

**DRAWING BODIES/DRAWING STUDENTS:  
MAKING UP RELATIONSHIPS IN CURRICULUM REFORM**

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**ABSTRACT**

Drawing has a unique and complicated association to teaching and learning. Much of this complexity stems from shifting definitions about the body. What drawing is and how it invokes certain pedagogical responses depend on certain ways of thinking about the body as in *relation* with the world. The following comic essay describes two images of the body—affected and unaffected—circulating in curriculum reform efforts. Drawing primarily upon Science, Technology, and Society (STS) literature, critical pedagogy, and cognitive research, this comic examines how body discourses and the idea for drawing align with a commonsense logic of formal schooling: changing the conditions of schooling occur through changing the child (and adult).

**KEY WORDS**

Drawing; Bodies; Objectivity; Vision; Teaching; Learning.



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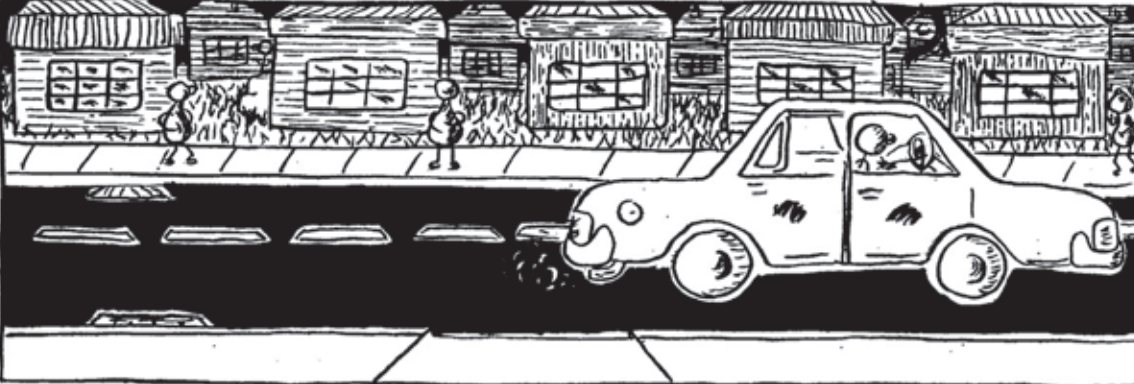
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I PROPOSE A NEW MODE OF ETHICAL ENGAGEMENT



IN WHICH A CRITICAL SPACE FOR RECOGNIZING PRECIOUS



DIFFERENCES MAY HELP



Get up  
you  
little ...

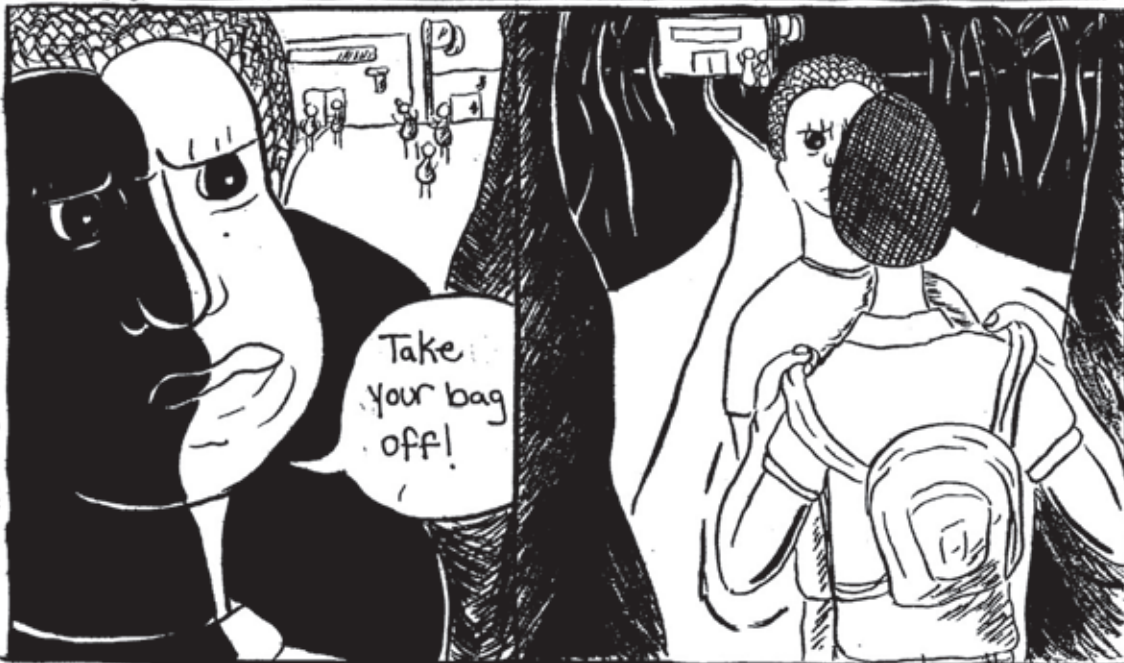
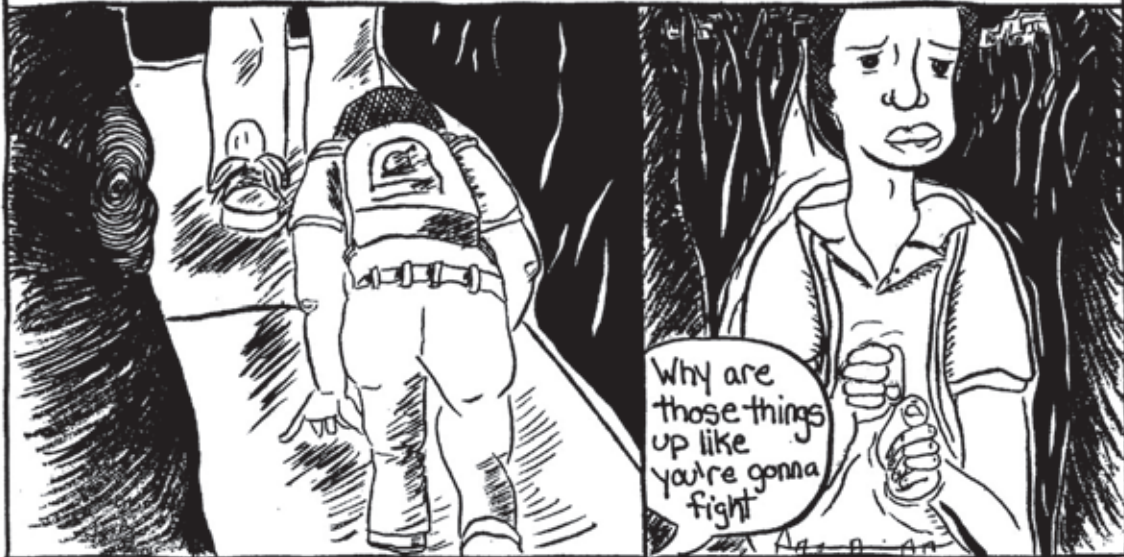
US MOVE

