THE MATERIALITY OF EARLY LITERACY CURRICULUM: A NETWORK

CASE STUDY OF ONE KINDERGARTEN CLASSROOM IN NEW YORK CITY

by

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ABSTRACT

THE MATERIALITY OF EARLY LITERACY CURRICULUM: A NETWORK

CASE STUDY OF ONE KINDERGARTEN CLASSROOM IN NEW YORK CITY

Daniel Edward Ferguson

This dissertation draws on data from a six-month study of the materiality of one Kindergarten classroom undergoing curriculum reform in an urban public elementary school. Informed by a network case study approach, whereby case study methods are *uncased* through an Actor Network Theory lens, I question what it means to say literacy curriculum is enacted, or reformed, by acknowledging the multiplicity of actors entangled within curriculum, both human and non-human, local and distant, invited and uninvited. Furthermore, I propose ways of *uncasing* studies of literacy curriculum, revealing how no site—a school, a classroom, or an instructional block—is a fixed case but rather is constructed through networks of mobility streaming from many places.

Through ecological surveys, images, fieldnotes, recordings and document archives, I trace the materialities of one Kindergarten classroom outward to

reveal multiple dynamic networks—shifting school zones, neighborhoods, and curricular trends—that mobilize various bodies and materials into one seemingly stable public-school classroom. Networked within one morning meeting, for instance, were rotting pumpkins, pocket charts and cheese sandwiches doing the work of environmental nonprofits, DOE officials, and cafeteria staff, all entangled with the teacher and students in solving the problem of food waste at lunch.

However, I also confront ethical choices made in tracing literacy curriculum as material "network effects." Set in the nation's most segregated school system, I address how curriculum is not only affected by networks of circulating materials, but also networks circulating students' bodies into unequal school spaces, leading to neighborhood gentrification and changing school funding and enrollment. I conclude with what responsibilities exist for researchers advocating for a material focus to address systemic issues of injustice in schools.

DEDICATION

To all of the students, parents, faculty and staff at Parkside Elementary.

ACKNOWLEDGEMENTS

To act is to be in a company of actors (Olsen, 2010). The writing of a dissertation is no different. To trace the entire network of actors—mentors, family and friends, scholars and thinkers—who in myriad ways have acted on this document would fill a chapter in itself. And although I should not exclude the material contributors as well—I am thinking of you, chocolate almonds and green tea during late-night writing sessions, and sweet potato pie and coffee for marathon sessions—I wish to reserve this space for expressing my sincerest gratitude to the many people whose company I have found myself in since endeavoring on this study.

First, I am beyond grateful for Clare and the students of Parkside Elementary for welcoming me into their space. It was truly an honor to learn from you. I write in your company.

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I am grateful for the company of my family in Birmingham and elsewhere who, from a distance, have constantly stayed by my side. I would not be here

without the love of my mother and father, my sister and nieces, and extended family. I am thankful for my uncle Arthur, who spoke of *when* I get my doctorate before I ever considered it. I am also reminiscent of family lost during my time at Teachers College: my grandparents, Robert and Kathryn Ferguson who always cheered me on. I am also reminiscent my maternal grandfather, whom I was never able to meet but whose name I carry as my middle name; who raised and sold a calf to buy a mule to pull gravel out of a riverbed that paved a road leading to the college where he became the first graduate of his family. To all of my family, I write in your company.

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Last, I am grateful to all of my friends and colleagues in NYC whose friendship has sustained my life outside of school the past six years. I will miss being a short walk, bus or train away from your company.

<div align="right">D.E.F.</div>

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INTRODUCTION AND THEORETICAL FRAMEWORK

A banner hanging over the school door that says, "Parkside Elementary: The First Progressive School of Avondale…"

An abandoned SmartBoard at the end of the hall…

A magnetized chalkboard covered by layers of bulletin board paper and glue…

A line on the wood floor underneath the new wax from tape residue of last year's number line…

These are some of the items I wrote about on my first day collecting

research in one Kindergarten in a New York City public elementary school. It

was early September, just before school began, and Clare, a pseudonym for the

focal teacher of this study, was returning to her room after the summer break to

prep for the beginning of the school year. All of the furniture and materials had

been packed into the back closet and inside the wooden pretend house that was

built in her room last year. Because classrooms are often used for summer

programs, packing everything up was a requirement. Clare warned me about her

closet before we entered, and then we discuss more items, each inciting a

memory or history:

A loom...

An indoor plant irrigation system...

Butterfly costumes…

Buckets of paint matching the classroom walls…

Two shelves completely filled with picture books…

A stack of boxes of commercial curriculum materials almost reaching the ceiling.

Figure 1. Clare's classroom closet, summer 2016.

For Clare, the closet:

> is where I accumulate things, try and get rid of things, and that's going to be years in the works… it's kind of this uncomfortable thing, cause there's so many directions, but those materials back there are allowing for all those directions.

When peering into a teacher's closet, as in the one depicted above, disparate stacks of various materials reveal a veritable archaeology of a school's curricula. Residues of past curricular trends or reform efforts are sedimented into each layer, and yet it still lingers, occupying space, and acting on the present.

Before teachers ever interact with students on the first day of school, they must interact with the materials of their classroom, deciding what to pull off the shelves and what to keep in the closet. As a new Kindergarten teacher, I remember being handed the keys to my classroom with a week to set up before students would arrive. Along the back wall were cabinets and two closets, all full of materials from past years of teaching. As I sorted through them to make space for my things, scavenging for useful items, I remember finding things that dated back to when I was a Kindergarten student. Those materials, vastly different than the ones I, as a new teacher in a new era of reading reform, were told to use, led me to a series of inquiries about curricular materials: how they were used years ago, how they differ from the materials produced today, and the course of events that lead them to become buried in the bottom of a closet. It also led me to reconsider the daily work of teaching, which in part was to reconcile with multiple flows of materials. Above those cabinets of older things were new materials from the school's mandated scripted curriculum. Also given to me was a stop watch to time my Kindergarten students bi-weekly on Letter Sounds and Nonsense Word Fluency, assessments also mandated under Reading First policy. Meanwhile, still in my car were my own collection of teaching materials: picture

books I had bought from library book sales for a classroom library, big books

from my literacy professor, and other things from my sister who also taught.

While I felt my graduate education had prepared me well to teach literacy, I had

not prepared for how I was to deal with the competing interests of these different

sets of teaching materials.

Figure 2. My first Kindergarten classroom, 2008.

I picked up these inquiries again in a mini-study conducted in the 2014-15 school

year that began as a study of the experience implementing new ELA curriculum,

and ended again rummaging through closets and cabinets with a 1st grade

teacher to help find materials for classroom libraries that could supplement their

new reading program. In a Kindergarten classroom, I helped another teacher to

organize her classroom closet so the contents of the classroom could be packed

up for the end of the year. Here I witnessed the effects of a constant flow of new curricular programs, as this particular school had adopted its 4th reading program in the last 5 years. Mining these closets was like going on an archaeological dig into a school's curricular history. As I went through each layer, I was exposed to the residues left behind by past reforms or past teachers, telling a story about the school's history. For instance, in the closets of both teachers, at the bottom of stacks and piles of past reading curricula we found treasure troves of picture books. As it was odd to think of these books as relics of a curricular past, it led me to wonder about the course of events that ultimately produced this arrangement of materials. And yet, these materials were also still lingering and acting on the present. They could be rearranged, and reclaimed.

This turn towards the material in my study focused on stacks of materials that were layered with remnants of five different commercial reading programs. It also led me to see how a reading curriculum can become layered, or assembled from multiple resources and materials, and how newly circulated materials may offer teachers of early literacy new affordances and constraints, shifting the order of past materials in relation to curriculum. In analyzing materials in the closet, I was given a very different perspective on curriculum implementation. For instance, fundamentally different than analyzing curriculum materials for their content, such as one that is skills-based or Common Core aligned, was to think of the same material in terms of mobilities, such as part of the 4th new adopted program in the last five years, as was the case in this school.

Figure 3. Picture books in cabinets, 2014.

Today, I remain interested in the material conditions of early-childhood

classrooms and their relation to the production of literacy curriculum and

reform. Over the course of American public education, early literacy curriculum

has been materialized into many forms such as textbooks, basal readers,

worksheets and software, with commercial reading materials being the dominant

form in schools at least since the 1920s (Ball & Cohen, 1996; Shannon, 1989;

Venezky, 1987). While their content and intended use may vary, the presence of

these materials, and circulations of new materials through various curricular

reforms has remained constant. Evident in the stacks formed by curriculum

materials in classrooms is that social policies, such as curriculum reform, literally

"take place" (Sheehy, 2010, p. 72), in classroom spaces. The stacks of materials in

a cabinet, a closet, or the corner of a classroom, while often overlooked or forgotten, display past decisions on what kinds of materials were brought in to facilitate literacy learning and how those decisions changed over time. They also display traces of power determining what counts as literacy in school spaces, and reveal that reforms, materialized into reading programs, carry the voices of several outside forces deciding what and how reading curriculum should be enacted inside the classroom.

Background

The stacks of materials in any literacy classroom that represent past curricular decisions, reforms, and implementation beg us to consider the history that led to that particular arrangement of things. From the hornbooks of the early colonial period, to the publication of the New England Primer, the McGuffey Reader, basals, scripted teacher guides and countless reading programs available today, materials have taken many forms over time. In reviewing historical accounts of these materials, I noticed several common themes around the major influencers of their design, the catalysts that moved them in and through classrooms, and the implications they have had for how literacy curriculum gets made in classrooms.

Richard Venezky's "A History of the American Reading Textbook" (1987) provides many glimpses into some of the first materials produced for literacy education in the United States, and how some came to be published in such high

numbers and used prolifically across the United States in relation to state and

federal education policies. He argues that the historical evolution of reading

textbooks cannot be explained through any singular force, but only by

considering several "external pressures"—religion, commerce, government and

science to name a few—that ultimately influenced their construction and

mobilization into classrooms across the country. Consider the first material, the

hornbook:

> [a] thin strip of wood, usually 4-5 inches long and a few inches wide, to
> which was affixed a single sheet of paper containing the alphabet, simple
> syllables, and the Lord's Prayer. Usually a thin sheet of semi-transparent
> horn was tacked over the page to protect it from the wear and
> discoloration of small, indelicate hands. (p. 249)

Here, a simple arrangement of materials—wood, paper, ink, and bone

laminate—were assembled to arrange a set of values regarding literacy

education, Christianity, and childhood. The hornbook was simultaneously

educational, portable, and reverent; its paddle shape also made it amenable to

corporal punishment. Thus, it is both one and many things, connected to several

external forces (Nichols, Rowsell, Nixon, & Rainbird, 2012).

All textbooks, Venezky argues, are similarly, "multifaceted phenomena"

that vary from one to another by "assimilat[ing] change in one facet while other

properties are held constant" (p. 429). For instance, the Lord's Prayer and

alphabet from the hornbooks also appeared in the first printed textbook, *The New*

England Primer. With over 6 million copies printed in just over a century, this also

represented a merging of commercial enterprise and reading curriculum, layered

onto religious values. Over time the Lord's Prayer was replaced with secular texts like moral tales, literature, or commercially produced stories, while the exercises or activities printed for students to complete also changed through shifts in the government's view of the purpose of schooling, the introduction and application of behavioral and cognitive psychology into the study of reading, and the expansion of corporate markets (Venezky, 1987).

My purpose in reviewing the history of literacy materials is to suggest, like Venezky, that the textbook has always been more than just a textbook. Stitched into the binding are traces of myriad influencing forces from outside the classroom that shaped expectations for what students should learn and how teachers should teach. I use the term *materialize*, in concert with *materiality*, to describe how the external influences become inscribed into the material itself. What gets materialized in texts also has implications for how those texts get taken up and used, in this case, in curricular practice. Curricula, then, are also "multifaceted phenomena" (Venezky, 1987) that assimilate influences from the teacher and students, but also the materials and the influences materialized in them. As materials for literacy curriculum change over history, so too do the precarious relations between teachers, students, and materials in the daily classroom practices of curriculum-making.

In a historical review of curriculum implementation approaches, Snyder, Bolin and Zumwalt (1992) describe three major perspectives, with three distinct relations between materials and teachers in regards to curriculum established.

The "fidelity perspective" assumes that curriculum-making is a function of keeping it aligned to a plan, which is usually developed by experts outside of the classroom. Fidelity requires that teachers do not deviate from the plan, and materials like implementation checklists may be used to evaluate a teacher's fidelity to that plan. On the other end of the spectrum is "curriculum enactment" whereby curriculum is a co-constructed lived experience between teachers and students and materials are viewed as "tools for students and teacher to use as they construct the enacted experience of the classroom" (p. 418). Somewhere in between lies the "mutual adaptation approach" whereby curriculum is viewed as some negotiation between planned and enacted curriculum. This requires both material and teacher to be somewhat flexible. These three approaches signify three distinct relationships between materials and teachers in the production of curriculum, from teacher as follower of an externally made and prescribed plan, to teacher as mediator of an externally made plan, to teacher (and sometimes student) as active maker of curriculum, although the authors found the fidelity approach to be the most prolific. Thus, as textbooks have shifted form over the years, so too have conversations defining what curriculum is, and what implementation should look like (Pinar, Reynolds, Slattery, & Taubman, 2008). Present in those conversations are the commercial, scientific, and political forces materialized into the texts. In discussing each, I hope not to treat each force as independent from another, but to illuminate how the force of one overlaps and becomes "tangled up" (Nespor, 1997) with another.

If there is any constancy in the history of reading materials and curriculum, several scholars point to the dominant presence and use of commercially produced materials for reading instruction in the United States (Luke, 1988; Shannon, 1987, 2007; Venezky, 1987). This is evident in the sheer number of textbooks sold throughout the 19th and 20th centuries, primarily after reading instruction began to separate itself from religious instruction (Venezky, 1987). Another major external force noted by many scholars in the design and subsequent use of curriculum materials over history was the scientific study of reading, or rather, claims that materials were based on a "scientific investigation of the reading process" (Shannon, 1987, p. 310). The incorporation of reading science into curriculum materials was considered to be a significant factor in the proliferation of "basal" reading materials in the 20th century (Luke, 1988; Shannon, 1987). Instead of being merely driven by market trends, based in part on business relations between education publishers and school systems, textbook design was legitimized by the discourses of what "science" had confirmed about reading instruction. These scientific claims were not just commoditized through curricular materials, but also in popular books for parents and teachers, like the bestseller, *Why Johnny Can't Read* (Flesch, 1966). They were inscribed into teacher's guides that accompanied textbooks. What began as embedded notes to the teacher in the student's textbook became separate instructional manuals for teachers hundreds of pages thick (Venezky, 1987). Claiming that certain activities in these materials were scientifically valid legitimized the material's authority

over the teacher in curriculum implementation. They provided the justification

for demanding teacher's fidelity to the prescribed curriculum, or the even more

pejorative label, "teacher proof" curriculum (de Castel & Luke, 1987; Smith,

1981). Thus, the rationale behind these materials,

> is premised on the elimination of the very need for teacher knowledge and technique and on the minimization of variables of student background knowledge and cultural difference. (de Castel & Luke, 1987, p. 422)

Given the widespread use of these kinds of prescriptive materials throughout the

last century, scholars warned of a deep shift in "the subject and object of

teaching" (Shannon, 1987, p. 308). Patrick Shannon (1987, 1989; Goodman,

Shannon, Freeman, & Murphy, 1988) has expressly taken up the often at-odds

relationship between reading instructional materials and teachers. After

reviewing the perceived roles of both teacher and material towards literacy

curriculum throughout American history, Shannon (1987) conducted his own

survey of teachers to see why there was such a reliance on commercial reading

materials in many literacy classrooms, and in a sense, trace the networks of

influence on reading instruction. The most commonly stated influence was

administrative, what teachers felt they were expected to do by their school

administration, but they also considered the quality of commercial materials and

their basis in science. The second most common choice for why basal materials

are used was that "basal materials can teach reading" (1989, p. 53), which, in its

very grammar, suggests a shift in the subject and object of teaching. From his

survey findings, Shannon (1989) argued that by materials being viewed as the

only method available to many teachers, these materials became "reified" as the curriculum itself. This also placed control of curriculum-making in the hands of cognitive psychologists and commercial publishers, a shift between "the people in the classroom (teachers and children) and the people elsewhere who develop programs" (Smith, 1981, p. 634).

However, the review of literacy materials and curriculum also contains counter-examples, and resistances to commercial and prescriptive material, instead describing examples curriculum-making as "jointly constructed by teachers, students, and materials in particular contexts" (Ball and Cohen, 1996, p. 7). Research on young children's literacy learning before beginning school (Ferreiro & Teberovsky, 1978; Goodman & Goodman, 1979; Harste, Woodward & Burke, 1984) spurred curricula that built off of the linguistic and cultural resources children bring to literacy learning (Dyson, 1993, 2003, 2008), as well as the "funds of knowledge" available by connecting to the communities around schools (Moll, Amanti, Neff, & Gonzalez, 1992). Educators inspired by this scholarship advocated for engaging children with "authentic" and "meaningful print" (Smith, 1981), "literature-based" (Routman, 1988) and "real materials" as opposed to basals or instructional materials (Goodman, 1986).

These counter views to dominant curriculum trends can be traced far back throughout the history of literacy curriculum. In New York City, several institutions became producers of literacy curriculum under the large umbrella of "progressive education." Caroline Pratt (2014) was a former student at Teachers

College who founded a school in Greenwich Village in 1914 and claimed New York City as her set of curriculum materials; she often kept books away from young children arguing that fostering oral language and play were more important. She is also known for designing the standard wood unit blocks, which her students used to recreated buildings and bridges they saw on daily walks in the city. Rather than view books as inciting the imaginations of children, Pratt saw children's imaginations as inciting the creation of literature and worked with researchers at the Bank Street School to develop texts like the *Here and Now Storybook* (Mitchell, 1921) and others which used the phrases and rhythms of children's language to write stories. Authors such as Margaret Wise Brown and Marjorie Flack, who wrote many popular children's books, also came out of this school of writing. Thus, while these progressive education pioneers, as well as others, developed their own reading materials, they also resisted traditional literacy practices, arguing that educators rethink what counts as a literacy material, and as literacy curriculum.

It should be noted that much of the written history of progressive education has focused heavily on these private schools and thinkers, which served predominantly, and in some cases exclusively, White students and teachers. While less well known in the history of progressive education, several other education movements formed to embrace community and social justice within progressive education (Johnson, 2002). Examples of these community-oriented pedagogies include the multicultural education movement, the

formation of Black Liberation schools, the founding of the Zinn Education Project and Rethinking Schools, all of which carried a tradition of producing culturally affirming textbooks and pedagogies. In these movements, a variety of curricular texts were also generated for children of marginalized groups, arguing that school textbooks and other materials available were insufficiently representative of all students. In another example during the same time as Caroline Pratt and the Bank Street School, Pura Belpré, for whom a children's literature award was named by the American Library Association, wrote her own bilingual texts to enact a story hour in a Puerto Rican neighborhood library in New York City, where there were few texts in Spanish. Examples like these are numerous, but I hope these few broaden the conception of where materials for literacy learning come from and how they are used in curriculum-making. This is not to say, however, that counter movements were always immune to the aforementioned influences of commercialism, reform, or reading science, but that along with those forces have stood the teacher, the student, and the community as influencers on curriculum materials.

By the late 20th century through the 2000's, new policies, corporate mergers and several official government reports on reading instruction produced a "perfect storm" (Shannon, 2007) that heavily shaped curriculum materials at the time. The Reading Excellence Act of 1996 defined "reading" through a skills-based framework and introduced the phrase, "scientifically-based reading research" as a criterion for judging reading research. Congress authorized two

expert panels to be convened, by the National Institute of Child Health and Human Development and the National Academy of Science, the first of which resulted in the publication of *Preventing Reading Difficulties in Young Children* (1998) and the second, *Teaching Children to Read: A Report of the National Reading Panel* (2000). These reports defined what counted as reading and reading instruction on the basis of "expert analysis" and "scientifically-based" research. Last, *No Child Left Behind* and its reading policy, *Reading First*, offered over one billion dollars in federal funds for state education agencies that adopted "scientifically-based" core reading programs and assessments for their school systems. Concurrently, through various mergers and takeovers, four educational publishing companies controlled 85% of the reading curriculum materials market, and in the 2000's were well positioned to create the core reading programs that federal policies had defined and mandated (Shannon, 2007). Reviews of Reading First applications revealed that states were strongly pushed towards adopting commercial products (Shannon, 2007). Also during this time, several researchers were hired by the government as consultants to review products that they themselves helped write. In one instance that later led to a Congressional hearing regarding conflicts of interest in allocating Reading First funds, the author of the DIBELS assessment was selected to chair a panel that decided DIBELS was the best assessment for states to purchase through Reading First funding. Thus, as the work of policy married with research, researchers with business, and business with neoliberal politics, these external pressures

produced a "perfect storm" over reading curriculum materials, producing over one billion dollars worth of materials for U.S. elementary schools.

Given the acceleration of reforms, scientific claims about reading, and commercial production of materials aligned to them, the contemporary landscape of literacy reform, specifically in New York City where I have worked and studied since 2012, is one that looks both old and new. Between 2013 and 2014, NYC saw a new set of standards, newly recommended commercial reading programs, new tests for students aligned to those standards, and a new teacher evaluation that, in its first iteration, was aligned to the scores of their students on the new tests, all to be introduced into elementary schools. However, it is the circulation of so many new things, by forces that have frequently appeared in historical accounts, that make these reforms not seem that new. While government, commerce, and science are still involved in contemporary reforms and the curricular materials subsequently produced, one noted difference in today's landscape is in the muddying of boundaries between those forces. Rather than identifying one policy, recent analyses of education policies have documented multiple divergent groups participating in policy networks or assemblages (Ball, 2012), such that identifying one role or singular force is increasingly complicated. Thus, while a textbook is not just a textbook, neither are the entities influencing their production.

One material exemplifying this point, and likely to be found in amidst a stack of materials in many literacy classrooms today, is a binder of Common

Core State Standards (CCSSI, 2010). Despite its name, which would imply they were simply a product of state education policy, a deeper look traces the influence and resistance in many directions. To begin, their creation was significantly funded by private foundations—the Bill & Melinda Gates Foundation—drafted by a small nonprofit of education consultants—Student Achievement Partners—run through channels of state governors and superintendents—National Governors Association and Council of State School Officers—incentivized by the federal government through Race to the Top grants and further marketed and politicized by various corporations and political groups (Cody, 2013). This complex assemblage, not entirely a state or federal achievement, nor entirely a public or private endeavor, is masked by the packaging of the standards as the product of research, consensus, and alignment with other state and country's standards. Some groups, however, have seen through the packaging, such as Opt Out and Saving Our Schools or celebrities tweeting a photo of their children's Common Core homework to their followers, poking holes in the metaphorical packaging. In their critical remarks, they have attempted to unveil some of those complexities of these and other neoliberal reforms to schooling, and advocate for a reordering of roles in the teaching of literacy in classrooms. To others, however, they simply appear as a binder of standards, occupying space amidst other materials in a classroom. It is in these stacks of disparate materials where the history of struggle over the shaping of

literacy curriculum continues to be made, and where more consideration as to their lingering effects in curricular enactment of today, should be considered.

Statement of the Problem

In the United States, new curriculum reforms for literacy are continually materialized in new standards, contracted commercial programs, tests and evaluations, invariably adding yet another layer to the piles found in today's classrooms. The New York City public school system is one of the largest, most diverse, and yet most segregated school systems in the nation. In 2013, when I first began developing this study, new curriculum materials were "recommended" for schools in an effort to "shift" instruction towards meeting Common Core Standards (Fertig, February 2013), a recommendation taken by over 87% of regular district schools (Khan, August 2013). In a letter to schools, titled "Guidance to Implementing Core Curriculum Materials," it stated that these materials could be implemented, "either with fidelity or simply as resources to supplement other curricula" (NYCDOE, 2013, p. 1). In other words, either a fidelity or enactment perspective seemed permissible. However, framing implementation as a simple choice of either/or masks a long and continued history of external forces influencing curriculum and controlling how it is implemented. It also does not represent the struggles of progressively-minded educators seeking to provide alternative educational experiences while negotiating these reforms. And finally, in a school system deemed the most

segregated in the country (Kucsera & Orfield, 2014) this framing of curriculum

implementation also masks how such reforms are distributed over a landscape

whereby materials, and policies regarding their use, in schools are vastly uneven.

No classrooms, as sites of curricular enactment, are without both material

and social forces acting from both inside and outside the classroom. It is not well

understood how teachers are to simply "adapt" curriculum amidst these several

outside forces, nor are the lingering effects of past curriculum reform, which

often occupy space in the classroom and in the minds of teachers and

administrators. Furthermore, a view of curriculum enactment, which has

primarily focused on the interactions of teachers and students with materials

being viewed as tools to construct curriculum, may also be inadequate to the

understanding the contemporary material landscape of curriculum in schools.

As we learned from Venezky's historical overview, a textbook is never just

a textbook, and the network of relations that holds them together should not be

overlooked. To do so, Latour (1987) argues, is "blackboxing," or the act of

essentializing a concept such that its complexity is disguised. Despite curriculum

being more than just a box of materials, the packaging, or boxing, of these

ideologies into materials is what has allowed a fidelity perspective, whereby the

material becomes the curriculum itself at the expense of teacher and student

input, to become so pervasive. It is then that these complex networks become

viewed as a thing in itself, similar to how Shannon (1987) shows how commercial

materials become reified as curriculum. However, the notion of 'enacted

curriculum' too is encased, a term that I use in place of Latour's black box. Most conceptions of enacted curriculum tend to focus on the 'social construction' of curricular practice through interactions between teachers and students, where materials are seen as the tools, or building blocks to be used at the will of teachers. The problem with framing curriculum either through a fidelity or enactment perspective is that it tends to center agency on the teacher or the material, attempting to encase what is actually a complex set of relations.

