passes through «a certain territory, makes words coincide with things, utterances with visions, and implicates in this travel some relationship with the we of the community (Rancière, 2004, p. 12 f.). The use of metaphors such as the wind, clouds, the wave, and the flowers are in a relationship in
which the «I» of the body and the landscape are intertwined. The cloud, wind, wave and flowers act as metaphors in contrast with the «as if» of mimesis. Nature is signified and represented as separate from the human but disciplined by human reason to make it into something seen for its beauty and at the same time rationally mastered through science.

The representations, identities, and analogies that established relations between the humanity I and its external world provide a partition of what is sensible. Human reason policies its boundaries and provides the principles of what belongs that are at once aesthetic and cognitive; and thus what counts as experience within its framing. What does not fit is placed outside, not sensible and recognizable (experienced) as «civilized». The recognizability of experience as the produce of human thought but which can comprehend nature is embodied in the emergence of observation as a method of modern science. Between 1600 and 1800, observation became a way to systemically organize things and events into discrete parts. Central to this was the notebook. It replaced what previously was taken as a way of recording and what was observed as pure phenomenon. Scientific observations were «forms of ‘learned experience’ that crystallized out of vernacular practices and conceptualize as evidence and proof». Observations calibrated perception and judgment that remade both the body and the soul of the observer (Daston & Lunbeck, 2011, p.5).

I move previously between poetry and science to historically differentiate the reason of everyday life as not merely there for the researcher to recoup and narrate; or is it to give voice and empowerment. What seems as practical and «experience» of everyday life are embodied in complex processes that form the political —governing what is (im)possible to say, think, and act on.

To rely on the experiences of everyday life as the origin of explanation is ironically and paradoxically impractical. Impractical as it denudes the complexity through which daily life is produced. Impractical as well as the very complexities and uncertainties that planning is to tame are denied. Experience assumes that there is a consensus and harmony in the objects seen and talked about. Further the planning to use the «practical knowledge» fixes phenomena into Galilean objects such notions of modelling in a Euclidean space (for this issues of research, see November, Comacho-Hübner & Latour, 2010).

The fixing as Galilean objects entails displacements that do not imply any transformation as they move as immutable objects that keep their properties as they go. «To be sure, the emergence and stability of a virtual image is a fascinating phenomenon (witness Narcissus!), but it is not a phenomenon of correspondence between two different worlds that would mysteriously «resemble» one another» (November et al., 2010, p. 13). The research becomes a spurious reference that has no practical counterpart: «It leads you nowhere except in the equally spurious question of its ‘resemblance’ with the original model- that is created by the representation itself» (November et al., 2010, p. 9).

It is impractical in another sense of critical research. It takes-for-granted the political by the refusal to consider what is given as immobile and thought unified as historically produced and thus the possibility of alternatives other than those that currently govern the present. With this, the remaining question is whether it is perhaps time to (re)vision the projects of the education sciences.

Notes

1 While the study entailed ethnographic materials form rural schools as well, I will
use «urban» as the determinant category in the discussion (Popkewitz, 1998). I do this as the distinctions, differentiations and classification of children across geographical locations were formed through particular discourses about children, learning, and difference in schooling. These discourses embodied cultural theses about modes of living that had little to do with geography. Thus while the categories of urban and rural have geographical differences, these differences dissipated when talking about the cultural distinctions and differentiations of schooling.

2 This use of «urban» is one that travels across the Atlantic. The 2011 European Educational Research Meeting in Berlin made «urban» education as the conference’s central theme. A theme for education in most of the Americas and Europe makes little sense if thought of as a geographical category. In many cities, the poor and immigrants cannot afford to live in the city and be urban. I will argue later about «urban» as a human kind and cultural theses about modes of living.

3 I use this phrase to talk about uneven historical processes between the 18th century and the early 20th century that become visible in the formation of what is often called «the modern school».

4 One way of inscribing difference within a notion of sameness was the hyphenated citizen—the Swedish-American, the Italian-American, the Irish-American. Each kind of person allows for differences but within the same norms of sameness that the hyphen attaches.

5 The ordering of the trilogy was not only created for urban life but the engineering practices of the domestic sciences were embodied in other segments of society although not as a remedial project directed to populations feared as dangerous.

6 See footnote #3. I use this notion to move away from a evolutionary or notion of history that has a single origin but to think about grid of different practices that come together to make visible certain kinds of people and objects of reflection and action that previously were not possible. Foucault’s (1973) Birth of the Clinic is one example of.

Literature