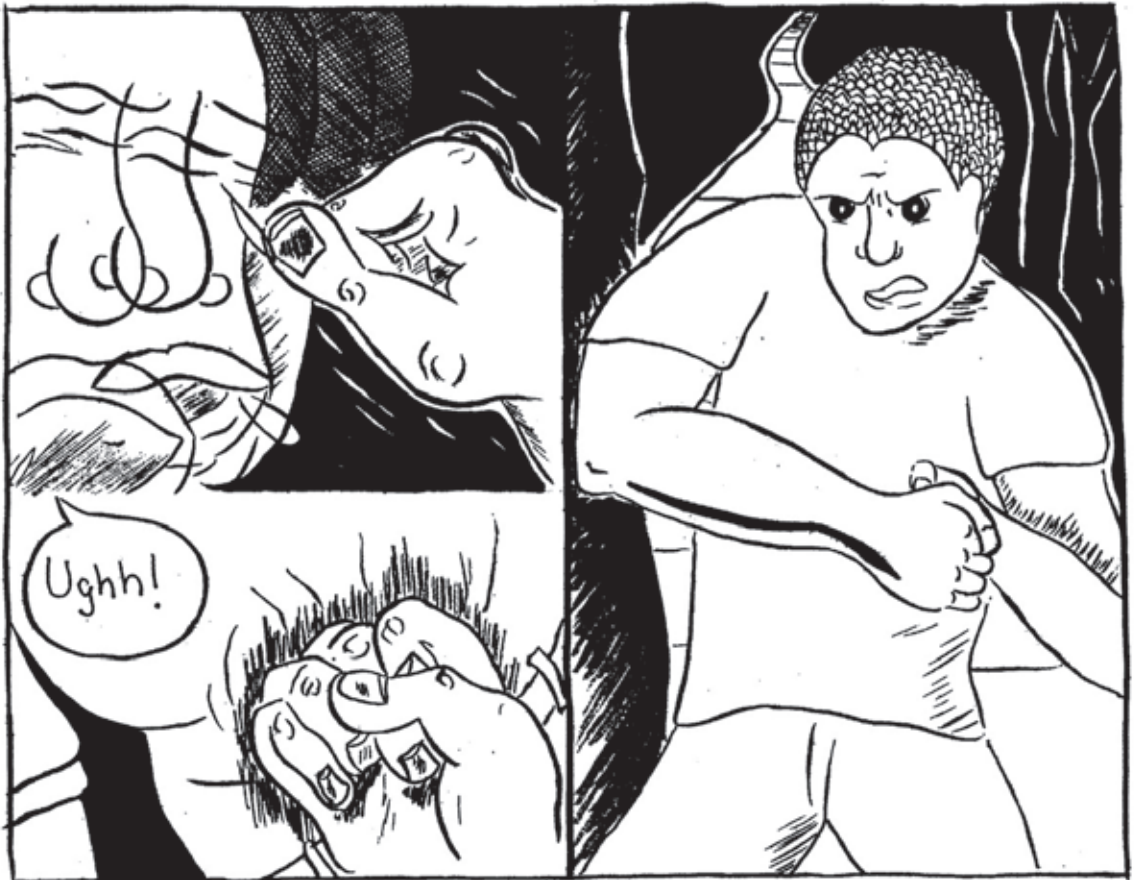


You know  
the  
Routine!



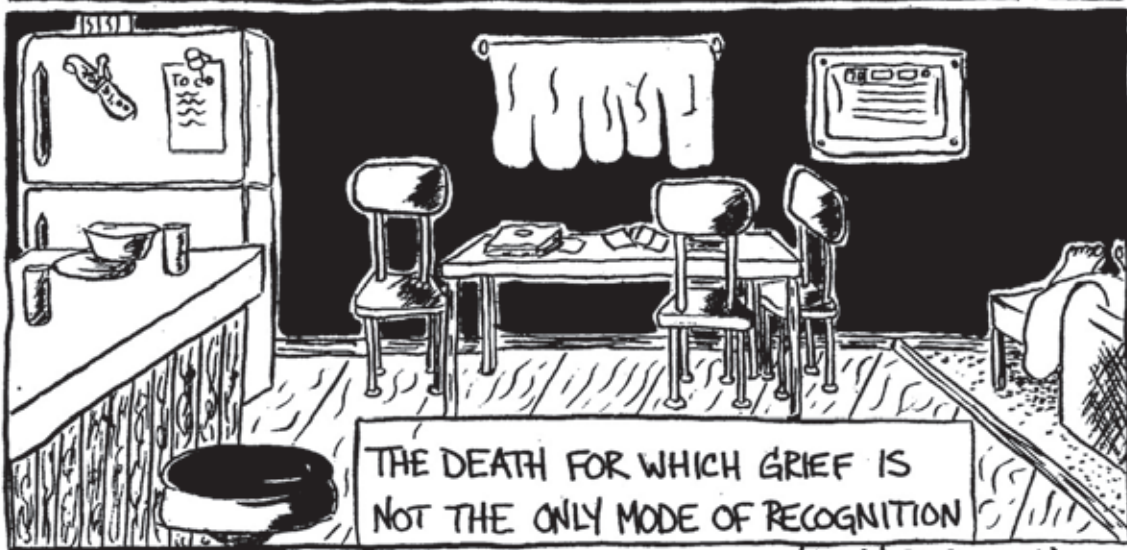
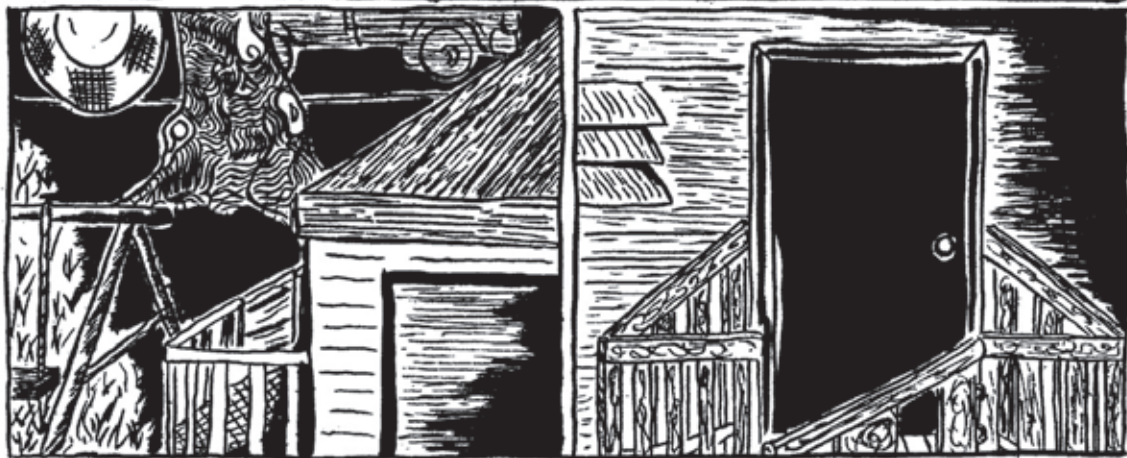
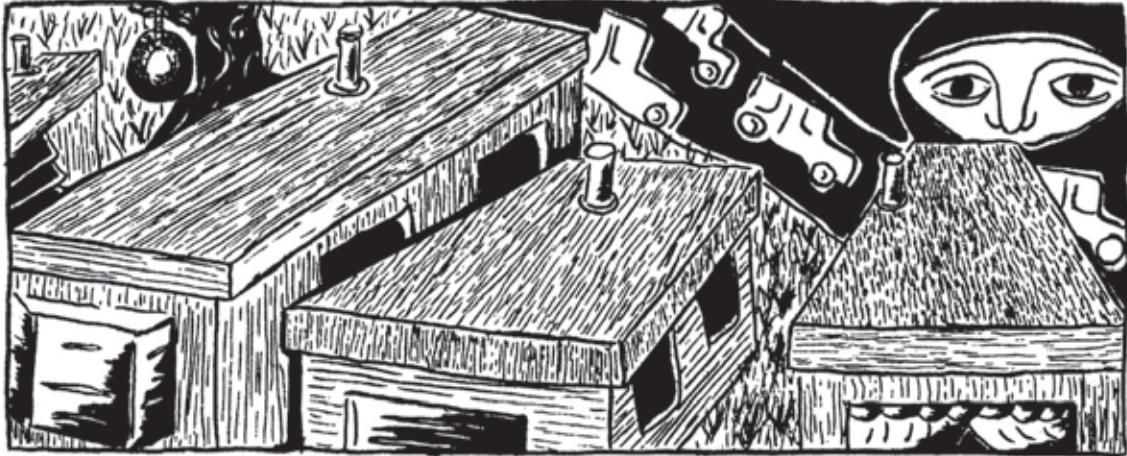
BEYOND THE LIMITS OF WHAT IS CONSIDERED 'LIVABLE LIFE' AND 'GRIEVABLE DEATH' IN ORDER TO IMAGINE AND EVEN ENACT OTHER SCENES OF CARE: AFFECTIVE