This has direct consequences for both teachers and students who are increasingly evaluated on standardized measures of individual performance, without consideration as to how student-material relations or teacher-material relations are also implicated in those performances (Nespor, 2012). For researchers of literacy curriculum, this raises concerns over how materials are mobilized into classrooms, what external forces they carry, and how those forces, along with all others, impact curriculum enactment. Also critical for researchers of literacy curriculum is to put into context the forces that have unevenly channeled students and teachers of color across a school system that perpetuate segregated schooling experiences for many students. Without these kinds of analyses into the relations between materials, teachers, and curriculum, as well as issues of race and class that permeate our school systems, our understanding of curriculum enactment is restricted.

Purpose of the Study and Research Questions

In order to study literacy curriculum, I sought to place more attention on materials, their movements through classroom and how they are taken up in literacy curriculum. A term that I use here to mean more than just the materials themselves is *materiality,* or, "the material dimensions of what is moving in and out of educational spaces" (Nichols et al., 2012, p. 28). A study of the materiality of literacy curriculum would trace the networks of relations between materials, teachers and students, and those beyond the classroom in order to better understand the forces exerted onto curriculum making through their mobilization. This applies not just to official curriculum materials but all materials within an educational space. As materials for literacy instruction, particularly in early grades, have proliferated over recent years it is important to document not only currently used materials, but all that has amassed over many cycles of literacy reform. These stacks of materials found in classrooms, often overlooked, bear witness to mobilizing networks of power that have run through classrooms, and whose relations may still linger.

Furthermore, I propose that materials be studied in relation to the enacted curriculum to better understand what relational forces exist in the production of literacy curriculum of a classroom. In addition, I suggested that these questions be studied in a public elementary school to reflect current conversations over literacy curriculum and reform, as it may be most useful to the literature around this topic at large.

To guide this inquiry, I asked the following questions:

1. How were materials for early literacy curriculum mobilized into one Kindergarten public school classroom?

   a. What materials were in the classroom?

   b. How were they mobilized into the classroom?

   c. Where were they displayed or stored?

   d. How had they been used in the past, if at all?

2. What were the relations between the materiality of the classroom and the enactment of literacy curriculum?

   a. What networks of relations were visible during enacted literacy curriculum?

   b. What literacy practices were enacted through these networks?

3. What other networks were implicated in the enactment of literacy curriculum, and how?

To address these research questions, I adopted a "network case study" (Nichols et al., 2012) approach, whereby case study methods are combined with concepts primarily drawn from Actor Network Theory (Latour, 1999; Law, 2007), allowing me to study a case not as bounded but constituted through a network of relations.

Rationale

While the materiality of literacy texts has received increasing attention (Burnett, Merchant, Pahl & Rowsell, 2014; Comber, 2016; Nichols et al., 2012; Pahl, 2014; Pahl & Rowsell, 2010; Scollon & Scollon, 2003), little has yet been given to the materiality of curriculum in early childhood literacy classrooms, where so many new reforms have taken place. In light of this emerging body of work, I have examined the materiality and mobility of early literacy curriculum in one classroom. This, however, requires a resistance to traditional Cartesian framings of subject and object, or the over-essentializing of the literacy teacher, material, and classroom. This resistance can be found within socio-material (Burnett, Merchant, Pahl, & Rowsell, 2014; Pahl & Rowsell, 2010) and network (Clarke, 2002; Leander et al., 2010) perspectives on literacy research. From these perspectives, one must consider not the essence of a literacy teacher or material in isolation, but how their essences are constantly adjusted by networks of relations connecting them to other humans, things, and ideas, and places. From these new ontological perspectives, new questions about literacy practices and curriculum are revealed. For instance, beyond talk in classrooms, how can educational research understand the intra-actions between materials and humans (Lenz Taguchi, 2010; Pahl & Rowsell, 2010)? How can the materiality of the classroom be viewed not just as a static background for social interaction, but as integral to its production (Leander, Phillips, & Taylor, 2010; Leander & Sheehy,

2004; Nichols & Nixon, 2013)? It is with these inquiries that I approached the theoretical framing of my study.

Theoretical Framework

In the field of literacy education, use of the term "materiality" has generally referred to the "stuff" of literacy (Kress, 1997). However, for scholars of new materialism and posthumanism (Snaza & Weaver, 2014), materiality signifies not just material, but the intersection, or space between, the social and material (Barad, 2007). It "resides in the blind spot where society and matter exchange properties" (Latour, 1994, p. 41). A similar obscurity exists in the relations of materials and people in curriculum making, as described in the problem. On the one hand, perspectives of literacy curriculum have been over-materialist to the point of negating teacher or student agency. Yet, teachers are also simultaneously positioned as the most significant factor in a child's education, leaving them vulnerable to blame if students don't succeed. Because materiality helps me to address the gap between these two statements, it is a central tenet of this study.

I also draw on Actor Network Theory (ANT) (Latour, 1999; Law, 2007) and its emerging use in educational research (Fenwick & Edwards, 2011; Nespor, 1994; Sørensen, 2009), whereby school activities, such as literacy curriculum, are seen as shaped by material elements and forces of *mobility*. Brandt and Clinton (2002) argue that attention to "the material dimensions of literacy" (p. 337) may

suggest several new directions to pursue research on literacy. Having said that, a few studies (Clarke, 2002; Heydon et al., 2013; Rowsell, 2001), have approached literacy curriculum through these perspectives, particularly in an American context (Leander & Lovvorn, 2006; Lenters, 2014; Nichols et al., 2012). Materiality addresses not only the stuff of classrooms, but the networks of relations among actors, both human and material. These networks highlight various mobilities, which refers not just to movement of materials but networks of power that mobilize. The mobility, or immobility, of a literacy material is a function of the strength of its networks. My interest, then, is in how various ideas are materialized and brought together as curriculum materials, what holds them together, and what forces mobilize them in and through the enactment of curriculum in a classroom (Fenwick & Edwards, 2010).

Materiality

This study, in part, argues that materials matter in relation to the enactment of literacy curriculum. In some cases, materials have been viewed as mere tools at the hands of teachers in curriculum-making, but in others materials have been positioned as a guide, a script, or as the curriculum itself, pre-made before entering the classroom. These different positions raise further questions into the agencies or power of various actors in the curricular enactment, namely between the teacher or student versus the material. The term that allows me to address not just the material, but the agencies and networks of relations in and around materials is *materiality.*

Consider this analogy posited by archaeologist, Bjørnar Olsen (2010) who

critiques a newspaper headline of a Norwegian skier credited with completing,

"the first solo and unsupported expedition to the South Pole" (p. 129). This kind

of description, Olsen argues, neglects the *networks* of actors that accompany the

skier in the materiality of his trek: his skis, his extreme weather clothing, his

freeze-dried food, his media sponsors, and generations of past mapmakers,

explorers, and satellites that constituted his trek. When those networks of actors

stabilize, they become hidden, or encased, and the attention is focused on a

single actor rather than the network. Olsen concludes,

> What [he] should actually be credited for, apart from his stamina and
> strength, is his ability to translate and delegate, uniting the different forces
> into a well-traveled collective… Thus, even in the Antarctic, you'll never
> walk alone. (p. 128)

Here, Olsen's point most clearly resonates with the work of a teacher, constituted

in socio-material networks in such a way that their action cannot be considered

apart from their material surroundings. To act, or in the case of curriculum, to

enact, "is to mobilize an entire company of actors" (Olsen, 2010, p. 127). Because

of these socio-material networks, there are no lone explorers, just as there are no

lone teachers. A teacher does not act alone but at best can orchestrate a company

of actors. Even in the often-used phrase, 'just shut your door and teach,'

delegated to the door is the task of being a lookout. Thus, we are always acting in

a company of actors.

Actor-Network Theory cannot be framed as one singular theory, but is

instead described as a "disparate set of tools" (Law, 2007) by which to

understand social, natural, or educational processes through the associations of human and nonhuman actors. Rather than framing social events as what humans do with humans, materials—or what Latour (1992) refers to as "the missing masses"—are put on equal footing. It seeks out not essences but the networks of relations to others. Actors—often perceived in individual terms, such as student, teacher, or textbook—are broken down into fluid relations between elements, complicating the boundaries between distinct objects. In doing so, materiality is fundamentally related to sociality, or in other words, social processes cannot be described in nonmaterial terms.

Sociocultural theories of learning have helped to locate processes like literacy and learning to not just in the brain but within social relations. Sørensen (2009), however, uses the term *materiality* to describe the intersections and entanglements of material and social relations, arguing that learning is situated in socio-material relations. If both humans and materials are mutually implicated in action—if their agency is shared, and it is this shared agency that produces learning—then for this reason alone we should take more thought and consideration into the materiality of classrooms. For the reformed classroom, this perspective asks researchers to pay attention to what intra-activities are occurring between teachers and students and new curriculum materials.

This does not mean outright that things have agency in the way humans have agency. As Olsen (2010) remarks, a human made an axe, but an axe never made a man. However, it is the assemblage of axe and human that produces an

action distinct from the two actors in isolation. What is produced by a skier and

skis is more than the either alone, and the same perhaps for a teacher and a read-

aloud text. Many structures in education, however, tend to isolate single actors,

such as through performance evaluations and standardized tests, which:

> hide our network-qualities—our histories, resources, tools, and allies—
> and inscribe us as discrete packages of abilities and potentials defined in
> terms of measurable categorical essences (e.g. 'intelligence'). (Nespor,
> 2012, p. 39)

For this reason, I draw from Actor Network Theory, which has been described as

a "semiotics of materiality" (Law, 2007), meaning that essences or meanings do

not exist in objects or actors, but rather in the relations between them. This is

especially useful for considering how meanings are inscribed, mediated, and

translated through materials, or how knowledge travels through socio-material

networks, a point critical for understanding literacy curriculum. For Latour

(1994), meanings emerge in socio-material interactions. To elaborate, he asks us

to consider a speed bump:

> The speed bump is not made of matter, ultimately; it is full of engineers
> and chancellors and lawmakers, commingling their wills and their story
> lines with those of gravel, concrete, paint, and standard calculations. (p.
> 41)

Here, Latour's example resembles that of Venezky's textbook as a multifaceted

layering of various external forces. Like curriculum designer and the textbook,

the speed bump is not just a speed bump, but is connected to a much larger set of

relations. The work of regulating speed limits, is "delegated" to the bump in the

road, making it more than inanimate concrete but an inscription or delegation of

human action materialized into concrete [it is helpful here to know the French phrase for speed bump, *casse-vitesse*, literally translates to "sleeping policeman"]. The effect, is to produce what Latour refers to as an "immutable mobile" (1987), an object that can be mobilized to act at a distance and carry meaning as a delegate for larger networks of power. In this case, the speed bump serves as an immutable mobile that has been delegated an authority to regulate driving speed. Through immutable mobiles, networks of power can expand to multiple places at once.

Delegations, translations, and mobilizations. Drawing on Latour's concept, materials of early literacy learning have been described is as "mobile semiotic bundles" (Nichols et al., 2012) whereby disparate materials are combined and circulated across space. For many elementary schools, several new reading programs have circulated through their classrooms in the last few years. Conceiving of these materials as semiotic bundles raises three points of inquiry: what actions are being *delegated* to them, how are those actions assembled or *translated* into the program, and how are they *mobilized*, and perhaps immobilized by other forces. For schools that have become inundated with literacy materials over the last several years, how does the constant flow of new materials shape the curriculum as it is enacted? As stated earlier, it is a fundamentally different perspective, rather than focusing on the content or essence of a curriculum material, to instead focus on its mobility, the fourth curriculum adopted in the last five years for example. Thus, I address this study

of literacy curriculum through the lens of multiplicity and mobility, setting it apart from other studies of curriculum. To do so, it will be necessary to draw on further concepts from the writings of Actor-Network Theory, in particular, the concepts of delegation, translation, and mobilization.

For studies of education, ANT researchers have argued school activities are shaped by material elements and forces (Sørensen, 2009). The goal in studying classroom materials, then, is to better understand how various ideas are materialized and brought together, what holds them together, and what forces are produced by their assemblage (Fenwick & Edwards, 2011). ANT analyses are well suited to the study of curriculum materials. As stated before, a book is both physical material as well as the "congealed labor" (Latour, 1994, p. 40) of its author, or several influences as Venezky (1987) described. *Delegation* is the process by which distant actors, education publishers or DOE officials, can be present in the enactment of a curriculum program in several classrooms at once. It is easy to overlook these distant actors as we interact with everyday objects. Latour (1994) likens this to a projector that is treated as one thing until one part breaks. Then the projector becomes *uncased* into a set of parts assembled through the work of a network of people. In the case of curriculum, Ball and Cohen (1996) write, "when the gap between materials and teaching is very wide, teachers must invent or ignore a great deal" (p. 7). Delegation through immutable mobiles, then, is a means by which power can be circulated through a network, but this process is not always immutable.

The extent to which meanings are carried through materials to other actors is a result of *translation,* a term used in many ANT writings to describe what happens when two actors connect, partially connect, or do not connect, and how they are changed as a result. When a translation occurs, Latour (1994) argues that properties between the two actors are exchanged, changing them in the process of exchange. Through the process of translation, an actor can extend their action through various networks. This counts for writers putting thoughts to paper as it counts for engineers putting a policeman in concrete.

While Latour was not referring to texts precisely, his description of materiality and meaning making seems quite resonant with Louise Rosenblatt's theory of transactional reading (1978). She writes,

> The reader, we can say, interprets the text. (The reader acts on the text.) Or we can say, the text produces a response in the reader. (The text acts on the reader.) Each of these phrasings, because it implies a single line of actions by one separate element on another separate element, distorts the actual reading process. The relation between reader and text is not linear. It is a situation, an event at a particular time and place in which each element conditions the other. (p. 16)

From here, Rosenblatt (1978) argues that meaning making arises through the situated transaction between text and reader, as something evoked in the event between reader and text, which seems to acknowledge the materiality of the text, not just as the connector between author and reader, two humans, but as an actor in that chain outright. Latour may take issue with the word situated, however, if it were used to imply a face-to-face interaction, rather than one link in an expansive chain of human-nonhuman networks, although Rosenblatt suggests

further links in the chain herself. What is important about translation, for Latour, is what happens after, the ways that both actors change through transaction. The human with book in hand is different now than before enacting with the text. The book as material travels to new places because of the human, just as ideas are mobilized through the book to other places and other actors.

Words like transaction and translation, as well as intra-activity (Lenz Taguchi, 2010), are used with the precise intent of recognizing a shared agency between material and human. Something gets produced that is new, that changes both actors, and that thing can then be mobilized into new networks, evoking a sense of fluidity between the agencies of humans and materials, both becoming extensions of each other. For literacy curriculum, this suggests that all actors are agentive in the enactment.

However, it should not be assumed, then that all actors act equally, that all actors have equal mobilizing power. Nespor warns, "it would be a mistake to emphasize the fluidity of the world without noting it flows at times in deeply worn channels" (1994, p. 15). This is why, especially in the case of an urban school system like New York City, that socio-material intra-actions be situated within the context of an unevenly resourced and racially segregated school system. Many scholars have traced the higher rates of mobility of White middle class parents actively choosing schools for their children, and subsequent increases in resources in schools with higher White and middle class populations (Freidus, 2016; Posey-Maddox, 2014). Thus, in highly segregated schools systems

such as in NYC, resources can become highly stratified across schools. The mobilizing power of teachers is also not equal in all schools because, in part, of deeply worn channels of power that control the implementation of curriculum, such as in schools deemed 'low-performing' differently than others.

Thus, the *mobility* of materials, and the mobility of ideas through materials, get at more than shared-agency but also the networks of power that privilege certain agents over others. Here, the term *mobility* may refer to both the movement of materials and the mobilizations of ideas/discourses through materials (Rowsell, 2001). The mobility, or immobility, of a material is a function of the strength of its networks, so to understand mobility is to get at what forces, power, are driving change through systems of networks. This concept, combined with delegation and translation, offers a way to talk of literacy as "transcontextualized" (Brandt & Clinton, 2002), as something not just situated in specific contexts, but capable of traveling, integrating, enduring or shifting.

Those moves, however, are functions of networks of power, which produce what Soja describes as "distributional inequalities" and "spatial injustices" (2010). They carry with them,

> politics and privileges, ideologies and cultural collisions, utopian ideals and dystopian oppression, justice and injustice, oppressive power and the possibility for emancipation. (p. 103)

For schools, this connects how curriculum reform across a racially segregated and unevenly resourced school system can perpetuate spatial and material injustices in classrooms. By studying the mobilities of curriculum materials, then,

one may also reveal the distributional inequalities in curriculum networks, and perhaps the possibility for rechanneling those flows, making different literacy resources accessible to marginalized groups, or how to mobilize and stabilize the literacies of marginalized groups into classrooms.

The materiality of literacy curriculum. Original references to materiality in literacy are mostly attributed to Kress (1997) and his analysis of early writing practices of young children. There, he describes materiality as being the stuff by which texts are made. The 'stuffness' of a text, he furthers, has everything to do with how meaning is made, in other words, how humans use texts. Materiality creates certain possibilities and limitations around various modes of meaning-making (Kress, 2000). For instance, Kress (1997) compares the meaning making that is expressed by a child drawing/writing a car on paper and constructing one with Legos. He continues,

> Paper as a material offers the potential for being drawn on, coloured, stuck together and cut out. As a material it opens certain possibilities, which cardboard offers less readily. Cardboard offers the possibility of being turned into container, shield, sword, objects for relatively robust physical handling. All of these offer the possibility of representing through a multiplicity of means, at one and the same time, in the making of one complex sign. (96-97)

There are important similarities to point out here between the scholarship in New Literacy Studies and multimodality that have taken a "semiotic turn" (Siegel & Panofsky, 2009) and ANT scholarship that has contributed to a "semiotics of materiality" (Law, 2009). In both places, meaning-making is situated between humans and texts, and texts are about more than just print. For

New Literacy Studies, conceiving of literacy beyond linguistic references has allowed for an expansion of meaning-making affordances and ultimately what may count as literacy. For example, the meaning of a "Slow down" road sign may be negotiated differently than that meaning concretized into a speed bump, because of a difference in materiality. This connects literacy practices to a much wider variety of activities than print. Pahl (2014), for instance, describes this in applying Kress' notion of materiality to studies of everyday community literacies. She argues,

> by seeing literacy as material, I can recognize the ways in which literacy practices are linked to other practices. Not only sewing and weaving, and gardening, but also speaking and talking can be material practices linked to literacy. By extending the lens of what is important, a much wider meshwork of symbolic practices come to the fore, instantiated within the material world. (p. 120)

This is to say that literacy practices are themselves *networked*, or connected to networks of both human and materials actors. However, other descriptions of meaning-making appear more one-way than intra-active, as with Kress's use of the term *deliberate* design, whereby, "meaning making becomes a matter of the individual's active shaping and reshaping of the resources that he or she has available" (p. 2). This has led some literacy scholars to critique 'design,' and the New London Group's notion of *curriculum as design* (1996) as implying a rational intentionality (Leander & Boldt, 2013), rather than viewing literacies as emerging from interactions. Rather than say that children in relation to materials are "the agents of their own cultural and social making" (Kress, 1997), these scholars

would argue that cultural and social learning are "network effects" (Fenwick &

Edwards, 2010) from heterogeneous networks of humans and materials.

This is not to suggest that designs, even as heterogeneously produced

actor networks, have no effects. Rather, designs exist as part of a network that

can be delegated to other actors, mobilized to new spaces, and subject to

translation in encounters with new actors. The strength of a design is a function

of its mobilizing power, but they can also take a life of their own once mobilized.

Fenwick and Edwards (2010) further that

> To view things as either the products of human design or as brute tools
> controlled through human action alone is to underestimate the power and
> contribution of things themselves in enacting events. (p. 6)

Because different materials afford different modes of meaning making, the

materiality of texts are important for understanding literacy practices. In a later

work, Kress more explicitly defines materiality as "the inherent characteristics of

the material used by a culture for making meanings" (2001, p. 15). It should be

noted, though, that this concept of materiality is different from that of Lenz

Taguchi (2010) and Olsen (2010), in that it focuses on "stuffness" rather than

"intra-relatedness." Instead of focusing on the essences of materials and what

opportunities for semiosis they afford (although this too is important), scholars

such as Latour, Olsen, and Lenz Taguchi are questioning the extent to which we

can attribute those essences to the material itself, instead of the networks of

which they are constituted. Furthermore, while viewing materiality as

"stuffness" (Kress, 1997) raises certain questions around the particular

composition of materials and their potentiality for meaning-making, it does not address how certain materials end up in classrooms and either in the hand of a teacher or student, or in the back of a closet. For these questions, one must also consider more than the design and redesign of literacy materials, but also the *mobilities* of literacies. Mobility, as it relates to materiality, offers two valuable perspectives to consider. This is not just about the movements or circulations of materials, but of the mobilities or the "traces of social practice" (Burnett et al., 2014) embedded within materials.

Here, I argue that curricula, literacy curricula specifically, are not singular entities, but rather widely performed patterns of networks (Law, 2007), whereby disparate elements may be bundled and mobilized across space, such as a textbook or state test, by a multitude of actors. The mobility of these bundles, and how they get translated through the enactment of curriculum, is a function of the strength of the networks. This perspective pushes against conventional framings of curriculum as a bounded entity, as the material *designed* to be followed with fidelity. However, curriculum enactment, which also pushes against this frame, must also be seen beyond a strictly local enactment between teachers and students. Pushing against this allows one to view the classroom not as a container but rather "a node, a knot, and a conglomerate of many surprising sets of agencies that have to be slowly disentangled" (Latour, 2005, p. 44).

Conclusion

To summarize, I view literacy, and literacy curriculum, as effects of a dynamic network of relations. Recognizing that materials are the delegates of other humans helps to highlight hidden networks of power present within literacies and curricula, and referring to literacy practices as literacy networks (Leander & Lovvorn, 2006) highlights the multiplicity of actors that come together in practice. Tracing these networks, then, provides a window into the black box placed over traditional or conventional notions of literacy curriculum, revealing how various actors are able to inform it.

Recent curricular reforms have attempted to materialize prescribed curricula for teachers to prepare students to meet new standards, while at the same time, holding teachers accountable for student performance of those standards. To summarize this dilemma another way, "teachers, as in all sweeping educational reform movements, are contradictorily positioned as both the obstacles to and the deliverers of change (Ball, 2003)" (Nichols, 2006, p. 174). There are far too many instances within the context of literacy education where either the material has been legitimized at the expense of the teacher (and student), or the teacher and student have been judged without consideration of the material. Considering public money in the billions of dollars fund this circulation of new materials in and through schools in the name of reform, more studies of the relation between materials and curriculum enactment are warranted.

Furthermore, the landscape where curricular reforms are circulated are themselves uneven. In New York City, Black and Latinx students are more likely to be enrolled in highly segregated schools, meaning less than ten percent White enrollment, than in any other urban school system in the United States (Kucsera & Orfield, 2014). Many of the schools labeled as "struggling" or "at-risk" by DOE officials are often schools with the high levels of racial and economic segregation, and the solution for struggling schools is often to adopt new curriculum at rates more rapid than other schools. These programs, and the learning frameworks they mobilize, often carry network effects that produce "asymmetries of power" (Heydon, 2013) whereby distant carry more mobilizing power in curricular production than do teachers and/or students. The intersections of these networks of race, class, and curriculum remind us that literacy classrooms where new curriculum materials may be distributed cannot be understood without considering the uneven distribution of students and neighborhood resources across the school system.

With these issues in mind, a network perspective also offers insight into how spatial injustices are produced through distributions of inequality. Distributions of inequality are about more than just the lack/availability of resources, but the control of their flows and mobilities. Furthermore, since the passage of *No Child Left Behind*, failure of a school due to test scores has resulted in a shift of power from local to state level, i.e. school takeover, the effects of which rapidly circulate new people and materials through schools. Just as

teacher turnover is a concern in schools, there are similarly high rates of material

turnover, especially in low-performing schools experiencing the threat of school

takeover through punitive reform policies. The reality of low-performing

schools, then, may not be indicative of a lack of resources, but at times an

overflow, one that makes the building of durable socio-material relationships,

those needed for enacting local curriculum, ever more challenging.

Willis (2015) writes,

> The history of reading testing indicates that the tests were not designed
> for the purposes of addressing economic, educational, or social
> inequalities—if anything—standardized reading testing points to the
> stratification within our nation. (p. 47)

Here, Willis recognizes the ways that objects, be it a textbook, a test, a school

zone or an enrollment policy, can be designed inequitably. However, the

consequences are in their mobilizing power, in their ability to move actors in

stratified fashion. Another goal of this study, then, is to also show how social

inequalities identified in literacy research are also connected to material and

spatial inequalities (Soja, 2010) and how both are at the crux of studies of the

mobility of curriculum materials. Mobility, and control over mobility, are

functions of power (Massey, 2005). Tracing the mobilities of curriculum

materials, then, is a way of accounting for who is ultimately included in the

network of curriculum-making, and who is not.

In the classroom, curricular designs may produce certain actions, but they

are also subject to translation, as actors beyond the designer, and their agencies,

are come into play. Thus, a socio-material or posthuman perspective should not

further diminish the teacher's perceived agency in curriculum-making, but rather strengthen it by recognizing what networks may be mutable through translation. Lastly, while a posthuman perspective may attend to material networks in greater detail, it need not be without equal attention to the ways in which these networks matter to the humans, students and teachers in this case, that they most greatly impact.

Chapter II

REVIEW OF THE LITERATURE

The focus of this study lies within the intersection of literacy materials, curriculum reform, and early literacy. In the first chapter, I argued that recent reforms in school systems like New York City have placed new demands on students, teachers, as well as mobilized new sets of materials for the purpose of changing the literacy curriculum in classrooms. From a material perspective that considers students, teachers, and materials as intra-related and networked, rather than isolated from one another, it was important to review what is known about the relations among curriculum materials, their mobilities, and curriculum enactment. In this review, I was guided by the following main question: what is known about literacy materials past and present as they relate to the production of early literacy curriculum? I was interested in identifying empirical studies that take on a triple focus of literacy materials, curriculum, and reform, and reading them through the lens of materiality. While studies that match all criteria were few, many focused on one, such as curricular enactment, or the intersection of two, such as literacy curriculum and reform. My review of the research began with studies of literacy curriculum materials, some of which were touched on in the first chapter. However, I juxtaposed these with a few studies that have looked at materiality, although not specific to literacy classrooms or elementary

settings. I then looked at studies of curriculum enactment in literacy classrooms, including a rereading of a few seminal studies of curriculum enactment through a material lens. While curriculum materials have received much individual focus in the literature, curricular enactment has mostly been studied through social interaction (Dyson, 1993; Mehan, 1978). Rereading these studies helped to make visible how a focus on materiality may expand on the inquiries of these seminal studies. Last, I looked at classroom studies of reforms in literacy curriculum.