AND MATERIAL CARE FOR SOMETHING LIKE THE GOOD DEATH,





THE DEATH FOR WHICH GRIEF IS  
NOT THE ONLY MODE OF RECOGNITION

(Casid, 2012, p.124)



\* Captions from [www.baltimoresun.com](http://www.baltimoresun.com)



DRAWING HAS A UNIQUE AND COMPLICATED



ASSOCIATION TO  
TEACHING AND LEARNING

(AINSWORTH, PRAIN + TYLER, 2011; HAY  
WILLIAMS, STAHL, WINGATE, 2013)



2 Particularly in the Sciences

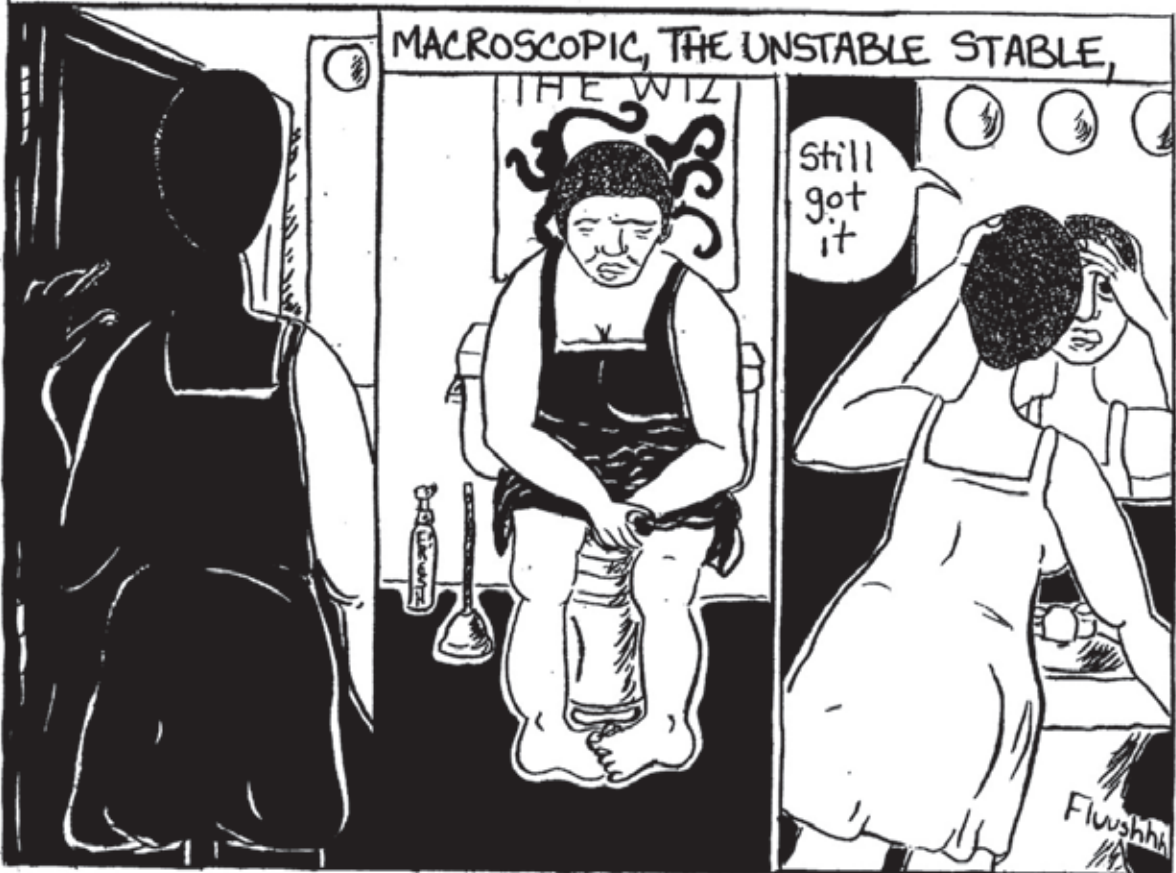


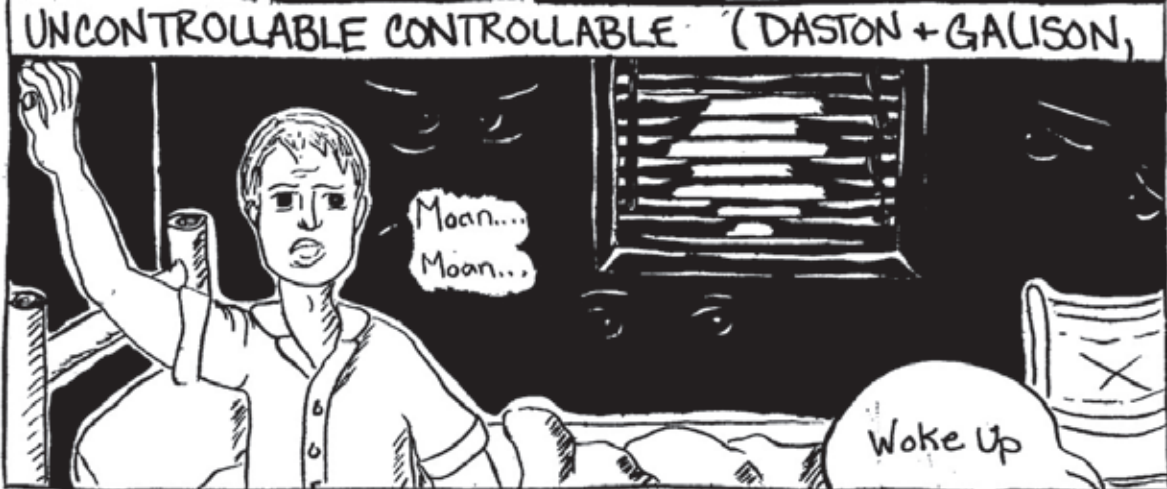


MUCH OF THIS COMPLEXITY STEMS FROM AN ATTEMPT TO MAKE THE INVISIBLE VISIBLE, THE MICROSCOPIC



MACROSCOPIC, THE UNSTABLE STABLE,





1992; Knorr Cetina, 1999; LaTour, 2004; Hacking, 1992a). Vision determines what a person observes, knows, and validates (Myers, 2005; Daston & Galison, 1992; Amann & Knorr Cetina, 1988; Knorr Cetina, 1999). Rather than taken as a natural given, scholars unpack it as a cultural thesis with real ethical implications, particularly in life/death issues (Myers, 2005; Haraway, 1997). What drawing is and how drawing invokes a response depend in part on certain ways of thinking about the body as *having* a relationship (Su, 2011), along a spectrum of distal and proximal, with the world. Relation implies some degree of separation to help perceive certain notions of difference. If people do not perceive themselves as separate from their surroundings, then the idea of *having a* and *being in* relation with or to something would be nonsense. Any notion of difference and sameness would also seem strange. Recognizing a relationship and then how the relationship takes shape determine if and how hierarchical distinctions form, endure, or dissolve (ibid). The following describes two images of the body circulating in teaching and learning reform efforts: the certain body and the indeterminate body. These images determine what counts as drawing by delineating the borders around vision and objectivity.

#### UNAFFECTED, CLOSED BODIES

One kind of body consists of a pure material substance with a distinct and separate form (Taylor, 1989, 1997; Freire, 2000). Like a suitcase, the body's shelled encasement regulates the inside/outside movement of the invisible and visible such as emotions, ideas, material things, or images themselves. The body and the world relate to one another at a distance. This unique orientation of being *with* the world rather than *of* it highlights a number of specific human qualities. How some people come to learn about their world depends in part upon this belief. Distance transforms the human body with markers of difference to hierarchically separate humans and non-humans as well as living and non-living (Haraway, 2008). The distance proves, in one sense, that people differ from animals, plants, microbes, or rocks. Humans stand outside and a little above the rules of categorization that determine all other species and non-species. This orientation also organizes the spectrum of humanness (ibid).



THE RELATIONSHIP DETERMINES WHAT GETS TO COUNT AS HUMAN, HUMAN THOUGHT, AND HUMAN ACTION.



PEOPLE MANIPULATE



THE WORLD BECAUSE THEY EXPERIENCE THEMSELVES OUTSIDE OF THEMSELVES



AS WELL AS DISTINCT FROM THE WORLD. ANIMALS CANNOT DO THE SAME (FREIRE)



2000, 2004). They do not experience the world as separate from their being. This renders all their actions as extensions of themselves and the world. This is what «animals are of the world» (ibid) means.

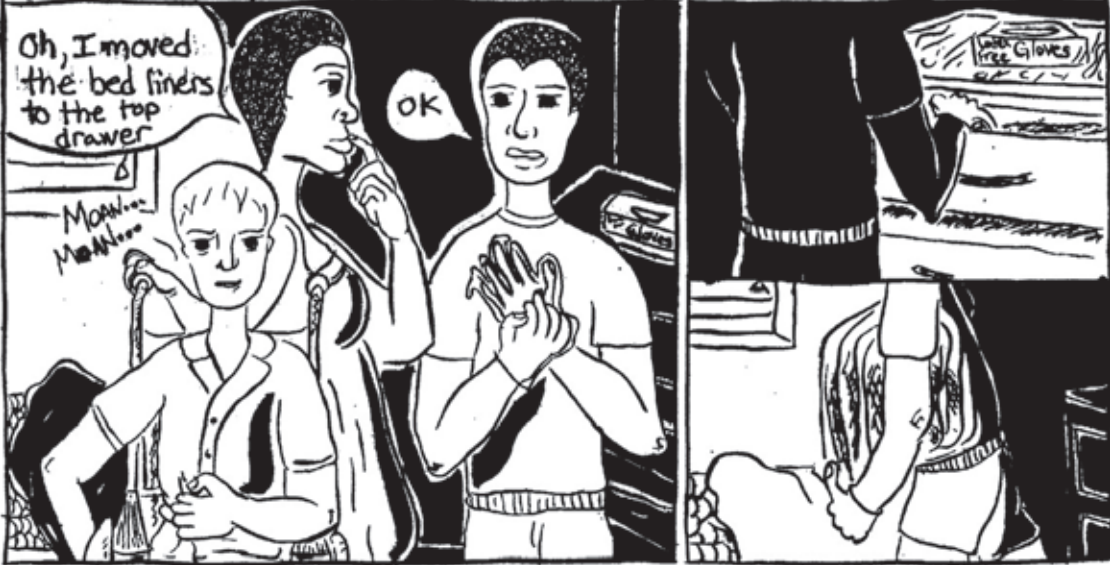
Animal movements reflect activity rather than existence. They move to survive and proliferate rather than to critically reflect on the world, themselves, and others. Animals perceive a borderless world and lack the creative capacity to be transformative. This creative capacity constitutes existence and defines what counts as change. Animals cannot be thought of as individuals where activity belongs to them. Their action belongs to the species, «Because the animals' activity is an extension of themselves, the results of that activity are also inseparable from themselves... Moreover, the 'decision' to perform this activity belongs not to them but to their species. Animals are, accordingly, fundamentally 'being in themselves'» (Freire, 2000, p.97). Animals lack ownership over thought or action. This senseless relationship keeps them from participating in making meaning about themselves and about the world.

Unlike animals, people reflect upon the experience of their experience and commit to action in transformative ways. People transform the world and themselves through renaming, relabeling, and reimagining (Freire, 2000, 2004). Words logically separate humans from animals. The word provides evidence of people's capacity to critically reflect using multiple and distant perspectives. It also gives them a way of thinking about agency as what one can do when critical reflection and action intermix. Animals remain submerged and incomplete because they cannot use the word.

People also perceive the environment as being made available for them (Dewey, 1997). Once perceived as being separate from who they are, it becomes open for investigating, knowing, controlling, and manipulating. Unless people recognize their inherent possession of the environment, there is no sense of self (Taylor, 1989). To put it another way, the environment exists for people to get to know themselves through interaction and manipulation. For example, in teaching and learning practices, the five-step scientific method standardizes how people imagine themselves and the world (Rudolph, 2005). The relationship reduces