Curriculum Materials, Curriculum Materiality

In 1996, Deborah Ball and David Cohen, in the title of their co-written article, ask, "what is—or might be—the role of curriculum materials in teacher learning and instructional reform?" (p. 6). According to them, "the design and spread of curriculum material is one of the oldest strategies for attempting to influence classroom instruction" (1996, p. 6). It is surprising then, not to see more attention given to the material in the literature on literacy curriculum in schools until recently. As McGregor writes, "we live in the midst of things, perhaps nowhere more so than in schools. However, this is often ignored in educational research" (2004, p. 354). The purpose of this section, then, is to survey the available literature on curriculum materials to get a sense of how they have been studied and what implications arose from studying them, as the dominant focus of such studies has been on analysis of textbooks exclusively.

From previous analyses of textbooks, it is argued that various ideologies including political, cultural, economic, and pedagogical, are embedded in various texts (Apple, 1984; Shannon, 1989; Venezky, 1987), which then have various implications for when they are taken up in the enacted curriculum in a classroom (Freebody & Baker, 1985; Luke, 1988). I highlight the work of Allan Luke as an example of researching the "technical form of curriculum" (Luke, 2013). Luke (1988) sought to identify what counted as literacy in postwar elementary schools in British Columbia. He used a combination of oral history, text and discourse analysis to address this question, which lead to an analysis of the Dick and Jane basal readers in particular. Here, for example, Luke applies Eco's semiotic typology for textual narratives to the stories in literacy textbooks, categorizing them as either "open" or "closed" texts. Closed texts "constrain readers to a narrow set of interpretative options" (Luke, 1988, p. 39) through the narrative structure of the text. For Luke, closed text narrative structures were reinforced in Dick and Jane readers through the use of "episodic storytelling." As a series designed to limit word use and be predictable, the fact that characters who embodied White middle-class suburbia and never changed or learned anything, semantically set to reinforce a mainstream view of the world as unquestionable, and whiteness as a norm. This constancy in their way of life seemed to "preclude criticism and enabled only a very literal controlled readership" (p. 119). By closing down possibilities of interpreting the text, Luke argues that reading was presented to children as mere consumption, limiting

their sense of agency in meaning making, giving the text a higher status in the 'subject and object' of school reading. Thus, in applying a semiotic analysis to the basal readers, but not observing actual lessons, Luke (1988) was able to make an ideological argument for how basal readers can control and/or constrain the literacy practices with curricular texts.

How, then, are readers (texts) produced such that they control or elicit constraints on readers (the student or teacher)? Drawing on studies of the technical form of textbook curricula such as Luke (1988), and Kress (1997) notions of materiality and modality, Jennifer Rowsell's dissertation research (2001) traced the 'models' of literacy embedded into textbooks by publishers and then taken up in classrooms. To do this, she began by interviewing textbook publishers, observing the writing process, and then following those books into classrooms to see how those texts are mediated by teachers and students. Rowsell (2001) distinguished her work from previous studies of textbooks by its attention to the "social actors" of textbook construction, asking not just what textbooks carry with them but also how they get inscribed in the textbook in the first place. In witnessing the construction of textbooks, Rowsell argued that publishers mediate between policy and market demands before they are published, mobilized, and then mediated by teachers and students. In her case, it was evident that the weight of a new National Curriculum policy had subsumed the publishing practices of commercial curriculum, whereas in the past markets may have been interpreted through pilots with schools and teachers. In later

writing, Rowsell (2006) described literacy curriculum as a series of "crossings," as a constant movement of "ideas, discourses, and modalities" (p. 198). In our contemporary landscape of curriculum and neoliberal reform, these crossings resemble a busy intersection of corporate consumerism, global accountability agendas, along with pedagogy and practice. By not only analyzing the textbook but also tracing these multiple crossings, Rowsell likens this work to the unveiling of Latour's black box (Pahl & Rowsell, 2010) around the textbook, showing how various ideologies become *translated* into them, and how they are *mobilized* into classrooms.

Rowsell (2001) argued that the materiality of a text offers clues to who made it, when, how and why. While most studies of curriculum materials focus on those in current use, I was also interested in identifying any studies that address the older materials, often replaced by the new. Two studies also documented and analyzed older materials, or "the debris of history" (Lawn & Grosvenor, 2001) in classrooms. In the first, Lawn and Grosvenor were studying the history of a school built in the 1800s when they were shown a tiny attic space accessible by ladder containing a small collection of old technology. Their method, similar to "thinking with theory" (Jackson & Mazzei, 2011), was to survey the "material culture" of the school by "interrogating" found objects with ideas from philosophy, anthropology, and sociology. This inquiry led them to consider the items "hidden away" as traces to the history of schooling there. Many of these pieces of equipment were used with the earliest computers, but

also ways of displaying media such as a photocopier, a slide projector, and audio speakers. The authors further noted, "these machines could be a guide to older ways of working in the school, and the arrival and demise of skills, duties and routine relations" (p. 118). While some materials revealed past pedagogic practices that once existed in the school, they also revealed traces of veteran teacher's own practices, as these materials were not abandoned, but saved for particular reasons. "Who would know," they ask, "if the two teachers who placed them there were to leave the school through retirement or promotion?" (p. 127).

Lawn and Grosvenor's work (2001) is useful in the sense that it inquired into the traces of past cultures of teaching through the lingering materiality of the school. Again, few studies have considered the implications that all materials, not just a particular textbook, have on curriculum-making. In a similar study, McGregor (2004) drew on Actor Network Theory to explore the storage spaces of teachers in one secondary school in England. This study, however, compared the "durability" of some materials over others. While some materials have changed or been abandoned altogether, such as slates and inkwells, blackboards and textbooks have more durability. This was not a result of their physical construction but rather "the stability of certain (power) relations" (p. 348). For McGregor, power is "a constellation of relations constituted from complex actions, including arranging and ordering" (p. 353). Power over curriculum, then, was evidenced by the arrangements of materials in classroom space. For

instance, in one history teacher's classroom, olds maps, atlases and a set of books on countries were found in a similar attic space as that in Lawn and Grosvenor (2001). However, three country books remained in the classroom, which they traced to a state education policy change requiring statutory assessment of certain countries. McGregor further noted that the need for storage space was evident, as teachers or departments were often in competition for space. What this suggests is that storage, as it relates to arranging and ordering, may shape the teacher's power relations with enacting curriculum. While Luke (1988) and Rowsell (2001) offer useful analysis into the materiality of certain curricula, both Lawn and Grosvenor (2001) and McGregor (2004) show the value in attending to materiality of older or abandoned materials, too, further warranting a case for all materials to be considered in studies of curriculum.

Curriculum Enactment in Literacy Classrooms

Latour argues that when entities are treated as a matter of fact, they are viewed as a "black box," hiding the networks of contingent connections that hold it together. In studies of curriculum enactment, the second part of my inquiry, the goal then is presumably to open up, or *uncase* the curriculum in order to trace its networks of influence and action, tied to both human and nonhuman entities. It is interesting to note, then, that one of the most cited studies of enacted curriculum (Mehan, 1979) also begins with the problem of the "black box." There, Mehan argues that previous education research had treated the classroom

as "a black box" by not investigating the actual processes of education in real classrooms. The solution, as in most studies of enacted curriculum, is by attending to the teacher-student interactions in the classroom in relation to the curriculum. This social framing of curriculum is evident in many book titles, such as *Learning Lessons: Social Organization in the Classroom* (Mehan, 1979), *Social Worlds of Children Learning to Write* (Dyson, 1993), and *Literacy Practices as Social Acts* (Lewis, 2001).

In Mehan's classroom ethnography (1979), 12 morning lessons taught by Courtney Cazden are recorded and analyzed to understand how student and teacher interaction in lessons are organized. His meticulous observation, by employing the use of multiple video cameras, provided a microscopic play-by-play depiction of teacher-student interaction during literacy lessons. Mehan (1979) frames dialogue during instruction as patterns of initiation-response-evaluation (IRE). This discourse pattern, as documented throughout the study, is used not only to assess the learning of content throughout lessons, but as a means of encouraging and limiting participation in the lesson. It is, "the interactional machinery driving classroom lessons" (p. 160). Using "context analysis" he is able to identify the multiple strategies a student must understand in order to academically and socially be a successful participant during a lesson.

While the organization of lessons, in this sense, is primarily framed around social interaction, this is not to say that the ethnography was completely devoid of a material focus. Mehan also describes how boundaries between lesson

units were marked by the setting up or removal of materials, as well as the arrangement of bodies around certain materials, such as a book or blackboard. Lessons, then, in this sense are produced both by their materiality as well as the predictable social interaction. In other words, it could be argued that predictable social interaction was *delegated* to certain materials and spaces. As there are only a few mentions of these material arrangements, however, we can only infer then how these materials came to the classroom, how they get translated into curricular practice, and the network effects that constitute the use of one material over another.

To consider how curricular production may be analyzed differently, Sheehy (2004, 2010) offers an interesting counter-perspective of IRE. For Sheehy (2004), IRE is a spatial practice, comprising a set of relations involving many actors. Her goal, rather than identify particular social organizations, is to show how a classroom is the "tangled relations" (Sheehy, 2010) among all players in curriculum. Sheehy, like Mehan (1979), also conducts ethnographic research in a classroom where IRE is the dominant social practice between teacher and students. Her description, however, reveals alternative ways in which students disengage from the lesson underneath the surface appearance of IRE. She writes,

> Two girls were looking at photographs of boys in the youth band Hanson. Several girls and boys were slouched in their seats, some watching Jade and their worksheets and others not… It only took the few participating in the exchange to keep the ideas in circulation, reproducing the value of that flow. Thus, the exchanges around objects of study, which Jade put forward and which continued to circulate as an IRE, were produced and reproduced as space, even without the entire classroom's participation. (p. 98)

Sheehy's reinterpretation of IRE exposed two ways that social-interaction analyses of curriculum-making remains encased. First, there is the lesson as a singular event. While students and teachers in Mehan's lesson studies may have appeared to "synchronize the rhythm of gesture and speech with each other" (Mehan, p. 79), students in Sheehy's were also capable of resisting by sleeping, playing, or having side conversations during instruction. Materials, like the photographs of Hanson, and space, such as the position of desks relative to the teacher, were taken up in the multiple enactments that occurred during a lesson.

Second, Sheehy's analysis revealed a case around the classroom. For Sheehy (2010), IRE was more than a tool used by the teacher, but represented a mobilized system of "content distribution" (p. 136) whereby networks of power from departments of education, administration, and even newspapers intersect forming a discourse of IRE. These networks were also present in the materiality of particular lessons. However, as Sheehy describes other teacher-student constructed lessons, deviating from an IRE frame, she was able to map different networks of content distribution that were more inclusive of students' ideas and input. Sheehy's study, then, is valuable in its tracing of curriculum enactments as network exceeding the boundaries of the classroom, and in tracing how various materials become enacted, officially or unofficially, into the curriculum. The next section further reviews curriculum materials in this context.

Official and Unofficial Curriculum

Several studies of children's literacy practices outside of school have led to advocating for their inclusion in official curricular practices inside school, which has implications for the materiality of curriculum in classrooms. Heath (1983) for instance, in her ethnography of literacy practices in Roadville and Trackton, observed language practices from the neighboring communities, highlighting a wide diversity of language and literacy practices that children learn before formal schooling. Certain practices, however, aligned themselves more favorably with the kinds of practices those children are expected to do once entering elementary school. Rather than heed to the generalizations, or standards, on curriculum and teaching elementary schools, Heath advocated for a curriculum constructed by teachers as ethnographers allowing the observations of students' language and literacy practices brought to school to inform teaching practice. To clarify this point, Heath described the teaching of Mrs. Gardner, who was in the beginning of a school year teaching a class of students from low-income neighborhoods. Mrs. Gardner visited students' homes, had outdoor playground material made from community materials in the shape of letters, and created class books using pictures of the students and their community (pp. 284-288). The materiality of Mrs. Gardner's curriculum, then, could in some ways be traced to the everyday experiences of children and their community. This overpowered the need for a prescribed curriculum, and the view that it was necessary for all students to be taught in the same way. Spatial studies of

curriculum (Nespor, 1997; Sheehy, 2010), as well as socio-cultural studies, have also acknowledged the intersection of home and school practices in classrooms, regardless of whether they are represented in the official curriculum. One caution made, however, is that in using ethnographic methods one does not localize, or stabilize, the practices of one place. Rather, the dynamic nexus of relations present in all spaces should be recognized. In other words, "we have never been Roadville" (Leander, 2010, p. 333), or in other words, Roadville is comprised of a multiplicity of dynamic material networks. The materiality of curriculum, then, should be more than bridging one static space with another, like home and school, but considering wider networks.

Anne Haas Dyson's multiple classroom ethnographies (1993, 2003, 2013) have also *uncased* notions of prescribed curriculum through use of the phrase "the permeable curriculum" (1993, p. 30) which blur the lines between official and unofficial, prescribed and enacted curricula. She has described how children draw on multiple resources from home and school to engage in literacies. The work of producing literacy curriculum, she argues, has more to do with 'uncovering' than covering the curriculum (2003). For instance, while literacy blocks may be "bookended" with official school lessons, the unofficial literacy practices of children that involve stretching, adapting, and playing with language, are documented, and argued should be given official curricular space as well. Furthermore, it is these varied resources and adaptive practices involved in children's literacy development in unofficial curricular spaces, while often at

odds with organized and official school literacy curriculum, that are their strength.

In these ethnographies, Dyson's uses the concept of mediation to analyze the intersections of "official and unofficial spaces" where literacy learning occurs in school. Rather than attending to the networks that mobilize "official resources" into classrooms like in Rowsell (2001, 2006), Dyson has provided acute attention to their point of contact between official and unofficial practices, how official curricula is mediated by children according to the resources they carry with them to school.

This is valuable in helping to understand curriculum enactment as always subject to translation, to children bringing unexpected connections to official curriculum material and "remixing" (Dyson, 2003) or transforming literacy practices. This is not to dismiss, however, the "deeply worn channels" that mobilize curricular practice in particular ways, but to recognize the permeable curriculum makes enacting a prescribed curriculum "an unstable and precarious achievement" (Edwards, 2011, p. 50). To better understand how translation complicates the connection between the prescribed and enacted curriculum, I move to studies of curriculum reform.

Commercial and Scripted Curriculum

Much has been written on the use of commercial or scripted curriculum in literacy classrooms. Scripted curriculum, a particular form of commercial

instructional materials, provide the teacher with a script to follow while "delivering" the lesson (Moustafa & Land, 2002). Their use has risen through the current era of standards and high-stakes testing (Au, 2011), especially in urban schools (Milner, 2013). The biggest boon for scripted curriculum programs came during *No Child Left Behind*'s *Reading First* initiative, when state education agencies were required to adopt specific commercial reading programs in order to receive federal funding (Shannon, 2007). Given their ubiquity in education environments still today in the United States, the relations between these materials and teacher's production of curriculum is perhaps the most overt, with the voice of the teacher itself being materialized in script form. Of studies referring to literacy materials in schools, many of them refer to mandated or scripted curricula. Themes touch on the use of scripted materials in elementary literacy classrooms in relation to teacher identity and action, or how materials are actually used in relation to teacher's beliefs and background knowledge and experience.

Several studies, for instance, describe teachers who are negotiating between their own pedagogy and that required by their school, creating a variety of descriptors to signify this negotiation. Smagorinsky, Lakly, and Johnson (2002) use three categories: "accommodation," a grudging effort to reconcile personal beliefs about teaching with the curriculum, "acquiescence," where teachers accept, comply, or submit to the curriculum, and "resistance," where teachers, either overtly or subversively, oppose the curriculum. In their findings of

secondary English teachers, actions were overwhelmingly categorized under accommodations, forming some sort of "hybrid" curriculum between the mandate and the teacher's own pedagogical values (2002). Similarly, Kersten and Pardo (2007) use the word "finessing" to describe ways in which teachers negotiate their practice in order to both comply with mandates and address individual needs of students. This negotiation is viewed as a form of innovation that teachers engage in with policy requirements to exercise their professionalism and regain control of their curricula (Kersten & Pardo, 2007).

Another place where these curricular negotiations appear between prescribed and enacted curricula are in the choice of reading materials for lessons. Because programs come with their own texts, basals, or readers, and the program occupies most if not all the reading time in class, the required use of scripted reading programs creates a conflict for any teacher who considers reading 'authentic' whole books to their students as good practice (Mahiri, 2005; Valencia, Place, Martin & Grossman, 2006; Williams & Bauer, 2006). While some teachers may "acquiesce" (Smagorinsky et al., 2002) their own values of using authentic literature to teach reading and stick to the basal, or accommodate their beliefs by separating literature study from reading instruction (Valencia et al., 2006), others resist by reading aloud books of their choice (Mahiri, 2005). Such restriction on the reading practices in school may also bleed into other subjects like Mathematics, where teaching time and content begin to mimic those of the scripted program (Parks & Bridges-Rhoads, 2012).

Yoon (2013), drawing on the work of Dyson (1993), contrasted the scripted curriculum as plan with "the enacted curriculum" arguing that the former neglects that, ultimately, curriculum is lived in classroom space. She profiles several teachers who are able to *translate* official curricular materials with students in order to create "flexible spaces" for both teacher and student voices. Doing this is a form of "translation" whereby standards and objectives are made meaningful but also never static. While Yoon draws on Bakhtin (1981) for this concept, the ANT interpretation also applies. In essence then, Yoon is describing the teachers' work as the translation of materials into resources with children, and her findings reveal moments where materials become *resourceful* for students' literacy learning changing both students and materials in the process.

Translation, then, from prescribed into the enacted curriculum is anything but linear. Edwards (2011) argues that human intention is 'betrayed' at the moment of translation, leaving the idea of a prescribed curriculum as "mere fantasy" (p. 40). Tracing the complicated webs of relations produced by old and new literacy materials would help to counter this linear notion of how new materials impact curriculum in schools. Thus, while the literature has varied examples of teachers' experiences with scripted programs, it is clear that there are a variety of ways in which teachers use them, despite their prescriptive design. Valencia and colleagues (2006) explain,

> Some teachers have a good deal of autonomy, others work under strict mandates; some schools experience great pressure from high-stakes accountability, others feel less pressure; some schools have supportive teacher networks, others leave teachers to navigate on their own.

Together, the variability in materials and contexts adds complexity to the instructional terrain, especially for new teachers. (p. 95)

Thus, in ANT terms, a program designed as an "immutable mobile" (Nichols et al., 2012) is often *translated* into different events once it enters the classroom, depending on the "variability in materials" in the "instructional terrain" (Valencia et al., 2006). It is surprising, then, to see little discussion of the wider material terrain of classrooms, the archaeologies of older materials that veteran teachers may have saved, or new teachers may discover, that open new networks of possibility for the enacted curricula.

Literacy Curriculum as "Network Effect"

Of all studies reviewed, one set of studies explicitly looked at literacy materials, reform and the enactment of curriculum together. Heydon and colleagues (2013, 2014, 2015) applied Actor Network Theory and the concept of multiliteracies to investigate the production of curriculum in a newly reformed kindergarten space in a public school in Canada. Through ANT, Heydon argues that curriculum is produced through *network effects* of the interactions of various actors, human and material. Those actors included the expectations from the official curriculum, identified as "The Program," data collection from the school district, the teachers, the children, the physical materials and space of the classroom, bringing into view "the multiple and sometimes competing/conflicting entities that make up literacy curricula" (2013, p. 506). What Heydon's analysis reveals, however, is not just the multiplicity of actors in

curricular production, but the "asymmetries of power" that have effects on actors, like the students, in becoming active agents in curriculum enactment. While reforms like the new program and assessments acted on the teacher's instruction, Heydon also notes how students and those curricular demands, "worked upon each other" (p. 506), producing unexpected results. For instance, children's actions during a morning meeting take the calendar reading curricular event into four different directions with their comments and responses.

Heydon and colleagues (2014, 2015) also look at the production of literacy curriculum in a child-care setting. One main area of inquiry is the extent to which literacy curricula take up children's funds of knowledge (Moll et al., 1992) or treat children as "curricular informants" (Harste, 2003). In a field that has looked at the gaps between literacy resources of home and school spaces, Heydon and colleagues attempt to see how these resources may become networked into the curriculum. Thus, this "triptych" of studies offers a unique look at how their methods and research questions can be applied in three cases. It reveals how bringing an ANT perspective to the case study shows the case to be only the beginning when one starts to "follow the actors" (2015).

Conclusion - Implications for Research Methods

To examine what is known about the relations between literacy materials, curriculum, and reform, I have attempted match older studies encompassing at least two of those aspects with more recent studies adopting methodologies with

material or spatial sensibilities. In this review, studies of textbooks have argued that curriculum materials come to schools with various ideologies embedded in them. A few studies have addressed how those ideologies are taken up through curriculum enactment, as most studies tend to focus on teacher-student interactions. Moreover, no studies have compared both the materiality of a classroom, including old and new materials, with the enactment of curriculum. In other words, we know little about how older materials, which had relational power at some point, still linger in current curriculum enactment, nor do we know what happens to those relations when new materials are brought in. Glimpses of each of these questions can be traced in parts of other studies, but more is needed on the direct examination on the relational networks of literacy materials, reforms, and curricula. It is not the matter, the stuff in classrooms, that ultimately matters, but the traces of practice and the networks to other powerful actors, which can be better understood through attention to classroom materialities.

Chapter III

METHODOLOGY

This study looked at how materials were mobilized through one Kindergarten classroom, and how the materiality of the classroom related to the enactment of literacy curriculum. I have argued thus far that considering the materiality of literacy curriculum could provide unique insights into studying who or what is networked to curriculum and how it ultimately gets enacted. Thus, drawing primarily on the theoretical perspectives of ANT and materiality, I approached the study of curriculum materials not just with the goal of analyzing the materials themselves, but the "network of relations" (Leander et al., 2010) around their use and circulation within and throughout school spaces. This study utilized a combination of research methods for the purpose of exploring the following questions:

1. How were materials for early literacy curriculum mobilized into one Kindergarten public school classroom?

    a. What materials were in the classroom?

    b. How were they mobilized into the classroom?

    c. Where were they displayed or stored?

    d. How had they been used in the past, if at all?

2. What were the relations between the materiality of the classroom and the enactment of literacy curriculum?

   a. What networks of relations were visible during enacted literacy curriculum?

   b. What literacy practices were enacted through these networks?

3. What other networks were implicated in the enactment of literacy curriculum, and how?

In order to address these questions, an 'assemblage' of qualitative research methods, or a network of practices linked around a particular function (Fenwick & Edwards, 2010), were collected into a methodology. Jackson and Mazzei (2011) write that an assemblage is not a thing but, "the process of making and unmaking the thing… it is the process of arranging, organizing, fitting together" (p. 1). Similar assemblages of research practices from prior studies of curriculum have been described as "tangled up," (Nespor, 1997) "messy," (Heydon et al., 2015) and "rhizomatic," (Leander et al., 2010) rather than systematic or linear. With these choices, however, come tensions between the theories I have drawn on to frame my study and the methods chosen to enact it. I will attend to each as I describe my approach to each method.

At first glance, my particular assemblage of methods resembles that of a case study (Dyson & Genishi, 2005). For my study, I surveyed the curriculum materials for literacy present in one classroom, interviewed one teacher and administrator about those materials, and observed students and teachers

interacting with materials through curriculum enactment, producing data through photographs, field notes and audio recordings. The case study is often applied in research aligned to an ANT framework (Law, 2007), or in other words, a case study applying "ANT sensibilities" (Fenwick & Edwards, 2010). Rather than viewing the classroom and its curriculum as a case, or as being *encased*, approaching these methods through a network perspective, in a sense, opened up the case, or *uncased* the site of inquiry. The classroom and the curriculum were not studied as encased, but rather as a dynamic nexus of relations, and as *uncased* through networks of mobility. Rose (2001), describes this kind of research as a 'critical visual methodology,' one that beyond merely documenting resources in a given space, thinks of those arrangements in terms of "cultural significance, social practices, and power relations in which it is embedded" (p. 3). Both terms get at the purpose of the study.

Research Design

The design of my study utilized methods in part from past scholarship applying ANT approaches to studying education or literacy-related cases. I will describe their methods before outlining my study. I will also describe some lessons learned from conducting a materials-focused mini study in a different classroom than my dissertation site.

The Network Case Study

The "network case study" was designed by Nichols et al. (2012) to study the circulation of parenting resources through three neighborhoods in two different countries. Their methodology combined ecological research methods (Neuman & Celano, 2001, 2010; Nichols, 2011; Pahl & Allen, 2011) with Actor Network Theory. The *network* aspect of their study has two main features. First, networks of early learning resources were traced throughout each case, which included libraries, malls, health clinics, and churches, twelve sites in all, spanning two continents. Second, the researchers *network-ed* case studies by comparing the cases with each other, deepening their analysis of the networks that run through and across multiple sites.

Their first method in each site was to conduct an ecological survey (Neuman & Celano, 2001; Nichols, 2011). This method requires a thorough and systematic documentation of all materials in a given site, mainly through photography and field notes. While the survey alone only captures the collection of particular materials in one site, it does not reveal movements, networks, or relations emergent in the site. For this, the team conducted an "immersion phase" of data collection (Nichols & Rainbird, 2014) where participant observation and parent interviews were conducted alongside continued early learning resource inventory. Parent interviews in particular highlighted what resources they accessed and where they came from, which often led the researchers down new paths for networks of resources. Nichols et al. (2012)

elaborated by describing one instance where a flyer on a community bulletin

board led one researcher to a website of parenting materials, then to a bookshop

carrying those materials. The authors explain:

> Through these rhizomatic moves we could identify a globally circulating
> discourse… materialized in multiple local places through texts and
> practices. (p. 30)

In their analysis the researchers were able to construct these networks through

Google maps and network diagrams made on PowerPoint, then shared with

other researchers in other sites. This allowed each researcher to document more

than just the existence or access to resources in one place, but their movements

and trajectories across various networks.

The ANT Case Study

Similarly, Heydon and colleagues (2013, 2014, 2015) employed what they

describe as a case study methodology with an ANT analysis. The tools used for

data collection included participant observation, documented using mainly field

notes and photography, with some audio- and video-taping, while analysis of

data attends to various "ANT sensibilities" (Fenwick & Edwards, 2010) or tools,

of which I will detail further in my methods section. In one study (Heydon et al.,

2015), observations took place twice a week for 3 months, while another (2014)

observed two "cycles of activity" or units of study, which lasted approximately

one month each. During this time, the team also collected curriculum documents

and planning tools that teachers and administrators identified as influential.

Semi-structured interviews were also held with teachers, principals, and

children, as well as recorded informal conversations during participant observation.

For Heydon's team, the case study was useful for capturing "an archive of descriptive material sufficiently rich to admit to subsequent reinterpretation" (2015, p. 176). For their studies, the researchers applied ANT inspired approaches to their analysis to trace the actors implicated in various curricular enactments. For instance, they juxtaposed photographs, transcripts, and field notes to look for the "relevance of actors" (Perillo & Mulcahy, 2009, p. 45) influencing curriculum across settings. These data points, then, become translated as they are represented in networks of relations. In some instances, these networks were short-lived, whereas others produced lasting networks across many points in the data. Some networks were then transformed into visual representations and narratives, which were then reviewed by the team, similar to Nichols and colleagues' (2012) network diagrams with Google Maps and Power Point.

Pilot Study: Lessons and Implications

Inspiration for the overall design of this proposed study also came from a pilot study I conducted in the Spring of 2015. The original intent of this study was to investigate the experience of two Kindergarten teachers implementing new curriculum materials and standards in their classrooms. My initial role as researcher in the study was that of an interviewer, but I also adopted a participant researcher (Dyson & Genishi, 2005) role in the Spring. As the end of the year came closer, it was more difficult to find free time to speak about

curriculum, especially as both teachers prepared to close down their classrooms for summer programs to use their rooms. I offered to help, which for one teacher meant reorganizing her closet so the rest of her things in the classroom could be locked in over the summer. In doing so, I ultimately was able to document more than the materials that were overtly displayed in the classroom, but the layers, residues, and flows of materials either left behind from past programs, donated or found items the teacher collected, as well as teacher-made materials saved for future use. In the closet, materials from five different reading programs were found.

Thus, rather than focus simply on the teachers' experiences with new materials, this material turn (Lenz Taguchi, 2011) in my study focused on the affordances and constraints that new materials offered teachers of early literacy. It also helped me to pinpoint two key moments rarely discussed in context to curriculum enactment: the classroom takedown and setup. In these moments, large migrations of materials take place, layering new materials with others, and sometimes emerging older materials for future use. While these reorganizations of materials may have opened possibilities for new intra-activities between teachers and materials, the new arrangements also represented the residual effects of networks, namely city-wide curriculum reform, that circulated the materials into classrooms in the first place.

My dissertation benefited from many lessons learned in the pilot. While the pilot study involved interviews, observation, and inventory of one teacher's

closet, they were not done in an order ideal for analyzing networks across all three data sets. A better order would have been to conduct data collection in layers, rather than linearly, or one at a time. Second, the main goal in organizing one teacher's closet was in part to prepare for the closing of the classroom, but as we organized materials, the teacher was already planning for what she could do with them in the following year. Mapping the materials at the end of the year, without following up with their rearrangements and use in the following year only enabled me a limited ability to trace retrospectively with my observation notes. Discussions of those materials in interviews were also cut short by the school year ending.

For my study, then, I intentionally planned with Clare, to document the setting up of the classroom, the pulling out of materials from storage, and the ordering and arranging that would happen before students enter. Similar to the last week of school, the week before the school year begins is an opportune time to document the full materiality of the classroom, as teachers are engaging with it in a very physical manner during these two weeks. These choices and moves that teachers make in the arranging and ordering of materials, if documented, provide some traces to larger sets of relations present in curriculum-making. Juxtaposing these data, then, with observed curriculum enactment and further interviews of teachers, layered with additional surveys of materials, would help to trace those networks further than the pilot allowed. For these reasons, I began my data collection with a mapping of materials, rather than ending with it,

which positioned me to "follow the actors" (Latour, 2005), tracing the movements of materials as curriculum was enacted throughout the year. Secondly, my attention to ANT sensibilities meant that I approached methods that "attend to the senses" (Pink, 2009, p. 14), providing more opportunities for reflexive dialogue with the teacher around curriculum materials and enactment, rather than a more singular and static depiction of materials and teacher/student interactions in the classroom.

Uncasing the Case Study

For my study, I applied aspects of the case studies of both Nichols et al (2012) and Heydon et al (2013, 2014, 2015), which was to approach a case with "ANT sensibilities" (Fenwick & Edwards, 2010). Beyond a mere inventory of curriculum materials, or the documenting of curriculum practice in one classroom, I chose to focus my case study on the materiality of literacy curriculum as understood through networks of relations between materials, teachers and students that were constituted in the production of literacy curriculum. Traditional data collection methods, such as observation and interviewing, may have been suitable for documenting materials and how they are taken up in a particular space, but the materiality of a classroom, however, required a different set of "sensibilities" to trace the "intensities" (Stewart, 2007) produced through encounters with materials. It was not enough, then, to capture someone's verbal description of an event or material, just as it would not be enough to call the teacher's planbook the curriculum. A rethinking, or *uncasing,*

of participant observation and interviewing as case study methods, as also

having "material and sensorial components" (p. 83) was required.

As I began writing up data analysis chapters after having collected data, I

realized that this notion of *uncasing* dealt with more than data collection

methods, but also how I frame the case itself. Rather than viewing the classroom,

the elementary school, or the curriculum as a case, or as being *encased*,

approaching a case study through a network perspective, in a sense, opened up

the case. The site description, then, needed to acknowledge the forces that

continually draw and erase the physical parameters of a case. Latour's concept of

(ir)reducibility argues that a case, a site, a situation, is neither reducible, nor

irreducible from another, so while a particular case cannot be "generalized to the

norm," it also cannot be written off as an isolated local phenomenon either

(Harman, 2009). The work of empirical research, then, is to engage in, to wrestle

with, and dwell in the space between reduction and irreduction, exploring social,

natural and other understandings for what makes and unmakes a case. In my

study, *uncasing* is as essential as casing in order to highlight how no site—a

school, a classroom, or an instructional block—is a fixed case but rather

constructed through networks of relations streaming from other places. With this

in mind, I sought in Chapter 4 to describe my site as a place with some

semblance of stability, but also in flux.

In approaching data collection methods, Pink describes research methods

such as participant observation and interviewing as "participant sensing" or "to

attend to the meanings of tastes, smells, and textures and the significance of their

presence" (2015, p. 68). In observing classroom practice and interviewing a

teacher about her practice, I wanted not to translate enacted curriculum and

socio-material intra-actions exclusively into verbal/linguistic forms without also

considering the sensorial experience of these moments. In doing so, as Stewart

(2007) argues, this allows the researcher to

> slow the quick jump to representational thinking long enough to find
> ways of approaching the complex and uncertain objects that fascinate
> because they literally hit us or exert a pull on us. (p. 7)

These pulls or exertions are what Stewart refers to as "intensities," and it is these

intensities that signal materiality. Stewart's work is a welcome reminder that in

order to capture materiality beyond its stuffness, one must employ methods that

also capture the intensities, the feelings, senses, and thoughts made possible, by

materials. To do this, I applied a sensorial approach (Pink, 2009) to my research

design, which I outline more in my data collection methods and analysis section.

Site and Participant Selection

In selecting the appropriate site for this study, I considered the following

criteria. First, I chose to situate the study within the public school system of New

York City in order to trace reform efforts and literacy curriculum. As over 80% of

elementary schools in NYC adopted the recommended commercial reading

programs in order to align their curriculum to Common Core standards in 2014, I

initially expected to choose a classroom of this group using these new materials.

However, the classroom that I chose had recently abandoned that reading curricula as the early childhood classrooms began to reform towards a "progressive education" philosophy. Note, while the term "progressive" has many meaning in a variety of educational and political contexts, here, I use quotations marks to indicate that I refer to the schools conception of progressive education, which I will quote from in detail later. Furthermore, a goal of ANT research is not to encase what concepts like "progressive" means, but to trace the networks that continually make and unmake its meaning and context. Personally, I am both aware of the history of progressive education, especially in New York City, and the status or caché of progressive schools in the city as well [some of the most well-known private schools label themselves as "progressive"], and in some instances, their exclusivity in who obtains access to such a school. Throughout this dissertation, I hope the multiplicities of meanings and ways they shape, stabilize, and disrupt the notion of progressive education at Parkside Elementary, are revealed.

Last, I chose to focus on a Kindergarten classroom as a particular site with a long history of materials and curriculum (Spodek & Brown, 1993) as well as the site of many ideological shifts through curriculum reform (Russell, 2011). I also chose to focus on Kindergarten to connect to other studies of enacted literacy curriculum and materials (Heydon et al., 2015) as well as my own experiences as a Kindergarten teacher, as described earlier, that attuned me to some specific material conditions of early childhood education. However, the classroom I

chose had just recently transitioned from being a Pre-K classroom. Thus, while both the transitions to a new school mission, and from Pre-K to K, were not initially anticipated, they both offered additional layers and residues to the classroom materiality.

The school where I conducted research, Parkside Elementary School, was a long-time public elementary school situated in a rapidly gentrifying neighborhood in New York City. It began as a lab school that tested out curriculum developed by professors at a nearby university. The building itself was shared by two other schools. Its student body, at the time of collecting data, was over eighty percent Black and Latinx, with approximately eighty percent of students qualifying for free lunch (NYCDOE, 2017a). Recently, the school, in concert with efforts by the principal and a parent group, adopted the label "progressive school" to identify its curricular approach. At the same time, however, the school had decided to move away from their previous reading program recommended by the DOE and adopt a new program to be implemented in the 2016-17 school year, the year I collected data.

Clare, was a former Pre-K teacher who looped with her class into Kindergarten the previous year. She identified as White, and as a "progressive educator" and had been given autonomy to establish a progressive Kindergarten curriculum for her students. However, she also expressed "tensions" between what it meant to be a progressive educator and implement a reading program. Before the 2016-17 school year, her class size would increase, and she would

participate in professional development around a new reading curriculum. In situating my case study in this particular school, with this particular teacher, my study became a case where early literacy curriculum, urban school segregation and neighborhood gentrification, and progressive education were all to intersect.

In establishing the research site, I considered multiple possibilities for the kind of teacher to work with: an experienced teacher who has taught in the same room for several years, an experienced teacher who has recently moved from one classroom to another, or a new teacher who is setting up a classroom for the first time. Each of these would offer its own set of unique perspectives into the relations between a teacher and the materiality of the classroom. However, for the purposes of my study, while open to the possibilities offered by each, I viewed an experienced public school teacher as offering the best opportunity to incorporate older materials into the analysis of the materiality of the classroom, and doing this would distinguish my study from others of materials in enacted literacy curriculum (Heydon et al., 2013, 2014, 2015). However, in establishing criteria for site and participant selection, it was my hope that around these criteria, multiplicities, differences and ambivalences would also work to "suspend a priori assumptions" (Fenwick & Edwards, 2010 p. 146), to *uncase* the notions of teacher, classroom, and curriculum.

Data Collection Methods

Similar to Nichols et al. (2012), the study was carried out in two phases. The first took place as the classroom was being set up before school. As learned from my pilot study, the set-up and take-down of the classroom are opportune times to document the materiality of a classroom as closet doors are open and materials are being sorted, arranged, and shifted. During August and September of 2016 before the school year began, I conducted an ecological survey of literacy materials in Clare's classroom. The particular timing for the first phase was intended to capture a larger catalog of materials than what would typically be visible during the school year, which allowed me to trace their movements, or lack of movement, as curricula was enacted throughout the school year. It was also a time when Clare was engaged in active and multisensory planning for future engagements with materials through curricula. Those decisions, captured in notes and audio recordings, regarding what to pull out and what to keep stored, reflected larger networks concerning how curriculum gets planned and ultimately enacted. To capture these connections, I simultaneously conducted "walking interviews" (Pink, 2009) with the classroom teacher, asking questions about a number of objects, such as where they came from, and in what ways they had been used in the past, but also allowing for the sensory experience of organizing materials to interject insights into the conversation as well. Reflective notes were also taken after these sessions to further capture how smells, tastes, and other senses not captured in the data further intensified material encounters.

The second phase comprised approximately 30 visits to the classroom over the course of the Fall and Spring semester. In this phase, I acted as a participant observer (Dyson & Genishi, 2005), taking photographs of materials in new arrangements and field notes of enacted literacy curriculum, primarily, but not exclusively, around the time of the official literacy instructional block. After a period of observing instruction, I planned informal interviews to further discuss classroom materials and the curriculum.

During the second phase, I conducted one semi-structured interview with the school principal, Mr. Gibson (a pseudonym), about literacy materials and curriculum for the entire school. I also collected official documents, such as Comprehensive Education Plans, Quality Reviews, and Progress Reports dating as far back as 2008, that illuminated the trajectories of official literacy curriculum over the past ten years. Demographic information of the school, the district and the neighborhood were also collected, and historical data was also obtained through internet and newspaper archives.

At the beginning of the school year, there were 21 students enrolled in Clare's Kindergarten class. Through consent forms sent to the guardians of all children in the class, I obtained permission from the families of 19 students to informally interview students periodically about their work, and to photograph the student work as a document related to the enacted curriculum. While students were not interviewed formally, students were occasionally questioned informally about the work they engaged in during the enacted curriculum

primarily by asking them, "can you tell me about what you're working on?" As these conversations were not recorded, short quotations were documented through field notes and later attached to corresponding photographs taken during the enacted curriculum. Also, I obtained permission to follow up with parents, and in the Spring semester I amended my plan to conduct short interviews with parents about the Kindergarten application process and their decision to send their child to Parkside Elementary. Thirteen parents participated in these informal interviews.

Last, during each data collection visit, I also scheduled time for defocused observation, or 'hanging around' (Nichols & Rainbird, 2014), and informal conversations, expecting that interviews or informal moments may reveal opportunities to follow actors into other parts of the school, such the library, a school basement where materials are stored, as well as virtually through websites. Pink (2009) advocates for researchers to participate in the kinds of movement and/or mobility that participants are also engaged in. For my site, this joining the class on walks to the school garden or to the park, to the pool in the basement, and occasionally following Clare into another part of the school, like a supply closet or another teacher's classroom.

Thus, activities in both phases included a survey of materials, classroom observation, visual documentation as well as semi-structured and informal interviews. Data were collected through fieldnotes, photographs of classroom materials and space, document collection, and audio recordings. While placing

these methods into 'phases' implies a systematic or linear order of methods, in reality they occurred at various points over the course of data collection, as layers of data collection. Below I share more details for how I attended to each method through ANT sensibilities.

Ecological Survey

The ecological survey was first used in Neuman and Celano's (2001) study of access to literacy in four neighborhoods. The main idea behind this survey was to consider the 'ecological niche' of particular things within an environment, which they were able to do by layering a quantitative inventory of data onto their analyses of neighborhood demographics. The survey has also been tailored to studying libraries (Nichols, 2011) and parenting resources (Nichols et al., 2012). In order to collect the data, researchers conducted a 'sweep' whereby field notes, photographs, and copies or relevant materials were inventoried during multiple site visits. These data sweeps in Nichols (2011, 2012) were also accompanied by collection of any connected web-based resources. Neuman and Celano (2001) used their survey as the primary method by which to compare "access" to resources in four neighborhoods. Nichols et al. (2012) however, juxtaposed survey data with interviews, which broadened their initial understanding of what counted as resourceful, as well as opened up paths to overlooked resource hubs, such as churches and malls.

For the purposes of my study, I initially planned for the survey to cover four main areas: official/unofficial curricular materials (textbooks, workbooks,

readers, books, papers), signage (bulletin boards, posters, environmental print, writing on the whiteboard), digital tools for information circulation (computers, Smartboards, projectors, tablets) and official documents pertaining to literacy resources/curriculum (memos, letters, websites). While the intent of covering these categories was to ensure that I attended to a variety of materials, actually assigning categories to specific materials was not useful, and in some ways undermined the ANT sensibility of "looking down" (Law, 2007), focusing on specific material details rather than "looking up" for abstract or overarching narratives.

Surveying was conducted through photography, field notes, and document collection. The intent was for this data collection to be exhaustive during the first site visits, and abbreviated through subsequent visits. For instance, precise locations in the room, such as the daily schedule or bookshelves, were identified to take images from the same spot repeatedly over multiple days. Over 600 images of materials were taken over the course of data collection.

Interviews

Both informal and semi-structured interviews were conducted with the participating teacher, the principal, and several students and parents. In conjunction with the survey, interviews provided insight into the materiality of the classroom by hearing about materials from through other's own words. Interviews were also opportunities to "fill in gaps in the data," in my case between field notes and the survey.

I approached the interviews as not just representations of participants thoughts, but also as emplaced and multisensory experiences (Pink, 2009). With this in mind, interviews were often structured around a classroom walk, discussing resources in various parts of the classroom. For the first phase, conducting interviews in the midst of organizing materials allowed for documenting not just Clare's thoughts but the intra-relations that occured as she talked and intra-acted with materials simultaneously. However, capturing this also required reflective field notes and memos (Dyson & Genishi, 2005; Pink, 2009) in addition to the interview recording.

In surveying literacy materials alone, I could understand what materials were present in one particular place. While certain meanings were implied through reading their particular arrangements, overtly displayed in front of the class or underneath a stack of things in a cabinet, the purpose of interviews was to gain better insight into the ordering and arrangement of materials. In order to do this, l asked questions about where literacy materials were found in the classroom, how they got there, and how they have been used in the past, what materials she inherited versus what materials she brought in or created, and in Clare's case, these anecdotes came unprompted.

In asking questions about literacy materials to teachers and administrators, I viewed the participants not as objects of analysis, but as co-analysts (Nespor, 1994) in tracing the materiality of the classroom. This reflexive approach to data analysis allowed for "intensities" (Stewart, 2007) to be

identified as the data was reflected on through interpretive notes, and through further data collection. However, interviews were also capable of "reifying" the interviewee as a single source of knowledge, producing a tension (Nespor, 1994) especially for a study premised on a post-humanist approach to research. Jackson and Mazzei (2011) discuss this particular tension in a book on posthumanist research methods, writing,

> To acknowledge and accept the centeredness of interviewing practices is to work both within and against a project that is failed from the start. Yet, starting with the interview as a failed practice does not mean that we give up on the interview as method… instead, we work the limits (and limitations) of such practices. (p. ix)

For me, if the purpose of interviewing was to better get at the socio-material relations present in the classrooms, this meant recognizing that interviewing, as other methods, are partial tellings of those relations, which are also subject to change.

Another consideration made with interviewing was how researching in a teacher's classroom was inserting myself into the networks of relations that I wished to study. Nichols and colleagues (2012) address this concern with both caution and opportunity. While I chose to use semi-structured interview formats, and include time for informal conversations as well, it was important to consider what questions, comments, and impressions I brought into those conversations, and how those may have shifted appearances of relations. Nichols et al., (2012) address this through reflecting on personal statements and actions in notes, and recognizing new networks that appear from the inquiries of the researchers.

Observation

The primary goal of observation in this study was to document enacted literacy curriculum, specifically what networks of relations were present through intra-action during the enacted curriculum, and to see how various actors, material and human, came to be enacted in the curriculum. Observation notes offered potential connections, or complications, of data from the ecological survey and from the interviews. However, my field notes were also reflective, and raised issues connected to other aspects of the research process (Dyson & Genishi, 2005). For instance, because an ANT perspective requires attention to mobility (Nespor, 1994; Nichols et al., 2012), in practice this means making descriptive notes that: track the movements of materials in and through the site including where they come from and where they end up, note who is carrying what in and through the site, and recognize my own position at various times. During observation of enacted curriculum, I asked myself:

What actors are present in the activity?

What is moving in/through the activity?

What enters and what leaves?

Where is attention directed and at what?

When and how does the direction of attention change at times?

What is produced in the activity?

What gestures, gazes, breaths, sounds, tastes and/or smells are apparent?

Law describes this approach as "looking down" (Law, 2004). As opposed to looking up, which is to look for overall patterns, looking down requires focusing on specific mundane details, "a concern with the sensuous materiality of practice" (p. 29) while also embracing uncertainty and contingency in documenting the entire practice as a whole. Sensuous materiality, here, is what I have described through Stewart's approach to "mapping intensities," and Pink's concept of "participant sensing." These concepts all suggest that observation alone may have been insufficient in capturing the networks of relations that were the focus of this study. I should also clarify that looking down is not a wholly different method than, say, "thick description," (Geertz, 1973) but rather by emphasis, an attention to materials that may be otherwise overlooked, and which may require multiple data collection methods to achieve "thickness." The benefit of "looking down" is in revealing a much larger company of actors, including distant actors working through these materials that are part of these enactments.

I captured my observations through field notes taken and stored on a tablet. The use of a tablet was chosen for several reasons. I wanted to be able to collect data efficiently and without being obtrusive. As tablets were becoming more common in classrooms used by both teachers and other observers, I did not find my use of one to be a distraction in the classroom. Furthermore, the tablet also functioned as my camera, allowing me to take photos silently, and my microphone for audio recording.

After each observation session, I set aside time that day for review of field notes, transcribing conversations, and for annotating images. Then I produced chronological data sets combining all forms of data. Often, images captured specific material details that were not present within the field notes, but in order to trace those details across data sets, I needed to annotate those details into the field notes. To do so, I reviewed each image by asking several questions, such as:

- What is the name and source of the material

- Who brought the material into the classroom

- When was the material was brought in

- Where was the material was found in the classroom

- Why: was there an intended purpose of the material

- How was the material observed being used (if it was used)

- What senses were emphasized? What senses were repressed?

This allowed for an immediate "stretching out" (Dyson & Genishi, 2005) of the field notes, and critical opportunity for reflection on the multiple actors engaged in the enactment of literacy curriculum, the sensory experiences not captured in the photographs or notes, and the potential paths to take in the next session of data collection.

Data Organization and Analysis

As each form of data collected had the potential to provide insights into new networks and pathways to pursue through future data collection, it was

imperative that data analysis be a continuous process not only after but also during data collection phases. In order to trace the networks of curriculum materials, the data had to be organized in ways that allowed for connections to be discovered across data sets. Nichols et al. (2012) describe their methods for organizing data that made 'network analysis' more feasible. For instance, after data were collected, researchers produced Google maps or network diagrams on PowerPoint slides across cases to identify the links between layers of data and share with other researchers.

For my data organization purposes, I created both a digital and paper set of my corpus of data. For the digital set, I combined my fieldnotes, images, and interview transcripts, organizing them chronologically as taken, then dividing them into pdfs for each day of data collection. I then uploaded each pdf, 30 in total, to Atlas.ti, a qualitative data organization and analysis software that, as an alternative to traditional coding approaches, offered a platform to trace across data sets by creating data networks. I found having a digital corpus of data useful for my study, primarily, for the ability to organize multiple modes of data: text, images, and documents, in open and flexible ways. After all data sets were added, I was able to search for specific words across the entire corpus of data, and quickly trace one material across multiple days of data collection. As my study was centered on one site, as opposed to a multi-site case study (Nichols et al., 2012), and was not be shared across a transnational research team, a more suitable method of network analysis was one that allowed me to visually

manipulate data through mapping and tracing, which this particular program allowed. However, manual juxtapositions of data sets with paper, as used by other scholars applying network analyses (Heydon et al., 2015) were also used. For this, I printed out all pdfs and compiled them into a binder to read as one large text. Reading the binder of data offered a slower and more contemplative reading of the data than searching for particular threads in the digital corpus.

Data on specific material objects were critical to answering my first research question on the circulation and mobilization of classroom materials. For my second research question on curriculum production, all texts were reread to trace actors and themes across data sets. I especially paid attention to transcripts of phone conversations or weekend meetings at the school where Clare and I reflected on the curriculum or where Clare brainstormed future projects. These conversations often functioned as "member checks" (Marshall & Rossman, 2006) on the broad curricular tracings of major inquiry units and smaller projects and activities.

For specific inquiries, I used search functions across all data sets to trace one material. Nichols and Rowsell (2014) define this kind of analysis method as "network tracing," another ANT sensibility described as, "a process of following and building connections across spaces, e.g. through intertextual analysis." Tracing, as opposed to coding, attends more to relations than essences. Furthermore, relations can be traced as contingent, ambiguous, and multiple, rather than definitive or over-arching. While Nichols et al.'s (2012) use of this

method also allowed for building connections across sites, my purpose was in tracing connections across data sets: the survey, the interviews, and the observations. For instance, curriculum materials were identified throughout the data from a variety of sources, including interview data, but also through official school-wide documents, curriculum maps, DOE press releases, instructional calendars, or student work.

For my third research question, I initially wanted to compare and analyze the various traces accumulated through answering the first two research questions. I was particularly interested in how teachers and students were "tangled up" (Nespor, 1997) in the enactments, and the extent to which they participated in these networks of mobility, or not. In comparing various networks of mobility and translation, I hoped to contribute to understandings of "distributional inequalities" (Soja, 2010) early literacy classrooms, connecting this study of curriculum to broader matters of spatial justice. I viewed this as when the actors within one particular space had limited control over the mobilities circulating through that space.