PEOPLE AND THE ENVIRONMENT TO THE *Hawmg* APPROACH, A CREDESCENCE THAT PRIVILEGES



EXPERIENTIAL LEARNING AND INNER DEVELOPMENT. VERIFIABLE EVIDENCE AND VERIFICATION OCCUR



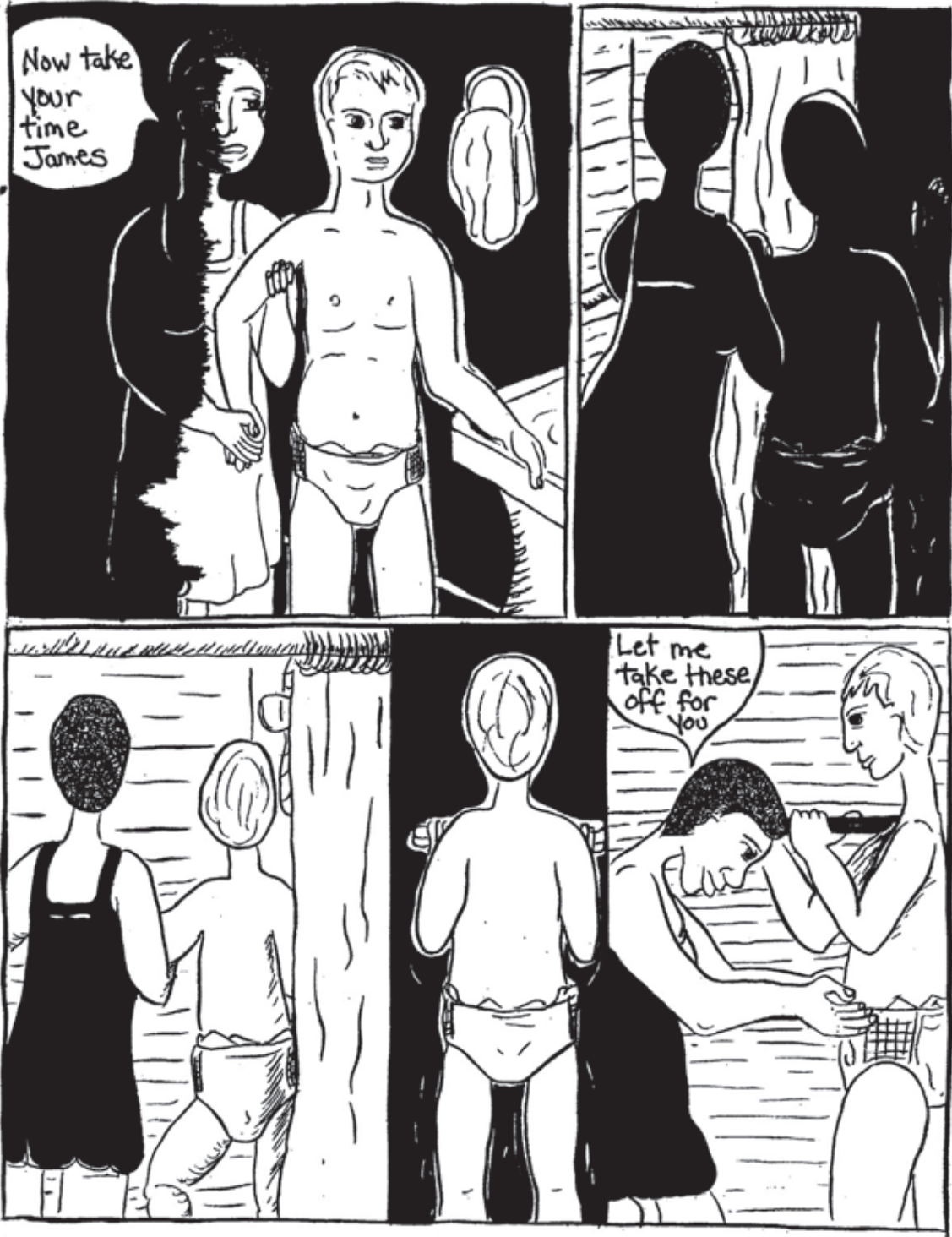
THROUGH CONSENSUS, REFLECTIVE THINKING, AND A REPRODUCIBLE PROCESS. THIS METHOD



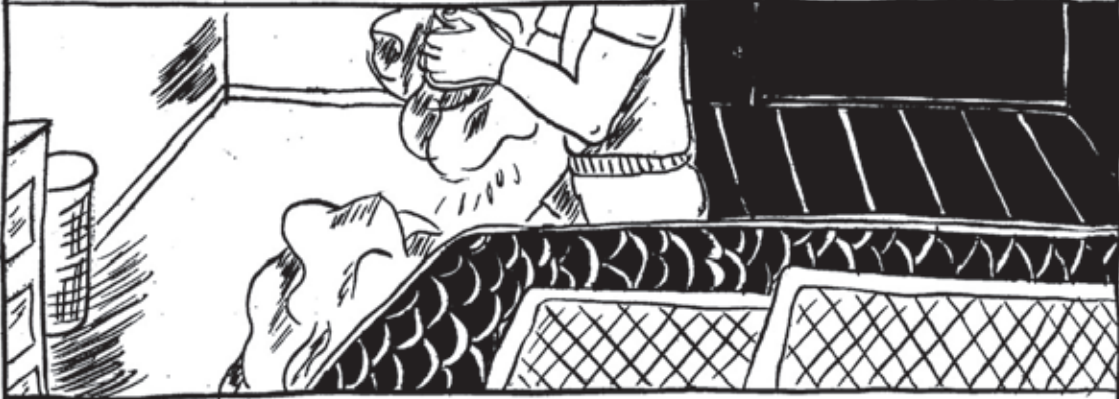
STARTS INVESTIGATION FROM A PSYCHOLOGICAL CONCERN.







PROCESS MATTERS IN CONDITIONING LEARNERS

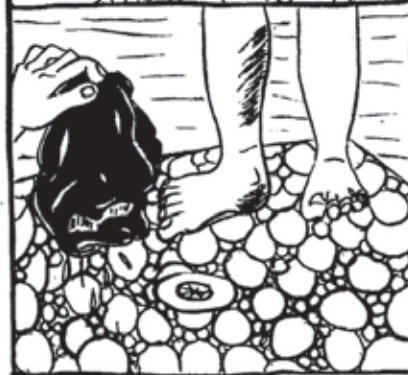
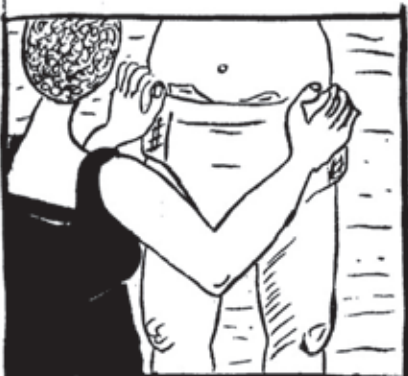


ON HOW TO DISCERN RELIABLE KNOWLEDGE FROM



FEELINGS, SENSATIONS, OR EXPERIENCES THAT





CANNOT BE TESTED BY  
THIS METHOD.

Don't let  
go of the  
bar James



THIS BODY IS ALSO THE CENTER OF PERCEPTION (SHAPIRO, 2012). IT FILTERS THE TOTALITY OF WHAT



CAN BE PERCEIVED TO MAKE THE WORLD INTELLIGIBLE.  
THE PERCEPTUAL ASPECTS OF THIS BODY MAKE UP



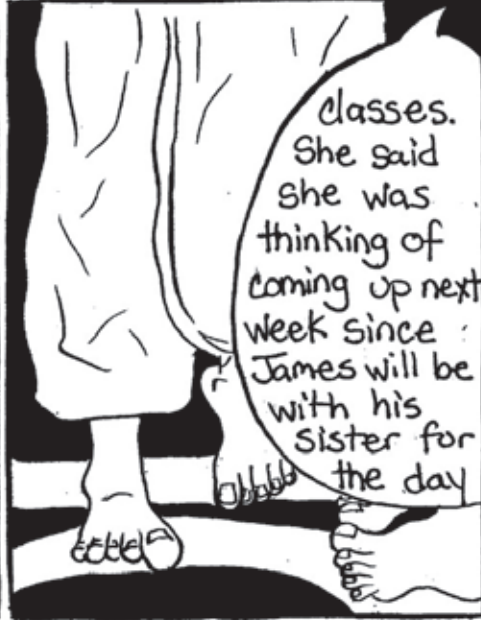
PEOPLE IN THREE WAYS: 1) ETHICAL WORK - IF  
PEOPLE PERCEIVE AT A DISTANCE, THEN THE



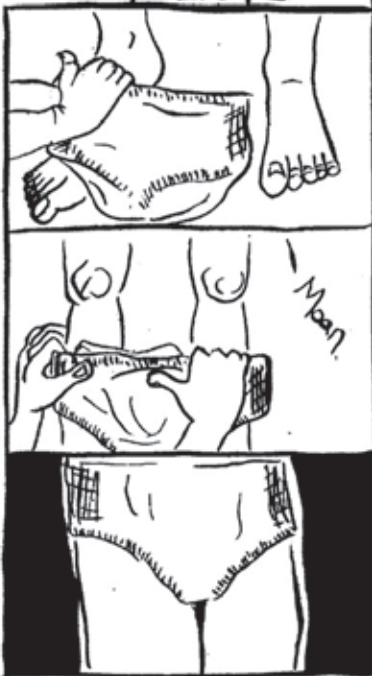
QUESTION BECOMES WHO OR WHAT GETS TO EXERCISE RESPONSIBILITY AND A COMMITMENT



TO ACTION (FREIRE, 2000, 2004; DEWEY, 1997);  
a) DOUBLE GESTURE (POPKEWITZ, 1998) - IN NAMING



THE QUALITIES THAT MAKE UP THE HUMAN FORM, THE PROCESS SIMULTANEOUSLY LISTS



THE CHARACTERISTICS THAT COMPRISE NON-HUMAN FORMS. IN OTHER WORDS, NAMING



excludes as it includes. This is the double gesture; and 3) Spatial-temporal alignments—If learning means to perceive the world and the idea of yourself at a distance, then peoples' lives unfold through a sense of movement towards, more often than not, something greater (Taylor, 1997).