Originally, I had written the third research question as, "how do various networks of mobility present in the classroom allow or constrain opportunities for the teacher and/or students to inform early literacy curriculum?" After documenting the ways that curriculum enactment were complicated through the networks of many actors mobilized through classroom materials, I wanted to understand how one could then reconceptualize the notion of teacher autonomy,

or student-centered pedagogy, whereby the agencies of teachers and students are reclaimed from the mandates of other actors. While I continue to think these issues are important, through the process of collecting data I grew concerned that other networks of relations that were not centered around classroom materials, were not getting enough attention because of the positioning of my first two questions as materially focused. Furthermore, it would be difficult to address teacher and student agencies without also considering other networks of relations, such as parent networks, that push and pull on them as well. This shift in inquiry ultimately led to the creation of a 3rd data chapter regarding parent networks. This chapter, ultimately, served as a critical reflection of the curricular network tracings that centered around the classroom materiality as it related to curricular production, and asked "What is taken for granted in this reading of the data?" (Heydon et al., 2014, p. 8).

Trustworthiness

While ANT researchers are unflinching in acknowledging that "methods are always more or less unruly assemblages" (Law, 2007, 605), scholars have found ways to interpret the soundness of qualitative research through ANT sensibilities. Similarly, Heydon and colleagues stress the importance within ANT research to attend to the trustworthiness of one's study, "particularly given our understanding of curricular production as messy and our apprehension of it as provisional" (2014, pp. 7-8). Marshall and Rossman (2006) drew on four criteria

developed by Lincoln & Guba (1985) for establishing trustworthiness in qualitative research: credibility in thoroughly describing the subject, transferability of findings to other contexts, dependability of one's methods, and confirmability of findings beyond the researcher's own biases. For this study, I applied "ANT sensibilities" to fostering these criteria for trustworthiness. The notion of uncasing, for instance, seeks credibility by thoroughly describing networks such that it can be seen how a subject is made and unmade. Looking down at mundane details reveals both how all actors are unique, but also possibly connected, or transferable, through network tracing. Because the researcher is a part of the network they aim to study, dependability and confirmability are somewhat elusive. However, it is imperative, then, for researchers to be explicit of their own moves and cuts, of multiplicities in findings, and of messiness (Fenwick & Edwards, 2010).

In addition, I sought to develop a rapport with Clare, students, parents, and other school employees, balancing roles as participant and researcher, and making time for informal conversation before and after school. Second, because literacy curriculum was more dispersed across the school day than I had anticipated, I increased my planned amount of sustained field duration. Third, I collected a variety of data sources on site—images, recordings, and field notes— that offered multiple perspectives on each day's activities. Fourth, I stayed after school on many days to talk with Clare, and often reviewed my notes while we talked as a form of member checking. On some weekends or holidays, we had

longer conversations about the curriculum more broadly, which I also recorded and used to compare against my initial curricular network tracings. The vignettes that I chose to include in my data analysis chapters were, in part, guided by Clare's own tracing of the class curriculum around five main inquiry units. I chose the three of which I had collected the most data to analyze for this document.

I view trustworthiness as an ongoing process, not as achieved by capturing an assemblage of networks in entirety, or such that they are generalizable to other places. I learned that despite one's best efforts, there are always limits, gaps, and obscurities within the network. Thus, equally important in the process is critical reflection on what may be missing, taken for granted, what could be influenced by the researcher's positionality, and what could be read differently (Lewison, Flint, & Van Sluys, 2002 cited in Heydon et al., 2014). In other words, if my choices in data inclusion centered on "intensities" then these critical questions aimed to probe at the silences and the margins. As I explained in amending my third research question, the main critique I developed of my own network tracings were how they left out larger networks that mobilized children's bodies into the classroom as enrolled students. However, within each network tracing (see Chapter V) I also make efforts to recognize and include mentions of actors who did not evoke intensities in the observations.

Limitations

It has been argued that a primary advantage to ANT-inspired case study research is in its ability to link up multiple cases, as is evident in Heydon and colleagues work in a nursery school and kindergartens, as well as Nichols and colleagues multi-site work in three countries. Given the parameters of dissertation research, it was imperative that I recognized the limitations of what one researcher could accomplish with the methods employed by trans-national or multi-site research teams. These considerations necessitated a reduction in scope of my proposed study compared to other ANT multi-case studies, which also reduced the size of the networks that I was able to trace. While I did not compare multiple cases, an ANT approach still allowed me to view one site as multiple, as always being connected to other spaces beyond the local case. It is in this sense that an ANT approach to a case study serves to 'uncase' it, and my hope is that it could be linked to future cases conducted at a later time.

Providing balance to the notion of *uncasing*, whereby endless networks are exposed and pursued through analysis, a practical move for any network case study is in "cutting the network," whereby boundaries are placed around a particular object of inquiry such that network relations can be traced (Strathern, 1996). These cuts may be both intentional and unintentional. For instance, in my study I intentionally did not want to cut the time before school when the classroom is set up from the analysis of curriculum enactment. However, while I knew other perspectives made add further complexity to network tracings, such

as documenting the mobility of materials in another Kindergarten class in the school, for instance, I cut the network around one classroom only. Cuts were also inevitably made in the analytic process, focusing on certain materials and traces over others. While these cuts are practical for any researcher to reach an end to data collection and analysis, they come with issues of researcher bias that I also had to confront.

Unintentional network cuts are places where data collection or analysis were limited by my own biases. For instance, my whiteness, maleness, affiliation to academia, and outsider perspective within Clare's classroom all carried biases to the networks I ultimately traced, which potentially left some actors marginalized in the analysis. Similarly, the closeness that I immediately gained with Clare, which produced a rich collection of candid conversations and insights, may have in part been a product of our shared whiteness, unintentionally privileging these insights on the curricula for those that could have been provided by other nonwhite actors connected to the classroom. Network cuts, then, require serious critical review of who and what are left out. Much of my work in Chapter 6 around the amendment of my third research question addresses how I came to reassess the networks I produced in previous chapters and offer new tracings from these critical perspectives.

Another limitation to network-based research, as stated before by Nichols and colleagues (2012) is how the researcher is unable to talk about a network without placing themselves in it as well, arguing that "one cannot simply

observe a network and analyze it as a product separate from oneself" (p. 26).

Mindful of this point, I considered how I became networked to the participants

of the study: the teachers, administrators and students of an elementary school,

and what the implications were of those networks towards my study. I

considered "the subjectivities of my own" (Peshkin, 1988) in the context of the

classroom where I observed, which meant recognizing my own subjectivities as a

teacher of ten years in various schools, beginning at the height of *No Child Left*

Behind, another large movement of curricular reform. In my first classroom, a

kindergarten class in an urban elementary school in Birmingham, Alabama, I

experienced the tension between being required to teach and test students in

ways that were counter to the best practices I had just been taught in graduate

school. I was provided with materials that did not resonate with my own values

regarding literacy teaching. My image of 'best practices' was different than the

criteria by which I was evaluated as a teacher. Sheehy argues that teaching best

practices misses the mark when, "they assume that teachers can perform these

pedagogies in any space at any time" (2010, p. 24). As a researcher of other

teacher's classroom space, I did not want to impose my own notions of best

practice, nor my own notion of what counts as a literacy resource, onto the

participants but rather seek an understanding of how the teacher negotiates their

own practice with the resources they see available to them to produce a

curricular space around literacy in their classroom.

The ANT sensibility that most guided my data collections methods was the notion of "looking down." One challenge in doing this, however, is capturing a sense of the network beyond the moment. Jan Nespor warns that too insular a view may blur "deeply worn channels" (1994, p. 15), trends or patterns that reflect larger forces of inequity or injustice shaping the network. But for a theory of endless networks, a researcher must put boundaries somewhere, be it for the limitations of one researcher, or the space/time constraints of a manuscript or presentation. Deciding, then, where to "cut the network" becomes an ethical choice of the researcher involving inclusion and omission. The ethics, then, of posthumanist research do not come with the theory but still reside with the human researcher, who carry their own biases and privileges entangled in intersections of race, gender, and class. This work may require at times a pause from "looking down" to, say, "looking out for" the human participants in a study fairly in addition to materials, looking out for how one's own biases skews the network, and looking out for deeply worn channels in addition to encasements.

Finally, there was a strong tendency in writing up research to essentialize, summarize, and generalize in the effort to reach understanding, as well as cut the network in places to make the analysis simpler. Typically, the goal of a case study is to collect and analyze enough data from one context such that they can be woven into a narrative, or "patterned quilt" (Dyson & Genishi, 2005). ANT approaches to the case study, however, have different goals. First, by attending

not just to the actors but to their networks, ANT cases, to continue the metaphor, are more about the threads than the patches. ANT cases are described as "dynamic relations between multiple actor-networks" (Nichols et al., p. 45). From this perspective I argue the goal of the study—a case— is to *uncase* it, or to expose the threads that hold the case together and inquire into how some cloths remain durable while others unravel.

However, there is a tension in moving one's gaze outside the case before sufficiently documenting the inside. For the purposes of this study, I aimed to study the enactment of literacy curriculum as the network effect of many actors, material and human, across multiple points in space in time. Case study methods with ANT sensibilities allowed me to uncase notions like the classroom, the boxed curriculum and the instructional block. However, the results of this study cannot be reified as a complete case, or network, nor is such a result possible. Uncasing, in this sense, only produces a "sphere of possibility" (Massey, 2005) by which new inquiries into literacy materials, curriculum, and reform may be pursued. In acknowledging a tension between casing and uncasing, however, it is critical not only to embrace but document that tension throughout the research.

Last, there is a clear tension in taking an uncasing approach to analysis and then encasing it into a dissertation document. Through the writing process, however, I endeavored to play with the structure of vignettes, anecdotes, and other details such that the mention of one object may foreshadow its intensity in

another moment. The hope is that this creates a nonlinearity in the reading experience, attempting to uncase the reading experience as well. Latour (2005) states that the notebook is the laboratory of the qualitative researcher:

> The simple act of recording anything on paper is already an immense transformation that requires as much skill and just as much artifice as painting a landscape or setting up some elaborate biochemical reaction. (p. 137)

Thus, while the goal in approaching my data through a network perspective was to expand possibilities for how literacy curriculum is conceptualized, I acknowledge the experimental and otherwise precarious aspects of doing so in writing.

A Note on Confidentiality

Given that this study aimed to document a particular "activity space" (Massey, 2005) for literacy curriculum, careful measures had to be taken to conceal the identity of location without losing completely the uniqueness of place (Nespor, 1997). It was no more the intention of this study to find wholly unique circulations of resources in the school than it was to expect the findings to be generalizable to other school contexts. However, I did want to share as many unique findings as I could, but with so much information about schools available online through publically available documents on the DOE webpage, as well as newspaper and internet archives, any combination of unique details typed into a search engine or map could possibly identify a school.

Nonetheless, I approached measures to maintain confidentiality of the site and participants through a variety of ways. In this document, pseudonyms are used for all participants and school names, and descriptors of any identifying features of the school are masked. Some incidental details about the school's proximity, and its history, were slightly altered, and statistical numbers taken from publically available documents were rounded to make them unlocatable through simple internet searches. While I would have liked to cite the newspaper articles I located in digital archives, I chose not to, to avoid details being easily searchable. I also refrained from direct quoting, and using too many unique descriptors from any publically available document.

Chapter IV

THE MOBILITY OF CLASSROOM MATERIALS

Research Question 1: How have materials for early literacy curriculum been mobilized into one public school classroom?

Figure 4. "A tree in the trash."

A 14-foot tree sat atop several garbage bags on the sidewalk in front of Parkside Elementary School, an imposing 5-story building commanding presence in what is otherwise a quiet area in a New York City neighborhood. On the 18th day of the 2016-17 school year, Clare, a Kindergarten teacher at Parkside

Elementary, lead her classroom down that sidewalk to the school's garden for an event sponsored by a local nonprofit. It was then that students notice the tree, pruned from the park across the street and placed atop garbage bags for trash pick-up, as they walk to the school garden.

In the garden, children were led through a path where gardeners had planted different vegetables and created posters about plant parts or life cycles, and at the end they were given a goodie bag with a packaged brownie and bag of almonds. On the return trip Clare overheard children talking about the tree again and asked them if they wanted to bring it into the classroom. As a parent volunteer carried the trunk and children, while holding their goodie bag in one hand, found a branch to hold with the other hand, Clare and I took photos. A conversation ensued around how to get it up the stairs, through the front door and past the security guard's desk. I watched as the tree, goodie bags, students, and parent linked by branches all ascended the stairs, passing underneath the banner hanging over the front doors that read, "Parkside Elementary: The First Progressive School of Avondale."

In my preliminary chapters, I have argued that curriculum be viewed not simply as a material, such as a textbook, nor a concept, such as a teacher's plan, but as a network effect of socio-material relations (Fenwick & Edwards, 2010; Heydon et al., 2015). Consider the number of actors, beyond teachers and students, whose work intersects within the previous moment: gardeners, parent volunteers, park employees, and trash collectors.

Figure 5. Carrying the tree to the classroom.

Nonhuman actors are also implicated, such as the tree, the sidewalk, the garden, the park, the school door and the classroom. Each relation lends new possibilities for interaction. The size of the tree relative to the front door, the hallway past the security guard's desk, and the ceiling, necessitates a discussion of how to cut the tree to make it fit in the classroom, which later enrolls the work of Clare's brother donating a handsaw. Several events become offshoots to this particular moment: measuring the tree with rulers and recreating that length with handprints on a roll of paper, voting on how to cut the tree so that it can stand upright and using a saw to shorten some branches, creating mini trees out

of clay with the cut branches, reading several tree-related books and creating a shelf for tree books in the room, using the tree as a safe space for teddy bears, making applesauce from saved school-lunch apples after learning that apples come from trees, doing tree and life cycle themed yoga poses during transitions in the class schedule, pretend play by the "medicine tree" in the park, and several more offshoots about the four seasons, squirrels, and various art and writing activities.

Concurrently, Clare, fully aware that there needs to be, "at least three reasons for doing something in the class," produces many forms of documentation such that this work is legitimized as "official curriculum" by a variety of actors, including administration, DOE superintendents, parents, professors, visitors and other teachers. In tracing these events, and the various actors they enroll and mobilize, it is easy to see how enacted curriculum is never one thing, but rather a nexus of many.

Overview of the Chapter

I share this vignette as a preview of where I am headed, which is to describe the actor-networks present in moments of enacted curriculum in Clare's kindergarten classroom, and the literacy networks (Brandt & Clinton, 2002; Leander & Lovvorn, 2006) present in these moments. Curriculum enactment is understood through the mobilization, enrollment, and alliances of many actors networked within and beyond classroom walls. Thus, to document enacted

curricula through network analysis is to engage in a kind of critical analysis, to unveil the inner-workings, the moving parts, of preconceived black boxes such that they can be seen in a new light.

However, this also means that before we can understand how curriculum is produced within one classroom, which is the focus of the next chapter, two other sets of analyses are useful. In this chapter I examine how materials were mobilized into Clare's classroom, starting with what materials were present the week before school began, as Clare worked to set up her classroom. I also examine the multiplicities and mobilities of the site itself by *uncasing it* and its history, and connecting these networks to the materiality of the classroom. Latour reminds us that "network" is a concept to guide our methodology, as "a tool to help describe something, not what is being described" (p. 131). For a network case study, then, as important as it is to "case the joint" (Dyson & Genishi, 2005) by identifying the physical parameters around the focus of inquiry, it is also important *uncase* it, or to unveil how the site itself is not the static background where events happens but itself a composition of dynamic sets of networked actors.

Take the school: often, especially in the case of an old school building like Parkside Elementary, impressions of schools as institutions, as fixtures of a community, as fixed and stable are present. However, as concrete an edifice as it may seem, it can be transformed when a network perspective is applied to its

description, such as in Lefebvre's (1991) critical reading of the depiction of a

house:

> Consider a house, and a street, for example. The house has six stories
> and an air of stability about it. One might almost see it as the epitome of
> immobility, with its concrete and its stark, cold and rigid outlines . . .
> Now, a critical analysis would doubtless destroy the appearance of
> solidity of this house, stripping it, as it were, of its concrete slabs and its
> thin non-load-bearing walls, which are really glorified screens, and
> uncovering a very different picture. In the light of this imaginary analysis,
> our house would emerge as permeated from every direction by streams of
> energy which run in and out of it by every imaginable route: water, gas,
> electricity, telephone lines, radio and television signals, and so on. Its
> image of immobility would then be replaced by an image of a complex of
> mobilities, a nexus of in and out conduits. (pp. 92-93)

What Latour refers to as "actor networks" is not far from Lefevbre's house

without walls, namely that space is not constructed out of fixed boundaries but is

produced through dynamic but also elusive networks of relations. Instead of the

metaphor of a wall, however, Latour uses the metaphor of a box as what

happens when something is essentialized, or painted over such that the

multiplicities and mobilities are hidden. To uncase, then, is to "strip away" the

"glorified screens" (Lefebvre, 1991) of such boxes, or cases as I refer to them in

this study. With this in mind, I apply a network perspective as a methodological

tool to uncase the site of my study through the actors—the building, the

neighborhood and district zone, the Kindergarten program and application

process, parents and the student body, and the history of progressive education

in the city—who continually work towards and against the site of enacted

curriculum. The details that I share of each were chosen to highlight the

mobilities and multiplicities of each, in order to uncase their "air of stability." I

then argue that the materialities of enacted curriculum, the focus of the next chapter, are contingent on the multiplicities and mobilities of the site itself: the school and its residing district and neighborhood, the student body and the teacher. Each uncasing brings out new sets of actor-networks into the assemblage, offering new insights and further complexity into how materials are mobilized in and through the classroom and taken up in curriculum.

Uncasing the Site

Uncasing the School

I officially began collecting data on September 6, days before the first day of school. I met Clare in front of Parkside Elementary underneath the school's banner, and she took me to her room at the end of the hall on the first floor, where she has taught for the last five years. The school banner, erected during the previous school year, revealed three facets of the school's identity to any passerby: its name, the neighborhood where it resides, and its history or legacy as being the first progressive school of the neighborhood. In fact, the school has gone by many names, and on this day housed not one school but three on separate floors. It is a "complex of mobilities" (Lefebvre, 1991) with permeable walls and boundaries in flux, situated in an also changing neighborhood and school district.

Figure 6. Clare's classroom before school began, August 2016.

The classrooms on the main level were spacious, over 14 meters across and tall ceilings. On that day we met, the room was sparse as all materials and furniture had been packed up for the summer, stored in her walk-in closet and inside a wooden pretend house. The floors were newly waxed, and the walls were painted white. In the openness of the room, vestiges of the original building began to stand out: the wall of windows exposing the main street, the sidewalk, and a view of a park, one set of inlaid shelves on the front wall, the archaic sink and plumbing inside the closet, the "closet" with a front and back door (and another closet inside) with makeshift shelving that insisted the space was not originally a closet, the one outlet for the entire room, the creaking wood floors.

I had heard mentions of the school's history from teachers, the principal, and parents, but was able to uncover a great deal more through local newspaper archives[1] and a binder of school history loaned to me by the principal. The

[1] While I have argued that tracing the actors through space, and in this case through history, is important, I have intentionally presented these historical details in a generalized and thus

building was originally constructed to open a university-owned progressive lab

school, primarily attended by the children of university faculty. The school

advertised a variety of amenities, including two gyms, a rooftop playground, a

pool, a laundry facility, kitchen and dining room (Newspaper Archive). Over

time, the university sold the school to the New York City Department of

Education, and the building became the replacement for a dilapidated public

school building nearby. The name of the school changed and students K-6 were

enrolled, while parents of the lab school students purchased the charter and

relocated the original school to another neighborhood. Years later, Parkside lost

its early grades when another public school one block away was built in an effort

to ease school overcrowding, reducing it to grades 3-6. In the 2000s, after years of

declining enrollment, the school slowly built enrollment back in K-2 by offering

dual-language and gifted-and-talented program for early grades. Pre-K shortly

followed in the 2010s. However, a continued decline in overall enrollment led to

the co-location of two other schools within the building, who were still there

throughout my data collection period. One of the co-located schools was run by a

large charter organization with elementary and middle grades, while the other

was a public secondary school funded in part through a partnership with a

university. Both schools were able to invest money in the building's aging

infrastructure, renovating the gym, the pool, and the auditorium which had gone

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untraceable, manner, without proper citation so as to maintain the confidentiality of the school.
In historical descriptions, I avoid proper names and only use the citation, "Newspaper Archive"

unused for years by the public school, sharing those amenities back with the

public school. Only in the last two years had Parkside Elementary reintroduced a

"progressive" mission for their curriculum, and enrollment began to increase,

placing new strains among the building's three occupants as to whose growth

the school building can sustain, common in low-income catchment areas in NYC.

These material histories of the school and its infrastructure are important

in that while they were built for different students under different purposes,

their effects linger. The size of the original school made it amenable to other

schools moving in during low enrollment, for example, but unsustainable for

continued growth of all three schools. Thus, as I began to trace the mobility of

new materials, it became important to consider how curriculum was made

possible by the synergies of old and new, or how space was accommodated for

both.

Uncasing the Neighborhood

Parkside Elementary, as described in one school report, sits between

public housing and the "environs" of a nearby university. The sidewalk in front

of the school, if taken one direction, would pass a large public housing complex

that has traditionally sustained a large share of the school's student population.

In the opposite direction, one could see, as I did over one holiday weekend, black

tarps draped over brownstones with large roll-off trash containers lining the

streets with waste from renovations. Traffic cones and scaffolding blocked

another street where more renovations were taking place. There were also large

apartment buildings, one that advertised a professional concierge and penthouse suites on the front of the building, and a newer building that had an advertisement posted for music lessons for children in bongos, fiddle, or tambourine. On one street corner, a community church stood next to a recently opened (now closed) whiskey bar.

The neighborhood, like the school, is also in flux. NYC is often called a city of neighborhoods, but neighborhoods, especially in NYC, do not necessarily stay fixed in place. "Where does the upper west side stop and harlem begin" is searched enough on Google to be a suggested entry, for instance, and similar entries appear for several contested neighborhoods like Park Slope, Chelsea, or East Williamsburg. Despite some established borders, such as a street or a park, adjacent areas can become annexed as part of a distinctive neighborhood as the surrounding area changes. Area names also change or become rebranded. Consider Soho, which originally stood for south of Houston Street, but has come to embody a narrative of wealth and fashion. That branding traveled and was transposed on another area in the contentious naming of part of gentrified Harlem as "SoHa." Neighborhood identities are also tied into the kinds of places that comprise its streets. "There goes the neighborhood," which happened to be the title of a podcast on gentrification in NYC released while I collected data, is a statement often used to reflect the power of something new that is mobilized into a space, and ultimately changes it. Neighborhood schools can become entangled

in these larger transitions, either attracting or deterring families with financial means to move into an area in search of a "good school."

It is unclear the extent to which student body of the school was ever reflective of its surrounding neighborhood and community, and whether the environs of the university and public housing were ever equally represented in the student body, and thus, could be considered a "neighborhood school." Some reports of the original lab school suggest that its enrollment became a constant tension between researchers who wanted to study classes that were more representative of the general public, and university administration that would rather not bear the cost of free tuition to diversify the student body (Newspaper Archive). I did find examples of early curriculum projects that addressed the neighborhood and its community, such as one in the 1940's aimed at developing better "interracial relationships" (Newspaper Archive). The school was opened for 100 students and an additional 200 children from the neighborhood to interact through a variety of structured activities. The planning of this event suggests that the school was not familiar nor closely related with the community in which it resided.

When the university sold the school to the Department of Education and the building became a public elementary school, parents created a charter for the original school and reopened in a wealthier neighborhood. At this time, the city built housing projects across the city to accommodate families moving into the city, like those built near Parkside Elementary, and the school soon reached full

capacity. By 1950, it was reported that the school enrolled 1,200 students comprising 28 nationalities, with approximately half the students being Black, and a quarter Spanish speaking (Newspaper Archive).

Avondale, the neighborhood around Parkside Elementary, has experienced extensive gentrification in the last 15 years. Schools like Parkside Elementary that are zoned schools are often referred to as neighborhood or community schools, but the racial, cultural and socioeconomic dynamics of a neighborhood are not always shared by its neighborhood school. In a report titled, "Segregated Schools in Integrated Neighborhoods" (Hemphill & Mader, 2016), researchers mapped and described the disparities between housing and schooling across all NYC districts and neighborhoods. Often, the student populations in neighborhood schools were often higher in students of color and students of lower socioeconomic status than the families living in neighborhoods where the school resides, which goes against commonly held beliefs that school segregation is primarily a product of residential segregation. By searching the researchers' spreadsheet for Parkside Elementary and the Avondale school zone's particular demographic comparison, I learned that Parkside Elementary is a case in point (or rather, an example that uncases this conventional wisdom). According to their data from the 2014-15 school year, Parkside Elementary students came from families whose household income on average is almost half the average for families living within the school zone, while the proportion of

Black and Latinx students attending the school is more than twice the proportions of those living within the zone.

It is a common initial unit of study in early childhood classrooms to center on one's neighborhood or community; but neighborhoods contain multiplicities, and often stratifications. Furthermore, students in one class are not necessarily coming from the same neighborhood. In uncasing the neighborhood of Avondale, it was clear that the students, parents, and resources they would bring into the classroom were not bounded by one area. The question of which students, within which neighborhoods, does a school and its curriculum cater to has long been an issue raised by scholars advocating for the redesign of schools and curricula for equity and justice (Baldwin, 1963; Chambers & McCready, 2011; Delpit, 1988).

Uncasing the District

Clare surveyed her room, the furniture still out of place from the summer. I recorded while she thought out loud about how to arrange the room for a "flexible" number of students. "I could conceivably have 30 children... I may start with 25 and then it may go to 28 and then go back down to 22, I don't know yet." In this section, I look at how students are enrolled into a "zoned" elementary school in NYC, and its effects on the materiality of the classroom.

The student body is not a fixed number. How many students will enroll, and the extent to which that number will fluctuate throughout the year, significantly impacts the organization of materials in the room. In addition, the

availability of extra materials, such as extra tables, chairs, folders, and bins significantly impacts how new students are accommodated when they do enroll mid-year. Before Clare met any of her students, countless negotiations were made on their behalf with her room and the materials and furniture it contains, as well as negotiations with other teachers, administrators, other materials available in utility closets, or even objects left on the street that Clare passes by on her way to school. These negotiations set the stage for several actor networks to form and, hopefully for Clare, remain durable when students arrive.