## OBJECTIVITY IN RELATION TO A HAVING BODY AND ITS PARTS

Parts of the body such as the hands also matter. There is a close association with cognition and the hands (Goldin-Meadow, 2006; McNeil, 1992). This love affair with the hands stems from a certain understanding of the body and the relations it forms. In conjunction with the word, prehensile hands and opposable thumbs make people unique and allow them to stand apart from the rest of the world (Kittler, 1999). Man's hands assist him in experiencing himself outside of himself and separate from the rest of the environment. As hands move, manipulate, and transform they reassert that he exists with the world rather than being merely a part of it. They give man a creative capacity as well as a feeling that his actions belong to him. What he does with the world reflects how he thinks about it. In other words, hands also preserve the separation amongst species and hierarchical reasoning.

As with writing, drawing leaves an external trace of what is happening on the inside. It distracts from or adds to how ideas, inquiries, and practices read as extensions of the person who writes and draws. Drawing reveals the physical union of the hand with the idea and action. When perceived as conjoined they show what makes man amazing, «man himself acts [handelt] through the hand [Hand]; for the hand is, together with the word, the essential distinction of man. Only being which, like man, «has» the words, can and must «have» «the hand» (as cited in Kittler, 1999, p.198). Drawing can also be used to verify, make, and disseminate knowledge. The hand matters because of how it puts a mechanized logic and degree of control onto the, sometimes, unruly act of drawing and writing by hand. Machines, such as the typewriter, computer, and camera, also carry a similar line of reasoning (Daston & Galison, 1992). This has implications for what kinds of images and drawings matter.

The process of drawing objects coincides with the shifting socio-cultural norms of objectivity (Daston & Galison, 1992). Being

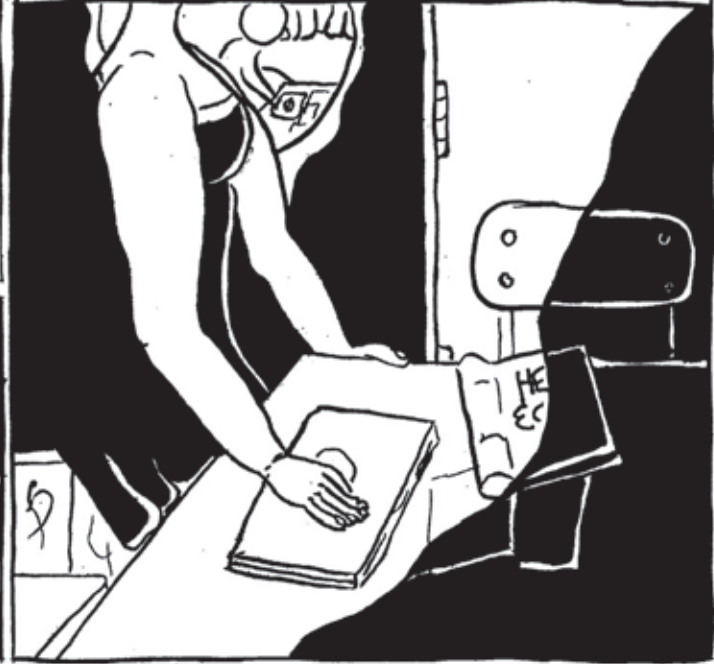




OBJECTIVE IN PART



MEANS TO MAINTAIN CERTAIN



after we come back



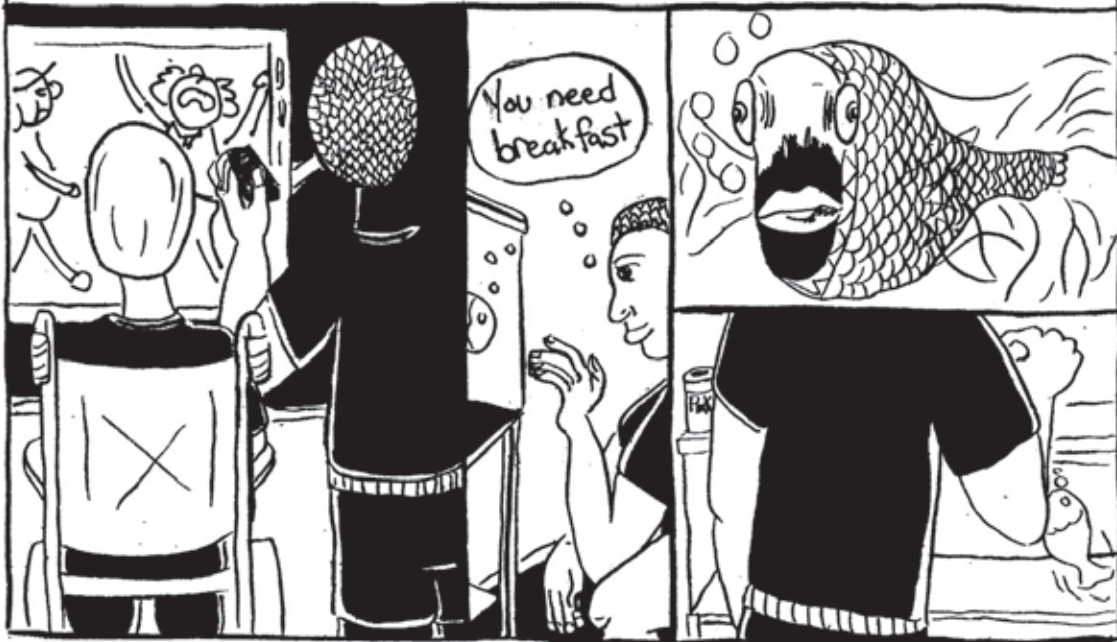
KINDS OF DISTAL



# RELATIONSHIPS THROUGH ELABORATE



# MECHANIZED PRACTICES IN SELF-CONTROL AND



self-restraint (*ibid.*). These relations center around discovering unbiased, purer truths. This kind of objectivity makes vision perfectible (Haraway, 1988). Vision technologies, particularly in the biological sciences, do the following: 1) they resort to violent acts in order to see objects of study; 2) they manipulate time/space narratives so that dynamic, moving objects become static, frozen, and observable; and 3) they assume that technologies can create unbiased, disinterested scientists/researchers, students, objects of study, and technologies themselves (Myers, 2005). A person's presence is controlled by technology such as, in the literal sense, machines and also in another kind of literal sense, governing of the self (Dean, 2009). Objectivity means to be a reasonable distance away from unverifiable imagination, improvisation, and judgment (Daston & Galison, 1992). It also means to desensitize from the acts of violence (Knorr Cetina, 1999) and downplay gross manipulations of unique time-space narratives (Schrader, 2010) to affirm this notion of objectivity and coincide it with appropriate teaching and learning practices. With this sense of objectivity, drawing takes on narrow definitions (Daston & Galison, 1992). It only becomes recognizable when it aligns with the general consensus of being objective while making valid knowledge.