When school begins, students will take up their own negotiations with Clare, other students, the classroom and its materials. Some of these will form routines: they place their backpack into a cubby reserved for them; they find a spot to sit on the rug during meeting; they move a laminated picture of themselves from "out" to "in" on an attendance chart; they stand on a number line, sometimes on factors of 10; they assist the teacher in posting their artwork above their name written on a sentence strip on the wall; they manage their writing folder; they notice when the calendar has not been updated or when a new card is added to the schedule. In her attempts to intentionally arrange the room such that these routines could form, Clare also made contingency plans for the inevitable day when a new student arrives who will immediately need a cubby, space on the rug, the attendance chart, the number line and on the wall for their art, and a daily job like updating the calendar. The number of students has potential consequences for more than just folders and name cards, but large

pieces of furniture. For instance, Clare began the year with 21 students. When the 24th student enrolled, her cubbies, 4 sets of 6, were able to accommodate them. A 25th student, however, would require a new arrangement, either acquiring another piece of furniture, which could have cascading effects for the other areas of the room as materials are displaced, or settling for an unequal or unfeasible distribution of resources. As it turned out, Clare gained 4 students and lost 4 students at different and often unexpected times throughout the year. As she explained to me in the summer:

> I would like to start out the school year in terms of being able to be flexible and welcoming to new children where I feel prepared as opposed to 'oh my goodness, because this new child came in I have to realign the entire physical environment,' so I want to be prepared for that so I can embrace newcomers.

In these anecdotes and more, the materiality of the classroom must be able to accommodate an unfixed and uncertain number of young bodies. What, then, are the networks of relations that mobilize students into Clare's classroom in uncertain numbers? For this, it is important to understand the growing complexities of NYC public school system enrollment, particularly the Kindergarten application process. Generally, a "neighborhood" school is situated in a school zone in a school district, and these boundaries largely dictate where children attend Kindergarten. However, as was shown by the difference in children who live in Avondale and who attend Parkside Elementary, several mobilities complicate the notion of situating the school within one fixed zone or district.

In January of 2016, seven months before I began Clare and I set up her classroom, Kindergarten enrollment for the NYC public school system was opened, and the family of any child born in the year 2011 and living within the city limits could apply to up to 12 schools. The system, spread over 32 districts and five boroughs had 993 different institutions providing Kindergarten education in 2016 (NYCDOE, 2017a). This includes two non-geographic districts: District 75 for schools across the city that exclusively serve students with significant special needs (about half of these schools are co-located in other schools, while some are stand-alone). The second is District 84, primarily representing charter schools or schools that are unzoned. These schools may also be co-located within other public schools, and handle enrollment under a separate application system. Outside of the public system, there are also hundreds of private and parochial Kindergartens in the city, which have their own application systems.

The "NYC Kindergarten Directory," (NYCDOE, 2016) which the DOE publishes every year, states that most children attend their zoned Kindergarten, and with "some exceptions" schools are able to accommodate all zoned children that apply. Schools may accept applications according to their list of "Admissions Priorities;" for zoned schools this includes (in order of priority): living within the zone, having a sibling that attends the school, living within the district, and having been enrolled in the school's Pre-K program. Each district is divided into zones for the elementary and middle schools within the district, but

there are cases of overlapping zones, or zones that lie in another district, schools that share a zone schools or entire districts that are unzoned, so not every residence in the city is situated within one zone within one district. Community Education Councils in three districts voted to make their districts unzoned, or "choice" districts for elementary. More districts are unzoned for middle schools, and all high schools are unzoned.

For the 21 children who ultimately came to Clare's class on the first day, their families made this decision from varying sets of other trajectories. Within the zone for Parkside elementary, there was more than one choice of a public school with Kindergarten, and more than a dozen schools within the district. They could have also applied to schools in other districts, just as families from other districts could apply to Parkside. Within the district there were also almost as many charter school choices, which have their own set of enrollment procedures and criteria, as public school choices. There were also options for special programs within schools, such as Gifted and Talent programs within the district and citywide, for families that could navigate the standardized testing requirements. Private schools were also considerations for families who could afford tuition or manage to receive often highly competitive scholarship. These varying channels for parents of children born in 2011, like those who decided to enroll at Parkside, show that families are not necessarily confined to schools in their neighborhood, school zone, or even their district. Nonetheless, when families considered the channels afforded to them in January, the result was 21

children mobilized into Room 1 at Parkside Elementary in September, where a cubby, a chair, and a spot on the rug awaited them.

A school needs a student body in order to stay open, as its funding is tied to the number of students enrolled. While some zoned schools are highly coveted, some schools and entire districts "hemorrhage" (Hemphill & Sant'anna Costa, 2017) more students during morning commute than they keep for themselves, which leads to lower-enrolled neighborhood schools at risk of being closed. At the other end are schools, primarily in predominantly wealthier white and/or Asian neighborhoods that become so popular children are "waitlisted" for entry. The complex arrangement of zoned and unzoned, public or charter (or private/parochial), essentially the tension between parental choice and geography in the Kindergarten entry process is one that ultimately results in many students attending schools in many places despite where they live. It also leads to schools becoming more racially homogenous than the neighborhoods in which they reside (Hemphill & Mader, 2016).

Historically, Parkside has enrolled a student body ranging in number from over 2000 at its peak to less than 200 at its lowest. By comparing the enrollment for Kindergarten only of public and charter schools in District x using the NYC DOE's Demographic Snapshot data (NYCDOE, 2017a), I found that the number of Kindergarten students enrolled in charter schools surpassed the number of students enrolled in public schools by 2013, the year of Parkside's lowest enrollment. Concurrently, public school enrollment both district and

citywide were also declining. For Parkside Elementary, declining enrollments had been an increasing challenge, due in part to more charter schools competing for students, and often occupying vacant space in schools, and to more open or unzoned schools across the city. Just before I began my study, a proposal was announced to co-locate another university elementary charter school in a nearby public elementary school, which meant that within a tenth of one mile there would have been three schools with Kindergarten. However, this proposal, was tabled after community members spoke out against it. This is only the most recent example of how the student body of a school is produced over tense negotiations at the district level, and at times fights between parents, the DOE, and other interested parties.

What the history of the school, the neighborhood and the district convey is how contentious and fragile the identity of a school can be, and how a list of its features, rather than its networks, can produce an "air of stability," (Lefebvre, 1991) that doesn't reflect the dynamic changes and tensions that impact the school daily.

Uncasing the "Official Curriculum"

Curricular trends in NYC schools, and the way that curriculum is talked about more generally, have been highly mobile over the last two decades. One easy way to see how trends have changed is to compare an early edition of a popular review of schools for parents shopping for Kindergarten, *New York City's Best Public Elementary Schools: A Parents' Guide* (Hemphill, 2002) with its most

recent edition (2016). In 2002, terms related to reading curriculum are whole language, phonics, balanced literacy, and basal readers. For writing, terms such as the writing process, invented spelling, grammar and penmanship are listed. Mostly, these terms do not reflect specific materials, but philosophies and methods for reading and writing instruction more generally. In the 2016 edition, however, the terms mentioned are almost exclusively commercial curriculum programs. Hemphill explains how in 2012, New York state became one of the nation's first states to adopt Common Core Standards, and in 2013 the NYC DOE, "hastily purchased new textbooks that publishers claimed were aligned to the standards." (p. 14) The choices in aligned programs for elementary schools were ReadyGen, Core Knowledge, and Expeditionary Learning. The Teachers College Reading and Writing Project, another program mentioned by Hemphill because, once, it was once mandated across the entire school system, was notably excluded from the city's list. ReadyGen, a brand new program unfortunately named, was the most commonly adopted but was not *ready* to be sent out to the schools at the beginning of 2013-14 school year, despite the DOE's insistence on schools adopting it due to its alignment with Common Core Standards (Anand, 2013).

Two years after the NYC DOE made implemented these curricular reforms, Parkside Elementary reformed its school mission statement to return to "progressive education," described as "inquiry-based" and as a "joint venture" among students, parents and teachers. Thus, Parkside broadened its notion of

curriculum to a network of local actors, within a larger school system that was

narrowing curriculum to a list of commercial programs, and to a notion of

curriculum that is largely material. The tension between these two conceptions

was further revealed as Clare began to show me more of her classroom.

Clare, despite only having taught Kindergarten for one year prior, had

been given a wide variety of commercial curricula for many subjects. After

talking about the furniture in Clare's classroom, I followed her into the classroom

closet, and she pointed to the largest stack of materials.

> This, from here to the floor and from here down are curriculum
> materials that were just given to me, and I wasn't really given any
> instruction, it was just stuff... and then I kept being given more and some
> of it I've integrated, including this... and probably this...

It is a misnomer, really, to refer to this particular tower of materials as

"curriculum" as it was clear by the way Clare spoke that all the contents of her

closet and classroom have curricular potential. What she is referring to

specifically in this moment are commercial materials, or curricular programs

adopted and purchased by the school, often through the recommendation or

guidance of the NYC Department of Education. In Figure 7, FOSS science

curricula are most visible, but throughout the closet were traces of several past

reading curricula. Some traces were as small as a sticker on a book, a mixture of

leveled readers—short paperback texts written with limited vocabulary, and

sometimes with a repeated phonetic sound, for practicing reading (see Goodman

et al., 1988)—from several different programs, a book labeled with an

Accelerated Reader level—a program where students collect points after reading

books of varying levels and taking a comprehension test—or stacks of teacher

guides like the *Units of Study*—a reading and writing program created by the

Teachers College Reading and Writing Project that employ a "workshop" model

to the curriculum.

Figure 7. The tower of commercial curriculum materials.

Throughout the year, I would witness some of these materials brought out

and used. On one occasion in October, Clare collaborated with the other

Kindergarten teacher on a science lesson using materials from the FOSS kit, a

commercial science curriculum, on wood. The *Units of Study* for writing was the

most prominent "official" curriculum used, with many pages in the teacher

guide marked with post-its or dog-eared. The *Units of Study* for reading,

however, which arrived midway throughout the year, was added to the closet,

and remained in its plastic at the end of the year. Much of this will be elaborated

on in the next chapter, but here, I trace how system-wide changes impacted

literacy curriculum at Parkside Elementary using interviews with Parkside

Elementary's principal and past school reports and official documents[2] obtained

through internet archives.

Mr. Gibson, an African-American male, became the principal of Parkside

Elementary in 2011. At the time, the school was under close watch by the

superintendent and DOE officials because of low enrollment and struggles to

meet Adequate Yearly Progress goals as measured by test scores, as mandated by

No Child Left Behind legislation. The school faculty, according to Mr. Gibson, used

a "mix of things" for reading curriculum, or rather when he asked teachers what

curriculum they used, they said "balanced literacy," again not referring to a

particular set of materials. They mentioned materials from the 100 Book

Challenge and "some elements of TC [Reading and Writing Program]." In other

words, teachers integrated a variety of materials into their reading curriculum,

much like Clare described integrating pieces from her stack of curriculum.

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[2] Recent documents are publically available on the DOE website, but I found older documents going back to 2005 using Wayback Machine (an internet archive). [Valerie Kinloch (2010) cites these kinds of documents in a general format so as to not reveal the school, just need to double check how she does that, though. But also, since I'm relying on a lot of documents that I cannot fully cite I wanted to write a memo about my methods.]

In a span of four years, Parkside then went from using a variety of materials to adopting *Journeys*, a basal series by Houghton Mifflin Harcourt, to adopting *ReadyGen*, a Common Core aligned program by Pearson Education Inc., and then the Teachers College Reading and Writing Project's *Units of Study*. Adopting a "progressive" mission statement in addition to the latter programs raised tensions around what adopting a curriculum program actually meant in practice: the extent to which reading curricula necessitated having a "literacy block" rather than literacy being integrated throughout the day, and the extent to which same-grade teacher teams should be on the same page of the curriculum.

The tensions in how the materiality of curriculum was interpreted, as programmatic or as constructed, between the school and the DOE were also reflected in reviewing the school's past Quality Review reports. The Quality Review is a system by which a team of "experienced educators" on behalf of the NYC Department of Education evaluate a school's ability to support student learning. Over time, the rubric by which schools are evaluated has changed to reflect other reforms the DOE has adopted, like Common Core Standards. This is evident in looking at how the first bullet, "quality statement 1.1" has changed in 2008, 2012, and 2015 versions. In 2015, the current version, the Quality Review rubric asked the question:

> Do schools ensure engaging, rigorous, and coherent curricula in all subjects, accessible for a variety of learners and aligned to Common Core Learning Standards and/or content standards?

Mr. Gibson expressed in our interview how this wording, and its interpretation

in actual school walkthroughs, made it difficult not to adopt an explicitly CCSS

aligned curriculum without it having an impact on the school's evaluation.

By contrast, in 2012, question 1.1 was:

> To what extent does the school regularly design engaging, rigorous, and coherent curriculum, including the arts, physical and health education, for a variety of learners and aligned to key State standards?

Here the question positioned the school faculty as designers of curriculum, with

the responsibility of connecting it both to diverse learners and standards. And in

2008, the first question was not about curriculum at all, but rather about data

management on student performance and progress. A later question on

curriculum asked whether schools, "provide a broad and engaging curriculum,

including the arts, to enhance learning both within and outside the school day?"

Written notes in two of Parkside's Quality Reviews of the late 2000s did not

address curriculum or materials directly.

In this same time period, a paragraph on the school's curriculum in

Parkside's School Comprehensive Educational Plan (CEP), a system required

school produced annual improvement plan, only discussed class subjects,

specifically how the school had surveyed students to see what extra subjects they

were interested in the school providing, which lead to a decision to add music,

along with swim lessons, and dual language programs. The explicit mention,

then, of curriculum aligned to specific system-wide mandated standards was

unique. Furthermore, CEP documents between 2011-2015 explicitly addressed

the rationale and funding source behind adopting specific commercial curricula for reading, academic intervention, and ELL services. However, the focus on commercial programs was not a result of Quality Review mandates, as union guidelines in the current Quality Review rubric state:

> The Quality Review Rubric has no stance on what curriculum a school has selected or developed. Whether a school has purchased curriculum or is developing its own, the assessment of Quality Indicator 1.1 focuses on purposeful decision-making regarding a school's curriculum, the effectiveness of planning to meet students' needs, and the degree to which all students have access to challenging and rigorous learning experiences.

These tensions in how notions of curriculum change matter, especially for how it has changed the materiality of elementary classrooms. When Parkside was due to have an official walkthrough, a group of educators entered the school with clipboards or iPads, looking for evidence of a list of "quality statements." The inclusion of language specific to Common Core learning standards cued teachers and principals to make this language as readily visible in classrooms to reviewers as possible. For instance, in December, when word got around that the superintendent would be conducting a walkthrough, Clare hung an anchor chart over the science table using fishing line. She consulted with a "learning environment checklist" she received in a previous year. It listed a data binder, content focus walls, a daily schedule "displayed outside my door in a sheet protector," lesson plans "readily accessible near the front door of my classroom," and content vocabulary as items that should be visible in the classroom. The compiled evidence of the review was then summarized and published on the DOE website.

Figure 8, Anchor chart supported by fishing line.

The results of these reviews have real impacts for schools. The "quality scores" of the reviewers are added to other public documents previously called "school report cards" which came with letter grades like restaurants, now called "School Quality Snapshots." These reviews also get added to the NYC Kindergarten Directory mentioned in the previous section. Other organizations, such as independent school reviewers, real estate agencies, and other media will also republish these reviews as a way to advertise or discourage families from that school, impacting a school's enrollment, and possibly the families choosing to live within the neighborhood.

Learning Environment Checklist
School
School Year: _____ -_____

Teacher:

1.Room Environment/Artifacts/ Evidence	Yes	No
I can show Evidence of ongoing student assessments (teacher made, formative and informative assessments, etc). My Data Binder/Conference Notes and student work folders are available and located in an accessible area.		
The content focus walls are complete and up to date.		
I have evidence of procedures used for checking for understanding (before, during and after the lesson) displayed in my classroom.		
My daily schedule is displayed outside my door and is inside a sheet protector.		
I can provide evidence of lesson plans that reflect differentiated instructional strategies that include data driven student centered tasks. (Rigor)		
My lesson plans are readily accessible/available and easy to locate near the front door of my classroom.		
My lesson plans include opportunities for students to engage in **rigorous instructional conversations** with their peers.(Turn and Talk)		
Current student work (**within the last 30 days**) is displayed in my classroom and on my bulletin boards with teacher feedback that reflects the displayed rubric.		
I have provided students with teacher feedback that reflects the identified areas of growth and achievement based on the rubric.(glows, grows and next steps)		
All student work displayed on bulletin boards is accompanied by a rubric.		
Anchor Charts are displayed and reflect the *current learning focus.*		
The Teacher/TA work space is neat and orderly.		
2. Teaching and Learning (What are we doing in the classroom?)		

Figure 9. The Learning Environment Checklist.

For teachers like Clare, these outside forces influencing the look and organization of the classroom can be overwhelming, but teachers are also capable of orchestrating counter networks to reclaim classroom space. As Clare and I came out from surveying the piles in her closet, afternoon sun shone brightly through her classroom windows, which evoked in her a related story. While the room's tall ceilings have fluorescent light fixtures, they were rarely used, as Clare preferred natural light. In many classrooms, though, with increasing demands of displaying student work and artifacts of the curriculum, windows become usable

real estate for large chart paper, KWL charts (what I Know, what I Want to

know, what I Learned), etc. In my mini-study, I observed a Kindergarten

classroom when consultants interrupted class instruction to advise one teacher

on how to prepare her room for an upcoming walkthrough. One of the

consultants advised her to place a chart from a social studies unit over what little

window space she had left. Clare told me,

> So in this building are [two other schools]. And one got money to do the
> lights and blinds in their part—oh I know where we could put those
> things—well what the principal found out was if those kinds of changes
> are made, then it has to be made building wide. I don't know if it was
> 100% of the money or subsidized by the DOE or from another stream, but
> they had workers come in at night time and all through the weekend to
> install the lights. I don't love these lights because they're very very bright.
> It's hard to notice now but the blinds are really elegant and remember
> when I was talking about anchor charts and teachers would keep these
> [blinds] closed so the kids would not get 'distracted,' and they'd use the
> blinds to put charts on. There is now a rule that you cannot tape or put
> anything on these blinds, because it will damage them, so as a result of
> that it will change the entire look of the school. When you walk in now
> you're looking out windows instead of anchor charts anymore.

Because of this, the windows in Clare's room exposed the sidewalk, street and

the park outside the building, allowing a variety of sights and sounds to enter

the room. A parked ambulance filled the room with dancing red lights across the

white walls one afternoon. Music from a passing car inspired a student to begin

singing. Light from a setting sun changed the entire look of the room daily. Clare

kept her windows uncovered, embracing the unexpected intrusions of the

outside from inside the class (Ferguson & Kuby, 2015), and in doing so, fulfilled

one of her key themes of a progressive curriculum, having an outdoor classroom,

and bringing the outside inside for further inquiry.

To conclude this section, the stacks of materials in a teacher's closet can serve as a veritable archaeology of curricular history in the school, and this archaeology can still act on the classroom; rather, it can still enact. For Parkside Elementary, as with many schools today, rapid reforms have produced a flow of materials into classrooms, only to be abandoned in a year or two. Consider this one goal statement written in Parkside's 2010 CEP:

> Teachers will be provided with more support in implementing Balanced Literacy and Readers and Writers Workshop to move away from using a predominantly basal approach to teaching reading.

The next year, at the request of the superintendent, the school adopted a basal program, which in the next year, was deemed insufficient and "not rigorous enough" for teaching Common Core standards, which led to adopting ReadyGen. In another two years the school returned to where they began, teaching Readers and Writers Workshop. For Mr. Gibson, this signaled to a larger problem regarding equity in public education:

> Schools that probably are performing in a more successful way as measured by state tests, you'll notice that they don't change their curriculum. But in schools that have like these real torrid histories of low performance, the one common element is that every year they're throwing something new at teachers to learn. So since I've been here, they've gone from having no curriculum, then we had Journeys, now we have ReadyGen, and now we're trying to introduce TC Reading. But in six years four programs... when do teachers have an opportunity to really learn and you know, deal with as the superintendent says "the muck" of understanding what with this philosophy means so that I can become a better teacher and teach my kids.

It was to my great surprise, then, that I only saw scant traces of ReadyGen, Journeys, and other commercial reading curricula in Clare's closet. One main

reason for this opens up another case around grade levels, and the tenuous boundaries between Pre-K, Kindergarten, and 1st grade, discussed in the next section.

Uncasing the Kindergarten Classroom

Clare entered early childhood education later in life after several other careers including owning a clothing business, being a doula, and managing a day care center. She attributes much of her early influence in early childhood education to a close friend and mentor, a career educator who lived in the same building and whom she shared many conversations on teaching. Clare began at Parkside as a Pre-K teacher until she was asked by the parents of her students to move with the children to Kindergarten and continue to foster a progressive early childhood environment. Citywide, some schools were experiencing a backlash to all of the new standards and testing brought with Common Core reform such that the parents in one Manhattan school boycotted the new state ELA test. For Clare, part of the desire for progressive education by parents was a resistance to the heavy inundation of standards, levels, and testing of their young children. Or, as I remarked to her during our first discussion, that she was "trying to keep 1st grade out of Kindergarten" by the request of vocal parents who wanted to keep a Pre-K style of education in Kindergarten.

"Pre-K for All" began in New York City in the 2015-16 school year, under a new mayoral administration that had not been in place when the citywide Common Core standards and aligned curricula were adopted. While there was

some discussion by DOE officials and others discussion around the focus Pre-K's curriculum, as well as a document circulated by the state titled, "PreKindergarten Foundation for the Common Core," the demands on Pre-K teachers were different than their elementary grade colleagues. There was no Common Core aligned curriculum mandated, and a revamped teacher evaluation system did not apply to them. In this more open space for teaching and learning, ideals of progressive education could be enacted more freely, offering greater teacher and student autonomy in the classroom. When parents of Pre-K students at Parkside spoke to Mr. Gibson about allowing Clare to move up with her class and continue her "progressive" style of teaching in Kindergarten, it also gave her permission to keep her room and its aesthetic as it was, an environment "more aligned to the philosophy of pre-kindergarten."

Clare's room was filled with objects and furniture she collected, often off the street or that were "left in the hallway." Clare also allowed students to collect materials on walks in the park and bring them to the room for inquiry throughout the year. Next to her room in a cranny at the end of the hallway near a stairwell, teachers or custodians often left unwanted items. Two media carts became a new shelf for her closet. A SMART board was attached to a rail to become a sliding white board for her meeting area. These flows of materials were radically different mobilities of materials that became "official" curriculum in this "Pre-K environment" as opposed to the commercial curricula of other grades.

Still, commercial curriculum materials were delivered sporadically throughout the year. On one return trip from the park, we found a stack of *Fundations* workbooks, a phonics program, left on one of her shelves (Clare presumed it came from a custodian who occasionally purges materials from a supply closet in the basement). Another day, custodians brought boxes of *Go Math* workbooks in on a cart, and Clare found another empty shelf for them to pack it in. She would later copy pages of some of the workbooks to send home with children of parents who requested more "homework," but were otherwise immobilized by storing them away.
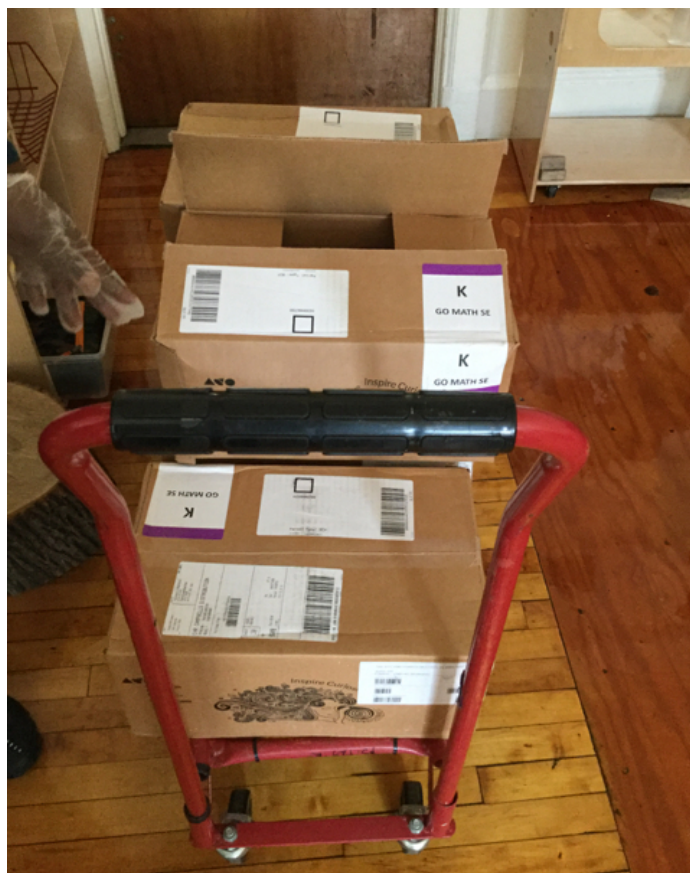
Figure 10. Math curricula delivered, September 2016.

Uncasing the Teacher

Another case hangs over the notion of "teacher," since Clare is not the only teacher, so to speak, of her students. The presence of several other adults throughout the day complicate notions of being an autonomous teacher. For instance, on any given day Clare is also negotiating her work as a teacher with that of her teacher's aide, and a student teacher, so they too may also get "teaching experience." If Clare must attend a PD or other meeting, she must consider what instructions and activities to leave for the person assigned to "cover" her class, which may be the ELL instructor or a substitute. Everyday, students are taken to the gym to be in the care of another adult. Beginning in the spring, before lunch, a "coach" from an outside organization takes over the class to engage students in "recess play" as required by the school administrator, who is another adult acting on students. Almost daily, Clare is interrupted by another adult, another teacher looking for glue, an office assistant needing to schedule time for her class to use the auditorium for a rehearsal, visiting professors, people who work as custodians, officials asking about "data" and so on. Visitors also request attention through the intercom, the fire alarm, and the class phone. In each instance, Clare must negotiate a response, which will either concede the students' attention to this person, or tactfully end the contact. "Can I email it to you this afternoon?" is how Clare responded to a request for data, while pointing to the children at the rug. Another day, she said to a ringing phone, "I'm making a choice not to answer you." At 11:00, custodians delivered the lunch and

returned at lunch time so Clare could take a break. On other days, Clare would give her seat at the rug to representatives of art, speech therapy, music, gardening, recycling, and a host of other groups the school had contracted with to supplement the school's curriculum. Each adult came in with their own sets of materials, some of which continued to occupy wall or closet space once they left, and these requirements of time and space added extra threads that Clare then searched for ways to weave into the rest of the curriculum. But to connect these programs to the rest of the class work required several negotiations between her and these other adults.

Administrators also become highly entangled in teaching. During my observations, the assistant principal (AP) and the principal observed formally and informally. They joined in conversations, interjected with questions (in person or through the intercom or phone). As previously noted, superintendents and other DOE officials also became entangled in teaching when it was known they may be conducting a walkthrough. Many educators are familiar with the adage of "shutting your door" and doing what you believe is best despite opposing demands from anyone outside that door. In this way, the door is delegated the power of guard or watchman (Latour, 1988). The door is also not the only way to get into the classroom for surveillance purposes. Two-way intercoms are installed in the room with a switch on the wall that allows someone in the office to hear the classroom. Clare's daily planning was often filled with considerations of how the work of other teachers entering her door

can fit into her own work, or sometimes, how her work is interrupted by that of others who enter the classroom, and, intentionally or not, become an actor in the teaching of her students. However, as I will discuss in the next section, Clare attended to the materiality of her classroom for ways that materials could be delegated some of this work, which was an important function in stabilizing the curriculum network.

In uncasing the site, I have sought to describe the context of my study not as a classroom situated within a school, in a neighborhood, district and school system, but to expose the networks of actors that actively make and unmake these cases. In doing so, I am prepared to argue that enacted curriculum does not occur within this context, but as a result of it. Lenters (2014) expresses an increasingly prevalent issue raised in qualitative studies, that, "in an increasingly globalized world connected by technologies of literacy, defining and isolating a situated practice of literacy is becoming increasingly more difficult" (p. 54). In the uncasing of my site, then, the making and unmaking of the school, its mission, grade levels, and teachers, is an effort to show how no case is isolated, nor fully contextualized by another. It is to argue, as Latour, that "nothing can be reduced to anything else, nothing can be deduced from anything else, everything may be allied to everything else" (1993, p. 193).

In the next section, I further go into detail of my ecological survey of Clare's classroom, tracing out from the materials present networks, often related to the networks revealed in the uncasings.

Classroom Materials: An Ecological Survey

As previously stated, before a teacher interacts with students on the first day of school, they must interact, come to terms with, and do something with/about the materials present in their classroom. In this section, I describe some of the materials found in Clare's classroom prior to the arrival of students, sharing accounts from fieldnotes and recordings taken during my ecological survey as to how she interacted with them. I describe both how materials were mobilized into the classroom, as well as their mobilizing power in regards to enacting literacy curriculum throughout the year. Many of the actors that first mobilized the materials connect to the previous networks described in uncasing the site, including the history of the building and the dynamics of the school district and neighborhood. In doing so, they address my first research question regarding how materials are mobilized into the classroom, and these mobilizations set the stage for discussing how curriculum was enacted once students arrived.

Tables and Chairs

Clare's room was occupied with furniture for both Kindergarten and Pre-K classrooms. It was Clare's second year of teaching Kindergarten, after having taught Pre-K in the classroom. Much of the furniture was kept from the Pre-K room, with some chairs and tables exchanged the next larger size. Clare also intentionally wanted to retain the look and feel of something between Pre-K and

Kindergarten, as the reason that she moved grades was due to parents wishing to continue the "progressive" style of teaching in Pre-K with Clare into Kindergarten. The parents lobbied the principal, and this began the school's rebranding as a progressive school. Thus, Clare's classroom, too, was a "complex of mobilities" (Lefebvre, 1991) contesting territory over where the line between preschool and school begins, as well as the line between "official" and unofficial literacy curriculum. As we arrange the tables, Clare considered what "area" of the room they would come to represent. She started with an art table, writing table, science table, math table, and tinkering table, along with a block area, pretend area, meeting area, library, and cubby area. Clare's tables were a mixed collection of tables she personally requested, to others purchased with "Pre-K for All" funding that she ended up with and later traded with another Pre-K teacher. They are not uniform across the school, and so collecting these pieces took time and "diplomacy." Which table to use for which area—older ones or newer ones, rectangle or round, tall or short—was considered in relation to the size of children's bodies and the number of chairs the tables can sustain. For instance, she explains,

> I used to put 5 [chairs at the round table] but if you were entering the room from Pre-K because if you ask students to tuck in their chairs, you have this thing where it doesn't fit [points to the four legs of the table].

Their ultimate arrangement was also contingent on how many students she must accommodate. Some chairs, however, were brought in by Clare herself. Clare often began morning conversations with, "as I was walking to work today," a

time that she thought about her plans for the day, or sometimes found something on the sidewalk to bring into the class. Clare's relations and intra-actions with the neighborhood often manifest in new ideas for room arrangement, or new materials themselves. As we pulled materials out from the pretend house in the corner of the classroom, Clare began telling me about three wooden chairs.

> Now these are nice chairs, they are oak chairs that I scavenged from [another elementary school] I often walk by. My husband and I have this thing with wood, he actually came home with 8, and we gave some away but when I came here I knew [the principal] wouldn't let me order wooden chairs.

Figure 11. Solid oak school chairs, salvaged from the trash.

Next to these chairs were, tree trunks sliced and cut into half or full cylinders came from Clare's brother's neighborhood in upstate New York and were used as seating (and speed bumps). For Clare, wood was an aesthetic that

could make her room feel a certain way to visitors that entered. Wood could also

become a "provocation" according to Clare, inviting a noticing of characteristics,

properties, and the forming of categories. Later in the year, the addition of a tree

from the neighboring park would complement this aesthetic.

The blackboard

Spanning the far right wall, in front of the walk-in closet, was a

blackboard layered in rolls of bulletin paper. Clare began to tear the paper away

to show me what was underneath. The fact that the chalkboard underneath the

paper was magnetized, and the opportunities that afforded her if she cleaned the

paper off, came quickly to Clare, who was able to enroll my fingers and those of

her husband, in picking, peeling, and scrubbing the board clean of years of paper

and glue. By the first day of school, all that remained were what appeared to be a

few letters, JAC, scratched into the surface, perhaps from Jack, a student long

ago. Now, as opposed to a bulletin board where items were affixed to paper with

tape or glue, items could be held with magnets allowing for freedom of

movement, and the surface could be written on and erased.

Classroom boards have traditionally functioned as a text, but their material

differences afford different possibilities for the mutability of text. Chalk and

white boards can be changed daily, while bulletin boards are typically slower to

change. SMART boards or projectors are capable of turning a board into a digital

space with capabilities to save and upload new texts. What this wall in Clare's

room became throughout the year is emblematic of the mobilizing power of a

board to enroll others in a variety of curricula throughout the year.

Figure 12. The original blackboard covered in paper.

In NYC elementary classrooms it is an unofficial requirement that

classrooms display a word wall. "Snapwords"—words that students can learn to

read by sight, or, 'in a snap'—may be introduced as an element of "word work"

and then placed on an alphabetized word wall as an aid for students to spell

common words. Clare came across a book, *Words Their Way*, which she borrowed

from a 1st grade teacher, noting that she had adopted some of the language from

it, like "snap words," to prepare students for things that may be more prevalent

in subsequent grades. However, Clare did not want to use the blackboard for this

because it was too high for students to reach. A better solution for snap words

was for students to be able to take a card with the word they need from a pocket chart, to their desk to avoid students needing to make several trips as they try to spell the word letter by letter. The blackboard becomes a Name Wall, instead, with the names of all students written and colored, with a corresponding picture of the child.

Knowing each other's name is important, Clare would remind students during meetings where they routinely sang, "say your name and when you do, we will sing it back to you!" When some students began saying their full name, last names were added to the wall. Later, when students jokingly said a different name when acknowledged at meeting—Hulk Smash, Elsa, Spiderman, to name a few—nicknames were also added.
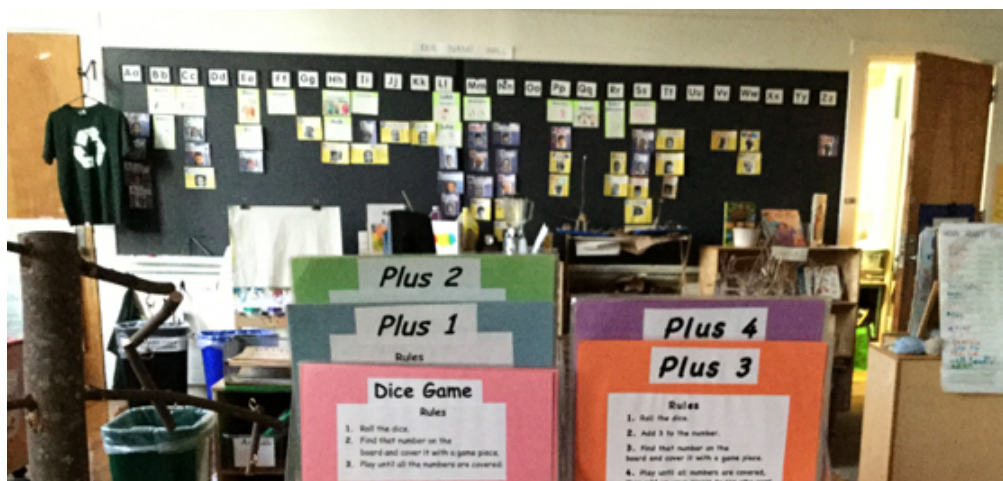
Figure 13. The "name wall" on the blackboard, in the background.

Names were organized by the alphabet, printed upper and lower case, laminated, and stuck to the board with a magnet. As some letters, like L and S, gained many more names than other letters, the line of letters was moved up to

the top of the board to accommodate more space, and the board, more than a

word wall, resembled a bar graph, allowing students to count how many names

started with a particular letter (this became another activity with the board).
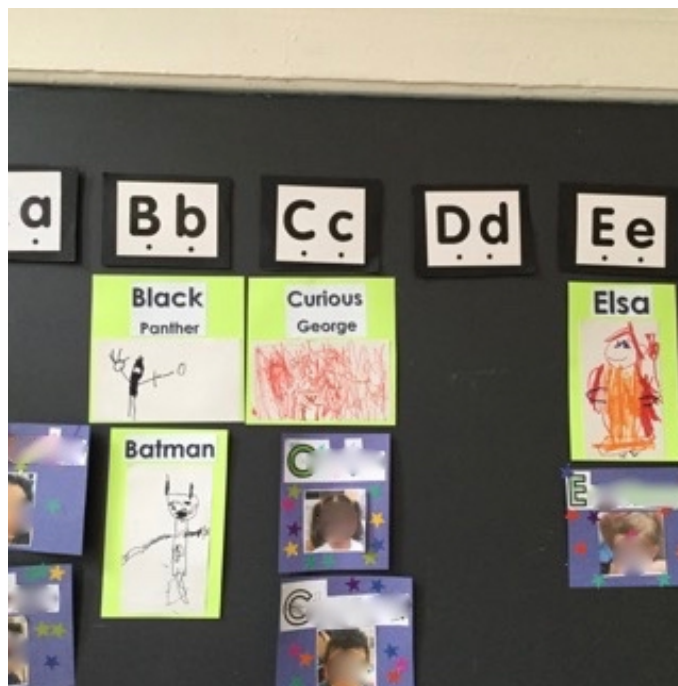
Figure 14. Nicknames added to the "name wall."

At the end of the year, the board was used to map the major curricular

units of inquiry the class had taken on. Five main units of inquiry were anchored

on a time line, with lines branching out from each unit of different projects

and/or mini-inquiries done by students around that theme. While Clare had

hoped to create this kind of curriculum web with students throughout the year,

we pondered ways that connections across units and activities could be

displayed on the chalkboard.

The SMART board

Before the end of last year, Clare salvaged a SMART board on an easel, from the corner of the hall where unwanted items are left. Her idea was to take it off the easel and attach it to the front wall of the classroom where the meeting area would be. Eventually she was able to pay maintenance workers to install sliding rails she purchased at a hardware store. When slid away from the meeting area, a shelf built into the wall would be available. Rather than plug in the board (which would have been difficult as there were no plugs on that wall), she wanted to put large sticky notes on it for meeting. Similarly, Clare created a shelf for her closet, with the help of a custodian, by bolting one media cart on top of another and removing the wheels. The carts still carry the label LMC, which stands for library media center. The school library was terminated years ago.
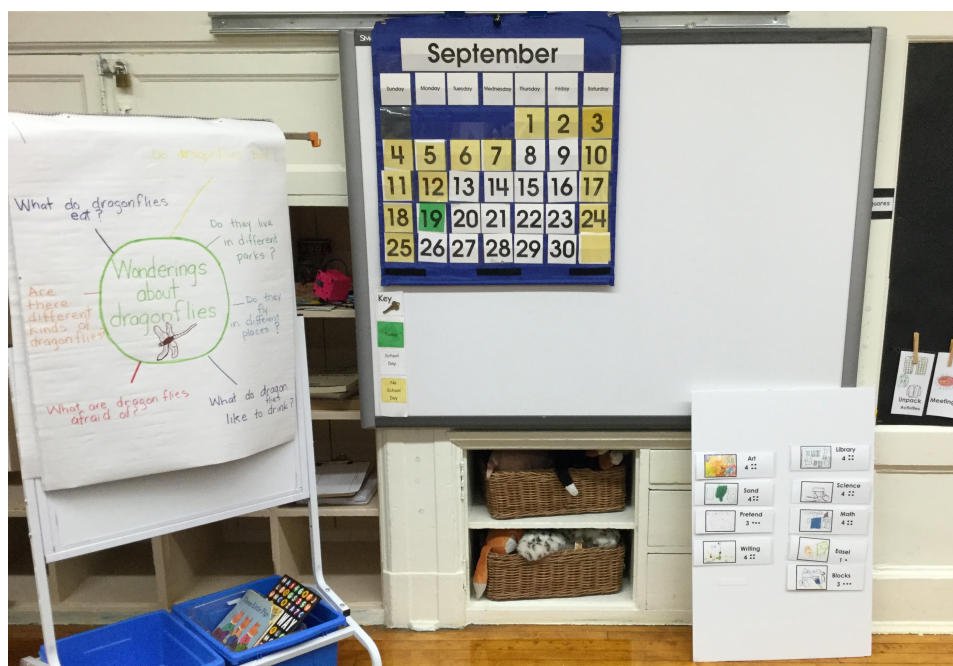
Figure 15. The SMART Board repurposed.

Later, Clare would decide that a more functional meeting area was in the middle of the room. From the back wall, she could run the projector with minimal distance for an extension cord, and project onto a wheeled chalkboard that she borrowed from the science teacher. This chalkboard allowed for one side to be blank, optimal for a projection screen, and the other side to display something, such as a story outline, a map, or a piece of art. However, the screen also became a site for shadow play when children discovered their shadows while the projector was used. In the figure below, children are pretending to be trees in the wind with scarves, their shadows displayed over tree-themed art from four seasons, while Antonio Vivaldi's *The Four Seasons* is played over a Bluetooth speaker.

Figure 16. Shadow play and art projection on the repurposed SMART board.

Picture Books

In lieu of using one official reading program, Clare made plans, and also enlisted my assistance, to organize her large collection of picture books. On the second day of setting up the classroom, Clare and I went through her picture book collection in her closet to organize them into loose categories, select some to begin her classroom library, and those she was ready to cull from her collection. For this activity, too, I recorded as she commented on several books regarding possibilities for use, where they came from, and many things she didn't like about certain kinds of books.

Figure 17. Books stacked in the closet, August 2016.

Conversations ensued much like the following excerpts:

Clare: How about this? Another DOE one… and this because it's kind of NYC neighborhood and Spanish.

Me: this one on eating might be about family?

Clare: Yeah that's one of the DOE ones, remember when we had that conversation, about DOE books that they spent a lot of money on?

Me: yeah that have a special label.

Clare: They do… There's not a lot of good books about fathers.

Figure 18. Books with "DOE" labels.

There were a variety of characteristics of the books we looked through that triggered responses from Clare: length, themes, language, her opinion of the author, representation of racial groups or families, or potential connections to class routines, jobs, or potential class inquiries. In doing so, Clare essentially

considered what was *translatable* of a potential encounter of a child with a book,

or Clare reading that book to the class. In other words, how could a book and a

child be affected by encountering each other, and what possibilities for

curriculum could result from those affects. Below, she discusses opportunities for

her students to be able to see themselves, their families, or their own cultural

experiences in books.

> Clare: *The Ugly Vegetables...*
>
> Me: it's about a girl who comes to appreciate the food that her mother cooks, after kids at school told her her lunches looked weird.
>
> Clare: that does come up actually when kids bring lunch to school. I had it happen last year.
>
> Clare: This has dark-skinned people in it which is nice.
>
> Me: Is that your book or a school book?
>
> Clare: I can't tell anymore honestly. I like that there are different kinds of people though...
>
> Me: *The Relatives Came...*
>
> Clare: You know why I have a problem with this one, even though it's kinda fun? It's cause it's kinda too Anglo-looking and a little too specific, kinda like when someone says, 'did everyone go to the beach this summer?' That's my same kind of thing."
>
> Me: Interesting that it is also mentioned in literature on Writers Workshop a lot [which Parkside had adopted, and Clare would be implementing], specifically the work of Cynthia Rylant as being quintessentially good writing and useful for studying craft.

She rejected books that introduced notions of bullying, and that had weapons.

After seeing a gun in one book "I can't picture myself ever using it." On *Snowy*

Day,

Clare [to herself]: Why would I bring this out now? Because he's Ezra Jack Keats. A lot of the kids know this. There should be one of his I think.

Me: Whistle for Willy is just a nice story. Snowy Day is too but it won't be snowy at the beginning of the year...

Clare: Over in the meadow, oh that's just illustrated by him… Googles, goggles, haha.

Me: Does that have to do with wearing glasses.

Clare: I would prefer if we can not start with issues like bullying.

In sorting, Clare mentioned finding books from a variety of places: from her son's collection, from friends that work at publishing companies, from a "reading recovery" box left outside a teacher's door, and from sets purchased by the DOE. Clare made quick decisions on which books could potentially connect with students at the beginning of the year for a variety of reasons, and which ones she could let go of. We created a stack of books that she deemed ready to cull from her collection, and hoped to eventually organize her entire collection so she could easily locate a book when the moment struck. Broken and limited shelving in her closet posed some difficulty in doing this, however.

Little of this experience sorting books intersected with any current or previous reading program. In other words, the literacy curriculum networks were heavily influenced by Clare, and classroom library activity was heavily influenced by students' choices, which effectively *immobilized* commercial reading curricula, relegating it to the closet for much of the year.

On this day in Clare's closet, all the basals and leveled books from a variety of programs were not carefully examined but rather placed in a box and

stored above the shelf. They would not be touched again until in November, when Clare was pressured to do more explicit teaching of reading in a manner that aligns with the other Kindergarten teacher. While the school was technically adopting the *Units of Study* for reading and writing, Clare had never received the teaching materials for the reading program, but after a superintendent walkthrough, Clare was told to start doing more of it, including using leveled readers for guided and independent reading. It is here where relics of past curricula: basals from *Journeys* and *ReadyGen*, intersected with Clare's classroom library, and independent reading time. This indicated how Clare's reading curriculum, and in particular the books and requisite literacy activities she made available for students while heavily curated by her, were also connected to distant forces seeking functions such as curriculum alignment and accountability.

Figure 19. Leveled readers in the library.

Figure 20. A student reader by *ReadyGen* found in Clare's box of basal readers.

Conclusion

In this chapter, I have endeavored to uncase several features of my research site in order to remove any "semblence of rigidity" (Lefebvre, 1991) from the case. Schools and their classrooms are highly dynamic, and especially in an urban area like New York City where neighborhoods also rapidly change, it would be inaccurate to depict the setting as stable. I have also provided examples that warrant further consideration on how teachers interact with the materials culture of schooling (Sørensen, 2009), and also how the "debris of history" (Lawn & Grosvenor, 2001, p. 127) lingers and acts on the present in the classroom.

Clare makes it clear that the kind of curriculum she wants to facilitate for her students requires a vast collection of materials to sustain it.

So one of the things I tried to do last year but was not successful is web out the whole year how I started and got to the end. And that back closet is my beginning stages of action of the work, it's compiling things the way researchers like you do, is I have to spread everything out and then pull from there materials that will be linked to the children's interests. That's why that looks like that, its where I accumulate things, try and get rid of things, and that's going to be years in the works… cause there's so many directions, but those materials back there are allowing for all the directions, cause for young children we need concrete tangible objects.

In light of this, Clare's closet functions less as a repository for abandoned materials and more as a circulatory system for enacting curriculum. Materials are curated such that at a moment's notice, it can be brought out to facilitate an activity, or make a connection.

Clare is also aware of "synergies" that come from combinations of materials. Carpet squares donated by a parent made her classroom library more inviting to students. A salvaged lunch tray or piece of wood fit perfectly into a shelf of another salvaged piece of furniture, becoming a tray that can move materials from the shelf to a table, which then officially became a "science area" where specimens can be pulled out from the shelf on the tray, and taken to the table for further examination. Yes, it is fair to say that there is a "design" element (Kress, 2000) taking place, but it is a collaborative effort between the teacher and inherited/bought/salvaged/prescribed materials. It is among a company of designers.

New materials mobilize a variety of networks uniquely available to any one teacher. A teacher may use school funds, classroom funds which may be sponsored by a PTA or parent group, or a teacher's own money. Materials may

also be borrowed or bartered from other teachers, acquired from retiring teachers, such as the tables in Clare's room. Clare utilized all of these networks for some part of her classroom. Also, because she often walks to and from work, she often "found" objects on the street placed on the curb, some that were relics of other public schools, such as her oak desk chairs. At the same time several actors: superintendents, Quality Review Rubrics, maintenance workers and parents acted on the organization of materials in the room as well. While much of the school's original materials have been replaced over and over, vestiges of the school's original design continued to act on situations in unique ways, as did the location of the room, activating networks as vast as the sun's trajectory across the sky. The spot next to Clare's room at the end of the hall and under the staircase where abandoned materials appear were given new life when brought to her room.

What studies of mobility offer research on curriculum, according to Leander et al (2010) are "how specific qualities of distributed networks afford and constrain learning opportunities, and for whom" (p. 347). In comparing the organization of the room on the first day to the end of the year, I witnessed the meeting area moved to the center of the room surrounded by bookshelves and wood stumps. I saw when the chalkboard was no longer used as a name wall but instead became a curriculum map. I saw the SMART board replaced in function by a chalkboard on a moving easel that she borrowed from the science teacher, allowing her to project on one side and post items and write on the other side. I

noticed when the bookshelf near the meeting area first held books on

Kindergarten, then books on trees, recycling, birds, water and more. Through

Clare's effort, the materiality of the classroom continued to afford new

possibilities in new arrangements, new functions, and new purposes, producing

intensities through sights, sounds, and even smells and tastes at times. These

changing materialities had particular implications for the curricula enacted at

different times of the year.

Chapter V

THE MATERIALITY OF EARLY LITERACY CURRICULUM

Research Question: What relations exist between the materiality of the classroom and the enactment of literacy curriculum?

In October, on the 20th day of school, given the explosion of conversations and activities that have come after the class finding a tree in the trash, I sat with Clare in her classroom listening to her brainstorm how to create a web of the class curriculum to be displayed and updated on the wall next to the classroom door. At the table with us was a large piece of sketch paper, a pencil, and three found objects (a stick, a rock, and a pine cone) glued to squares of cardboard from a recent classroom activity. She took the pencil and began to draw as she thought aloud:

> So one idea is the thread that starts on them going on a walk and learning about their new school, the inside and the outside, and then outside the children start going, 'what is this?' and they start gathering things and asking if they can bring them back to the classroom. So then we have some things that are tree related, or we don't know that yet, but in the classroom we have some pine cones, some sticks, some feathers, and then while we're there there's also quite a bit of excitement about dragonflies flying around, that's another time and that really gets them excited.

Figure 21. Clare sketching a web of the class curriculum.

On some parts of the page she begins to create a path of one moment leading to

another and another, but as seen in this short excerpt, the path quickly splits in

multiple directions. The main path that she hopes to capture is how the class got

to that day in early October when, on a walk to the garden, students saw a tree

that had been cut from the park across the street and laid atop trash bags on the

sidewalk, and asked if they could bring it into the classroom. In Clare's sketch,

this moment is connected to previous walks to the park where children collected

pine cones, leaves, and osage oranges and brought them into the classroom. This

also connected to a larger theme of her classroom as being both "inside and

outside." When other key moments were added, though, a flurry of tangential

paths were created. Reusing something from the trash, for instance, connected to the new recycling program the school had adopted, which also connected to conversations about the use of "writing workshop paper," paper with a square at the top for a drawing a picture and lines below for writing, and to designating a bookshelf just for books on recycling. Boundaries between one curricular theme and another were drawn through with connecting lines and other offshoots. Leaning back to survey the web thus far, the complexity of the task became apparent, leaving us both to wonder how everything could be captured. My mind wandered to Vivian Vasquez's "audit trail" (2004) whereby the curriculum of her former Kindergarten class was charted across their wall, a winding path of student inquiries and artifacts. But something about Clare's description resembled less of a path, perhaps an entanglement, or a meshwork (Ingold, 2007; Pahl, 2014), and attempts to straighten it out made the understanding of her curriculum more elusive.