## AFFECTED, OPEN BODIES

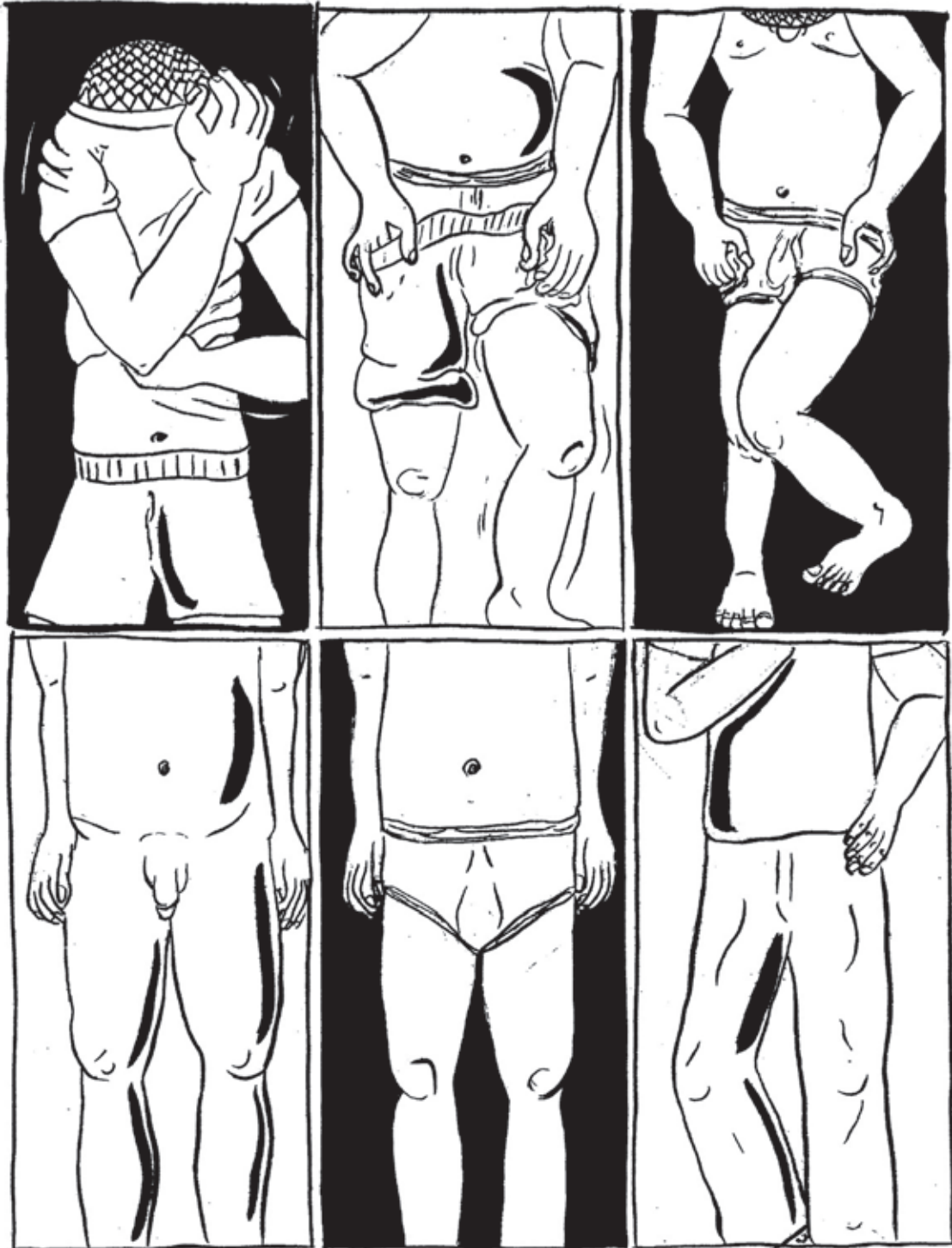
Another kind of body consists of a shifting, interdependent amalgamation of machines and species that share complex histories and responsibilities (Haraway, 1988, 1990, 1997, 2008). This body is dynamic, affected, entangled, rearranged, and relational as well as indeterminate (Barad, 2003). Its sensitivity transforms what happens to teaching and learning. The body moves by the subjective experience of being in this world and with aid of specific instruments to know, experience, and render the world without a definitive endpoint (LaTour, 2004; Myers, 2009, 2010, 2012; Myers & Dumit, 2011). This body is an interconnected space that takes shape as it «learns to be affected by more and more elements» (LaTour, 2004, p.2). They are fundamentally defined as sensitive. Their sensitivity opens up knowing the body, the world, and sensitivity itself, and puts them in constant formation. What matters, in addition to the mechanized approaches in teaching

AND LEARNING SUCH AS THE SCIENTIFIC METHOD,



ARE THE UNRECOGNIZABLE PRACTICES OF MAKING





KNOWLEDGE (MYERS, 2012; HARAWAY, 2008). FOR EXAMPLE, THE SENSITIVE BODY RETHINKS THE AESTHETICS OF LIFE AND



DEATH SO THAT AESTHETICS, BOUNDED BY GROSS SENSORY AND AFFECTIVE RESPONSES, BECOME A RESOURCE FOR

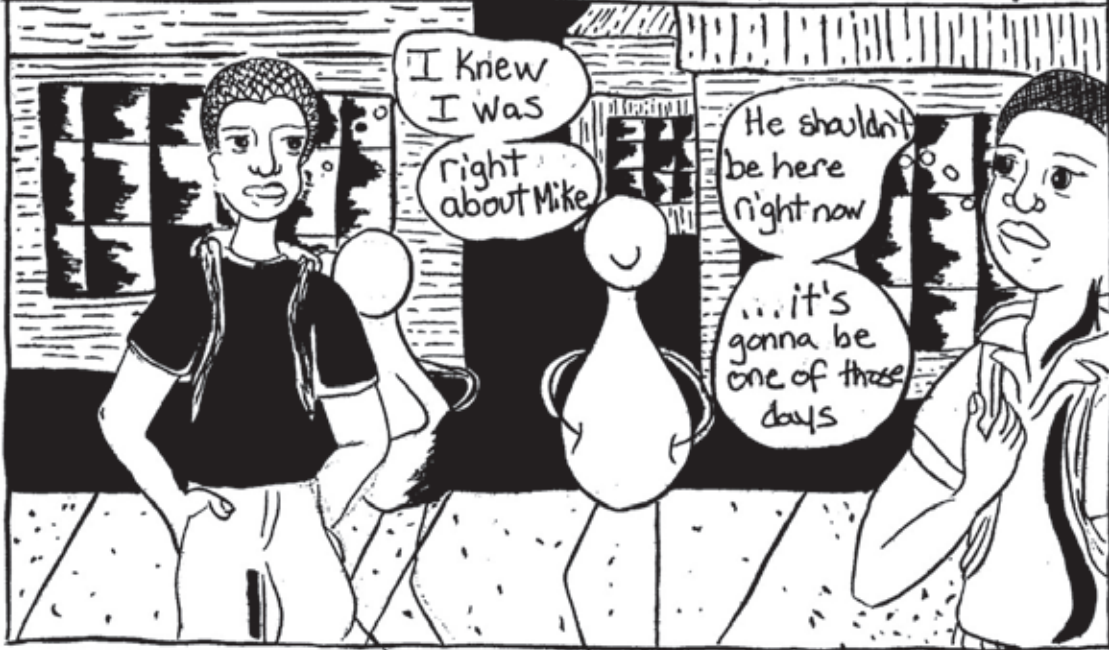


ethical practice (Casid, 2012).

Teaching and learning with sensitive bodies means in part to respond to everyday practices of care that also support the good death rather than solely fixating on the good life (ibid). With a commitment to practices of care, teaching and learning envisions life in death and bodies as interdependent and indeterminate. Distinctions, separations, and hierarchies make less sense with sensitive bodies. «We live in a moment of profound and compounded precocity in which social infrastructure support for care cannot, in any way, be assumed to have social value I call for close attention to the particulars of affective labor that are the (im)material support of care» (p.122). Opening up the body and extending it as profoundly dying matter makes the medical, Cartesian form seem strange. This other sense of the body needs practices of care that support a good death with the same vigor taken in striving for a good life. Destabilizing the human form also unpacks the limitations in certain teaching and learning discourses, particularly those where education is understood as a practice of rescue or an act of salvation (Popkewitz, 1998) rather than, for example, a practice of care.

In recognizing this affected and embodied form, teaching and learning interventions shift. For example, instead of the standardized five-step scientific method, affected embodiment molds in conjunction with specific tools to render the world in unique and less standardized ways of reasoning (Ainsworth, et al., 2011; Hay et al., 2013). Instruments vary widely and include the material (microscopes, pencils, books, people) and immaterial (imagination, pretend, play). Education scholars characterize these modes of learning as an essential yet immeasurable component of knowing. They mark these more artistic styles of reasoning as the rationale behind differences in expressions of expertise amongst people at various stages of formal schooling (ibid). By naming the *gap*, part of the purpose of schooling becomes effectively teaching affective and embodied knowledge.

PEOPLE NOTE THE DIFFERENCES IN PART BY



LOSS OF TEACHING AND



LEARNING THROUGH

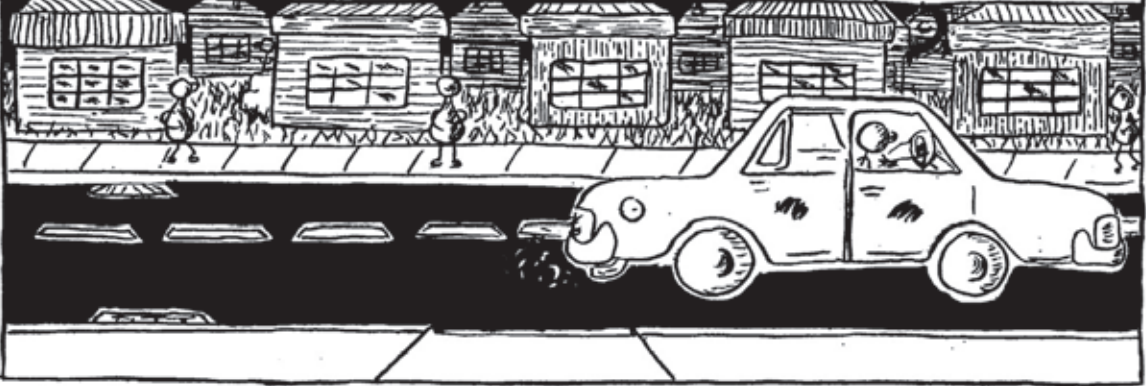




"EMBODIMENT AND SENSORY EXPERIENCES" TYPICALLY



EMBEDDED AS CORNERSTONE APPROACHES IN PRE-K AND



ELEMENTARY PEDAGOGY

(HAY et al, 2013; ROOT-BERNSTEIN, 2014)



Intervention strategies involve fuller-body classroom experiences such as hand-drawing comic strips or engaging multiple senses such as the olfactory and haptic (ibid). To put it another way, when students make knowledge through affective and embodied experiences, they increase the likelihood of becoming, for example, responsible, innovative scientists and researchers.

As with teaching and learning, objectivity transforms with the affected body. Objectivity through the sensitive body means in part to close the distance and blur boundaries amongst people, objects of study, and their tools of inquiry (Barad, 2003). It also means to pervert the good sense put into self-control and self-constraint. This term relies upon the lived, subjective, and interdependent experience amongst (non)species and (non)living (ibid) as it plays out against the backdrop of shifting, historical socio-cultural norms of an idealized public sphere.

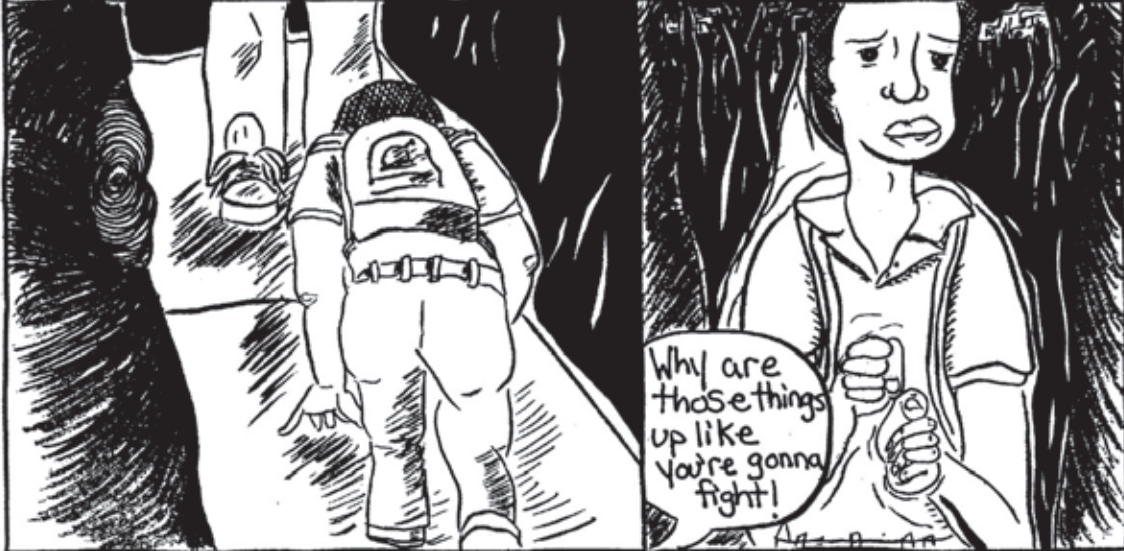
Drawing also extends beyond the pen and paper as well as disseminates beyond the hand. It includes any act—dancing, writing, filming, and composing—that opens up a definitive form (Nancy, 2013), shows interdependency (Myers, 2011), and recognizes the perpetual unfinished states of bodies (LaTour, 2004). Students and teachers take concern over how they draw to renew the possibility of drawing again rather than the drawing itself. Perfecting the act of drawing to turn the student into the scientist, for example, is not the purpose of drawing. The idea of knowledge gained, produced, constructed, mixes with prolonging the attainment of these very notions associated with the act of knowing. Drawing aims to draw out indeterminacy. This, in many ways, is the purpose.

The affected body, in part, is an ethical response to vision (Myers, 2005; Barad, 2003; Haraway, 1988). Teaching and learning with a notion that the body includes complex interdependencies and responsibilities means to hope that «an embodied approach to ethics might be the best way to keep pace with our shifting relationships and responsibilities as we integrate these evolving [image] technologies into our practices» (Haraway, 2008, p.265).





THOUGH THE AFFECTED BODY PUTS A CERTAIN KIND OF MORAL OBJECTIVITY IN FLUX, IT MAINTAINS THE IMPORTANCE OF WORKING WITH SOME SENSE OF OBJECTIVITY (HARAWAY, 1988). THROUGH THE AFFECTED





BODY, A KIND OF TOUCH TECHNOLOGY (MERS+DOMIT, 2011),  
(NON)SPECIES AND (NON)LIVING, ALL SHARE A



responsibility in making knowledge (Schrader, 2010). It also extends who and what counts as living a precarious life to the point where this question becomes nonsensical. If bodies are fundamentally open, sensitive, and interdependent, then there is also a sharing of suffering (Haraway, 2008). No one and nothing stands outside of precarious living.

There is a danger in applying different notions of the body in teaching and learning strategies such as drawing. Though body discourses may read differently, the idea for drawing aligns with the commonsense logic of formal schooling—changing the conditions of schooling occur through changing the child (and adult) (Popkewitz, 1998). Both bodies—unaffected and affected—normalize drawing as a practice of hope for pedagogical reform efforts. Whether certain or indeterminate, when bodies get taken up in curriculum reform narratives, both become knowable. They become the means for action in curriculum reforms efforts while also inscribing an a-historical sense to the present. In other words, they reaffirm a particular present, a local social order, and a certain projection of the future.

When drawing becomes part of curriculum discourse it turns into a vehicle for creating particular kinds of people. Drawing, what it is and what it can do, suddenly carries a fixed, universal meaning. People use drawing as a tool for making better students. Drawing exists to establish the rules and regulations for a finite range of what, how, and who people can be. This is the danger.

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