> Clare: Okay. So... I'm not sure how to do all this [points with pencil] and that's like not connecting a lot of the other things that are going on in here [points again]. That's not... there's nothing about names in this.
>
> Me: Right.
>
> Clare: And the names are important because that's sort of... but I can bypass that... so now we have this, we're into treeness, oh... a part of this is what I was trying to find again... where am I, rituals and routines, and um, signs, is sorting trash. And then we had an expert come, and then we went out on the field trip down to the cafeteria with the Green Keepers, and Alex [the aide] and I want to make this a job where they can put smocks on and instead of him doing this they have kids doing it, so that can become a job...

Clare was not confused, but rather was processing multiple paths

simultaneously. She was embracing both the multiplicity of enactments and their

unique mobilities such that she could narrow in on their trajectories and points

of intersection. She was rehearsing for the orchestration of "a company of actors"

(Olsen, 2010).

The complexity of the web increased as the conversation turns to the

material and spatial constraints around what to make the web with, and how big

it could become:

> So let's just say I could do it, it would be cool, and I just have to get some more ink for my computer at home, haha. And I'd like to kind of glue on pictures, and put, not glue but contact paper next to the number with like an 8x11 picture of them on the floor measuring [the tree], and the rulers, we could even put that next to... to have a place for the rulers and put the picture right next to it.

Now, the agencies of glue, contact paper, and her home printer become enrolled

in the project. Clare also expresses concern with how much "real estate" (wall

space) the web may ultimately require. The door no longer seemed to be big

enough, so how much of the wall outside her room could she claim? Would she

need a ladder?

Clare wrestled with the constraints of all qualitative researchers, in how to

document and represent an event or phenomenon in a textual form. Even if

multidirectional lines connecting multiple events would help to dissuade a sense

of linearity in the curriculum, there was still a danger, as in ANT research, of

affixing a concreteness to the network through its representation (Fenwick &

Edwards, 2010). For Clare, this issue was discussed at the thought of how to

translate Clare's web into something that students, parents, and administrators

could ultimately understand and at times, enroll them in its production as well.

> So to web this out back to the original story matters because what I want to do is show colleagues and parents how this works. People are curious and they're interested and it requires my exposé of how everything is connected. People like how I talk about it, but it's too dependent on me, so what I've had in my head for a while is to use the wall on the outside of the classroom to create a web… because for me there's got to be, there's always three reasons to do something, and at this point I have confidence that I know what I'm doing enough, but the idea is to broaden it. If we're calling ourselves a school that's inquiry in a space that's not, teachers don't know how that works, so the onus is on me to show them, but also in a way that's interactive where people can kinda come to it and see it without me having to explain it.

To summarize, this curriculum web was not just for the purpose of facilitating

more student inquiry, but two other reasons as well: for other teachers and

parents to comprehend what curriculum looked like in this "progressive"

classroom. She wanted to *delegate* her role of constantly explaining what she is

doing to visitors to this wall display so she has more time focus on her students.

"Three reasons for doing something" was a point Clare made several times over

the year that I worked with her. It was an acknowledgement of the multiplicities

present within her responsibilities as a teacher: to engage the unique interests of

students, parents, and administrators. Attempting to do these individually

would not fit within the temporal and spatial constraints of the school day and

her classroom. Thus, Clare sought out, in the materiality of her classroom, objects

that she could delegate some of this work to. The curriculum map that she

wished to create was an object that worked also to enroll others in the work of

enacting progressive curriculum, and possibly mobilizing it to other spaces.

Other objects, such as her class schedule, and her bulletin board, were also successfully enrolled into the making of a progressive classroom, as I will detail in this chapter.

How to map and display Clare's class curriculum was a conversation that we took up several times throughout the year. I used these conversations as a form of "member checking" as I began to outline the enacted curricula that I observed throughout the year, playing a significant role in deciding what to include in my own network representations of the curriculum. This particular vignette speaks to many of my initial inquiries that inspired this study: how can research into literacy curriculum represent the production of curriculum in ways that take into account the multiplicities, mobilities, and materialities of a classroom? When I first met Clare, and she described the class's curriculum to me, I followed her as she criss-crossed the room, pointing to materials, class experiments, or student work, making connections across different points in the year, and was struck by her own mobility in explaining the learning that took place in her class. I wondered more specifically: how could a study of this classroom do justice to Clare's way of conceptualizing her curriculum?

Overview of the Chapter

This chapter is my humble attempt to address these questions by drawing on observations of enacted curriculum to analyze actor networks present in Clare's Kindergarten classroom. In some ways, however, I am building off the

conversations Clare had with me about mapping to represent the production of curriculum in her classroom, albeit with a different set of constraints: a dissertation chapter rather than a door or wall makes some forms of representation possible, but also has its own challenges.

For ANT studies of curriculum, the goal is to remove the encasement over enactment by identifying networks of actors implicated within one moment, and analyze how different actors are changing or translating the interaction, or stabilizing it. ANT studies are mindful that notions of a stabilized curriculum, like that of a plan or script, are at best temporarily durable, and yet, for teachers like Clare, one can embrace the dynamic nature of curriculum enactment while also seeking stabilities that allow for multiple purposes to be met.

I have chosen three moments to analyze for the intensities (Stewart, 2007) of actors present within each. I begin each moment with a list of seemingly disparate objects present in the classroom. These lists are in no way exhaustive of all material actors present, but rather suffice to acknowledge a wider cast of characters than the students and teacher. Then through a weaving of narrative from fieldnotes, images, and analysis, I trace the interactions of these objects and other actors over time to one moment where their collective agencies, or intensities, were present in the production of a curricular event. These moments of socio-material intensity are networked to three main curriculum themes identified by Clare in the curriculum map she created at the end of the year (the

other two represented in her map occurred at times that I did not collect as much

data). As Heydon et al argue,

> Viewing curriculum as multiple, dynamic and the effect of a network of actors who change and influence each other, means that classroom curricula are differently formed depending upon who or what are involved, and all actors have the potential to translate the effects of others. (2014, p. 28)

By identifying material actors first, my goal is to highlight their effects in the

moment, thus producing an account of curricula that emphasizes multiplicity

and mobility in the materiality of curriculum by specifically asking: what actors,

including material actors, were mobilized into one moment, whether the work of

distant actors is being done on their behalf, and how all actors present are

changed through the enactment of curriculum. I will describe the effects of these

material actors through the ANT terms of *delegation*, *translation*, and *mobilization*,

as described in Chapter I. Each of these terms helps to reveal ways that

materiality impacts curriculum. *Delegation*, whereby the work of distant actors is

performed through an object, shows how distant actors are implicated in local

events. *Translation*, whereby actors roles are changed through interaction with

each other, shows how materials, students, and adults act on each other in these

moments, producing something new. And *mobilization* of actor networks reveals

how enacted curricula can become durable enough to travel across space or time.

Kindergarten Curriculum in Three Acts

Act I: Recycling

The daily schedule chart, adjusted to leave a space between meeting (8:30) and physical education (9:45)...

Three trash cans (green, blue, and black) placed by the pretend house...

A note from the principal, written on a post-it note and attached to the shelf by the front door...

A power strip stretched between two bookshelves and plugged into an outlet under the chalkboard...

The Earth Book, by Todd Parr is pulled from the closet and placed on the bookshelf by the meeting rug...

A spinning wheel for a game about recycling is placed by the math and science tables which have been pulled together. Workbooks about recycling are placed on the shelf by the front door...

At 8:45 on a Friday morning, one month into the school year, twenty

students were seated at the rug in the meeting area, plus one upset student

refusing to leave the cubby area tended to by Alex the Teacher's Aide. The class

had just read the daily schedule together. To address the space in the schedule

left between meeting, which they had just finished, and physical education at

9:45, Clare asked the class if there were any "visitors" in the classroom, and then

asked the visitor to explain what he would be talking about in that space.

"Recycling," he replies.

Clare lead the class in "head shoulders knees and toes" as they had been

sitting throughout meeting, but left the rug to speak with the visitor about their

plan. The sound of the class singing died after the first round, leaving the sound

of Clare and the visitor's conversation to fill the space, negotiating where to move the tables and the three trash cans. During the lull in the song, the upset student returns to the cubbies, followed by the TA who then takes him to the school nurse.

Clare returns to the rug to restate the plan to the class, but then the phone rings; the principal is running late. Clare returns and explains that the class will divided into two groups: one on the rug to read a book with her, and the other half to sit at two tables pulled together in the middle of the room for a game about recycling. Earlier, a student noticed that the bookshelf in front of the meeting rug had books about recycling on it. In fact, in preparation for today's visitor, Clare pulled books about recycling at the beginning of the week and had already read aloud two books from the collection. On this day, she planned to read *The Earth Book* by Todd Parr.

The nurse returns the student, telling Clare that he is OK. Mr. Gibson, the principal, arrives and asks where an outlet is. He types onto a laptop while Clare begins to read *The Earth Book* to half of the class. The other half of the class went with the visitor to the two tables. Alex joined the game group and I sat on the rug behind one student in Clare's group. As I put my iPad away so as to not add any possible distraction during Clare's informal observation, I listened to the cacophony of sounds present in this moment: the sound of Clare's voice reading aloud, the sound of typing from the art area, and the rattling of the game wheel (think Wheel of Fortune) from the middle of the room.

I highlight this moment as one of many where a multiplicity of actors-networks form an assemblage both mobilized and constrained by various materials. Below are tracings of each of the aforementioned materials, revealing the agencies they brought into this moment, and further elaborating on the ways that one event became translated into three.

Figure 22. The daily schedule chart.
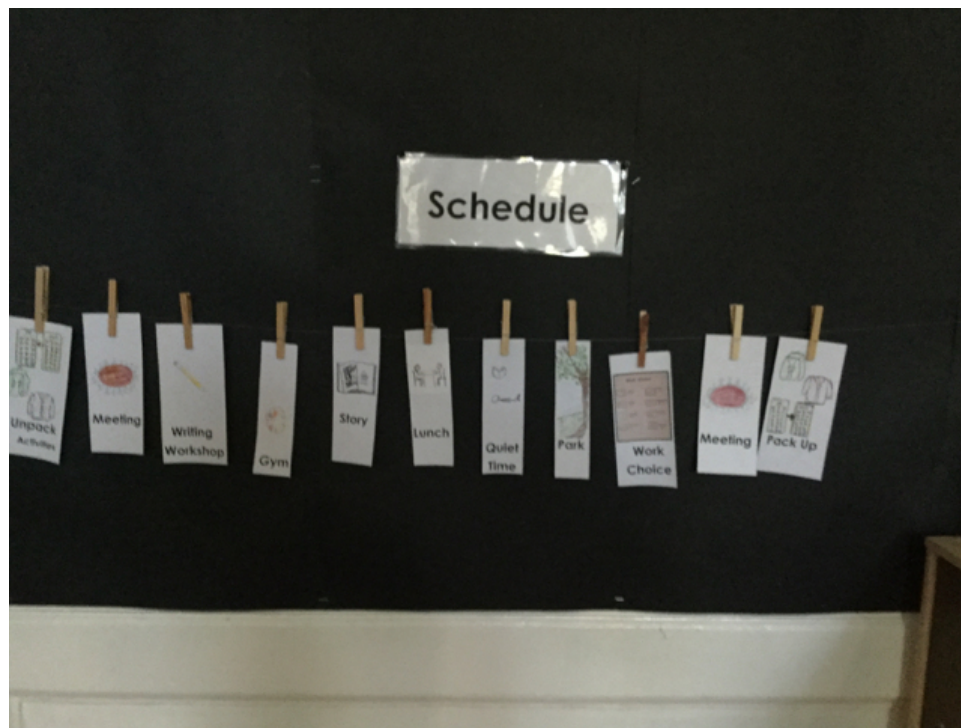
The daily schedule chart. The daily schedule chart, attached to a bulletin board at the meeting area, was constructed with fishing line, clothespins and activity cards with a title and typically a child-created drawing. Usually, a schedule denotes one activity that will occur at a specified time, such as meeting or physical education. The gap in the schedule between meeting and physical

education communicated to students that something new or unexpected was going to happen, a deviation from the usual daily routine. Clare's weekly lesson plan, posted on the bulletin board beside the front door at the beginning of the week, denoted the block of time between morning meeting and gym on this Friday as "PROJECT ZERO EXPERT." However, the actual event that occurs at this time is at least three: a lesson on recycling from a special visitor, a read-aloud, and an informal teaching observation. And each event carries its own unique set of actors, both human and non-human. Clare must negotiate all three like simultaneous games of chess.

The three trash cans. The week before this event, I noticed one of the maintenance workers on the basement level applying stickers with recycling instructions to trash cans stacked all around him. These were given to each classroom as part of a citywide recycling in schools initiative called Project Zero. It was created in collaboration by the Departments of Sanitation and Education. Over 50 schools entered into a pilot to work towards a "zero waste" goal. As the visitor later explained to me as we rearranged the tables after the class went to physical education, the name of the program, in reference to zero waste, is misleading because the mission is actually to increase recycling. According to him, 90% of school trash is recyclable, so the lessons he does serve to teach children where to put trash so that it can be recycled.

Both the visitor and the program itself mobilized their own "company of actors" into the classroom. For being in a pilot school, every classroom received

three small trash cans (green for paper, blue for hard plastics and metal, and black for trash). Clare also was given a large brown bin with a locking lid for compost but not all pilot schools also participated in this. The visitor brought in his teaching materials, most notably the game wheel, and samples of recyclables mixed in with materials rummaged from the classroom trash bins. These actors, delegated the responsibility of managing other classroom materials (paper and other waste) required a new classroom arrangement to accommodate the activity, thus the tables and trash cans were moved. He also left stickers, comics, and pencils for the students before leaving, which enrolled Clare and the TA into distributing them to everyone at the end of the day, and mobilized the lesson from the classroom to students' homes.

Figure 23. Comics on recycling left by visitor.
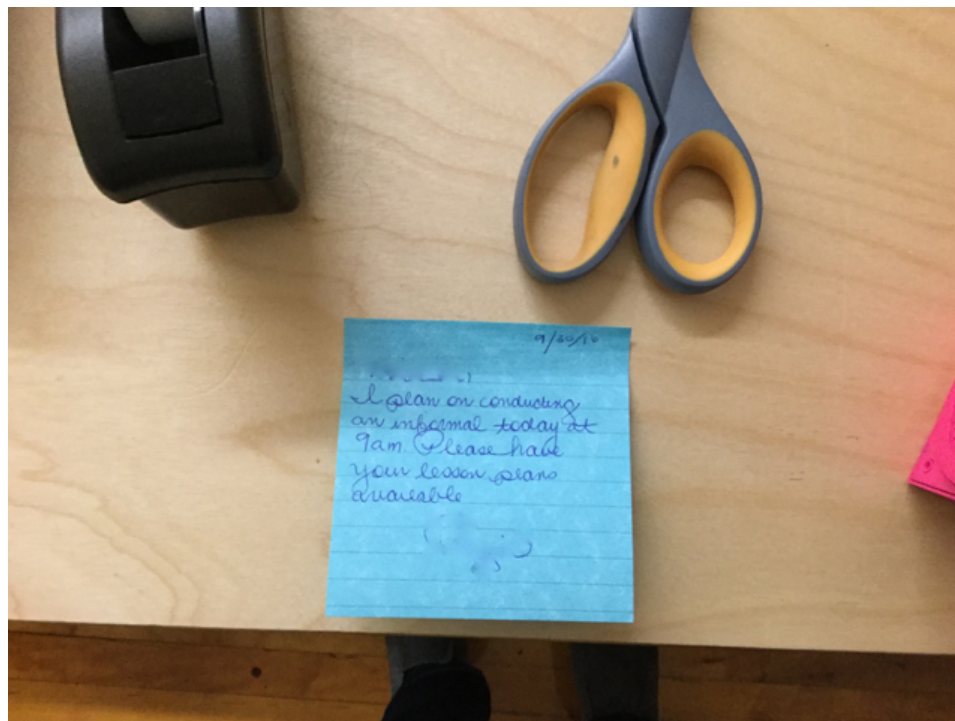
Figure 24, the post-it note from the principal.

The post-it note. The post-it note left by the principal stated that he would conduct an informal observation and would need lesson plans for the day. Clare had already heard from other teachers earlier in the week that observations were occurring, so she left a copy of her lessons by the door before school began. Later, Clare would meet with Mr. Gibson and learn that he also used the opportunity to take observational notes on a student for the purposes of a future IEP meeting. The next week, she received her observation, which was of the read-aloud she conducted and the questions that were fielded from students.

The power adapter. When the principal arrived, he asked for an outlet to charge his laptop before the battery died, and since there is only one outlet in the

room, this put him at the art table near the back wall, where a power adapter was stretched between two bookshelves. This position was in clear view of the student, who was sitting at 9:00 at the rug, Mr. Gibson at 10:00 and Clare at 12. However, it may have been disadvantageous for observing the teacher, as he was essentially sitting behind her, although it is possible he was able to view students' reactions from this vantage. His observation of both teacher and student behavior was also heavily influenced by the teacher informal observation evaluation he was required to fill out and share with Clare, as well as a format of documentation for student behavior that could be shared in a possible IEP meeting. In that sense, the single power adapter, as well as the dying battery of the laptop, translated this moment into one where the principal's position was most advantageous for completing documentation, whereas the limited mobility was not as advantageous for observation.

The Earth Book. *The Earth Book* was one item pulled from Clare's closet for this activity, to use during "READ-ALOUD," a curricular activity denoted on Clare's printed weekly lesson plan by the door. It appeared on each day of the schedule, albeit at different times, and sometimes partnered with another activity such as "BOOK SORT" (organizing the class library). Throughout the week, each read-aloud book was chosen to connect to a theme. On Monday, the book was *Pond Life*, after the class walked to a small pond in the park. The last three days of the week were recycling related books, although the title of the book for Friday was not included. The overall effect of reading *The Earth Book* was short-lived.

Student questions that had more to do with differences in imagination and information, a past discussion during read-aloud, than it did recycling, but Clare engaged those thoughts as well. However, other materials, such as the noise emanating from the game wheel, and the time left in the schedule, constrained the possibilities for the read-aloud discussion.

The game wheel. The recycling game was played by children taking a turn spinning a wheel made of wood and a plastic stick flapping against pegs made of nails, producing a noise overpowering other classroom sounds. Once the wheel had landed on a kind of trash (plastic, metal, paper, food) the child would choose a corresponding piece of trash from a pile on the table and place it in the proper trash bin. Sometimes a choice would lead to a question or discussion, such as what to do if a paper product has food on it, or if paper and plastic are stuck together. Each turn was delayed by the long (and loud) spinning of the wheel, which made the game last longer than the read-aloud, and overbear it in sound. While Clare was aware that the visitor would engage students in an activity, the game wheel specifically was not planned for, and forced the other activities, such as the read aloud, to accommodate its presence.

The materiality of recycling curriculum enactment. Three distinct but interrelated enactments were present within this one moment: the read-aloud, the game, and the teacher observation. Each enactment was the effect of its own set of actors, mobilized into the classroom with their own unique agendas. However, each network also became an actor that produced effects on the other

enactments as they occurred simultaneously. For instance, the read-aloud

produced a space for a small group game by occupying half of the class. It also

produced an event that could be observed by the principal for evaluation

purposes. The principal observation, signaled first by other teachers then by the

post-it note, influenced the detail in which the written version of the day's lesson

was produced, connecting it to official standards and tasks, and leaving it in a

very visible location. The game produced time and noise constraints on the other

two as well. The curriculum enacted was the effect of all a multiplicity of entities,

recent arrivals (the visitor and the game wheel) and relics of the school's history

(the one outlet). Multiplicity in this sense does not imply isolated events

occurring simultaneously, but as being shaped by each other. Also, the

multiplicity of actors producing effects on the particular moment were not just

the ones visible in that space, but also distant actors. This included the work of

DOE officials and newly reformed teacher evaluation policies, and Department

of Sanitation curricula about recycling which the visitor mobilized into the class.

Ultimately, the most successful of the three in stabilizing new networks

was the recycling game, in that throughout the school year, students could

autonomously *read* classroom materials as being associated with the black, blue,

green, or brown bin. These networks were not always durable, as each new

material posed unique challenges in categorization: a paper with staples,

cardboard packaging with a plastic window, or paper napkins with food residue.

However, as was the intent of the program, the visitor, through the activity, was

able to enact change by mobilizing students to interact with disposable materials differently, and Clare was able to make further alliances with curriculum being done, such as in the school garden.

Another actor, not present but seemingly still acting on the event after critical reflection, was the father of the upset student. Before meeting began, he lingered in the room as some parents do, particularly interested in the science area. Before the teacher announced that they needed to begin meeting soon, he had picked up an osage orange from the "offering plate," a place where students placed objects found on walks to the park. While he asked Clare what it was, he did not notice how much time had passed and that the schedule denoted it was time for visitors to leave and for meeting to begin. When he left, the student became upset and retreated to the cubby area.

In retrospect, while there were many circumstances of which I was not aware pertaining to this particular parent and the events that led the student to be upset at the their departure, it is clear that his presence was still felt, and in that sense he was still acting on the classroom event, producing effects that were mobilized into the teacher's actions during the read-aloud, (offering him a spot in the rug to get his body under control) and into the principal's notes of his behavior.

Figure 25. The offering plate in the Science area.

My ability to collect data, too, was affected by these networks. By the presence of the principal conducting part of Clare's teacher evaluation, I opted to be as discreet as possible, leaving my iPad in the closet and making mental notes while sitting behind a group of students at the rug offering silent support. This vantage left me without full view of the principal's perspective, nor that of the group at the tables, relying on my memory as best I could. Thus, while the intent of an activity may be to form and stabilize new relations through translations, translations can also do the work of destabilizing relations as well.

Act II: Trees

New yellow cards with children's last names have been posted under their first letter on the blackboard...

A "ch" word poster with several post-its with words containing "ch" is hung by the closet...

Two large eggplants from the school garden sit in a basket by the sign-in sheet...

Five pumpkins sit atop the math shelf in size order, numbered 1-5...

A stalk of fresh brussel sprouts is left in the closet next to a felt coconut tree...

A 14-foot tree laid over trash bags on the sidewalk in front of Parkside Elementary...

Before students arrived at school on a Friday in October, these items, mostly new to the classroom, were visible. It was 20 minutes before school when I arrived, and Clare was beaming with several ideas of what to do with these things. She began with the new yellow cards:

> We've started writing some of the last names [on the yellow cards], and the group sitting here for water [the students who do not bring their own water bottles sit at the round table after PE and Clare gives them plastic cups of filtered water] they're starting to really look [at the names on the wall] and have conversations. So my plan, as I was walking to work today, was that during meeting time, I might pay attention to first letter sounds and say how some are matches and then ask 'how many' matches there are for each letter, which will extend the morning meeting too long, but in another point in the day we could do that and start writing them down.

She also told me how the "ch" poster got started, how a student with "ch" in their name realized that "what letter do you hear in your name" was harder for them to answer than other students, so Clare wanted to build on that in concert

with the yellow cards and students' names, as a way of redirecting a scheduled Writers Workshop lesson on "being an expert" to labeling their pictures with letter sounds. She also mentioned how she hoped they could fit in something with the eggplants, as they were just picked from the school garden, and wanted to "label" them before students and parents arrive. She also wanted to somehow fit in the pumpkins, which she got upstate last weekend and said "caused quite a stir" after she put them on the shelf with no introduction. These materials listed in this section are indicative of two aspects of the school's progressive mission that Clare often spoke of: allowing student interests to drive curriculum and connecting outside spaces to inside classroom learning.

 The yellow cards and the "ch" poster. The first two materials, the yellow cards and the "ch" poster, were both inspired by comments made by students during morning meeting. As a routine, the class recites, "Say your name and when you do, we will say it back to you!" and each child would introduce themselves to the class. When some children began using their first and last name to introduce themselves, Clare decided to add cards with students' last names to the "Name Wall" in addition to their first names. They also later added imaginary names after students began introducing themselves as Spiderman and Luke Skywalker. Second, the "ch" poster was made after students noticed names that sounded similar. Both the cards and the poster were made with materials Clare had readily available in her closet.

The eggplants, pumpkins, and Brussel sprouts. These materials, while

not derived directly out of a student's proclaimed interests, were items that made

some connections between outdoor spaces and the classroom, particularly the

school garden where the eggplants were grown. The garden originated through a

school partnership with a nonprofit that facilitated hands-on educational

experiences around urban gardening and nutrition. Clare expressed that she has

often "glommed onto" program representatives whom she recognized as

"resources" that connected with the class curriculum. This was the case with the

representative of the recycling program, as well as the school garden. Clare had

worked closely with two of the school gardeners on building curriculum, and in

exchange getting access to the garden occasionally when her class took walks. In

this sense, the eggplants made a connection between outside and inside learning,

as did the partnership she formed with the gardeners, while the pumpkins and

Brussel sprouts were tangentially related to this.

Thus, in the setting up of the classroom and the schedule, it was as if Clare

had identified, and in some cases actively placed, loose threads (Pahl, 2015)

around the room where curriculum could be woven. Or, to evoke a different

image of threads, it is as if she cast several fishing lines out, then waits to see

where she is able to 'catch' student engagement.

The tree. Instead, by the end of the day the class would have a 14-foot

tree, found in the trash, placed on top of the pretend house, and a new anchor

chart with seven ideas listed for what the class can do with it. In the following

weeks, Clare's extensive storage of materials would be put to work to transform the classroom to all things tree related. Old *Everyday Math* rulers and tape were used to measure the tree. Brown paper and blue and yellow paint were used to represent the tree's height in hand prints. Recycling books in the meeting area book shelf were replaced with all the tree books Clare could find in her collection. A handsaw from her brother was borrowed to cut the tree to the ceiling's height and place it upright. Within a minute after reading about soil in a big book on trees, Clare dumped the sand out of her Pre-K sensory table and replaced it with potting soil. Bark samples were placed in the science area once that word was read during a read-aloud.

Figure 26. Students measuring the tree's height with Everyday Math rulers.

Figure 27. Measuring the tree's height with handprints.
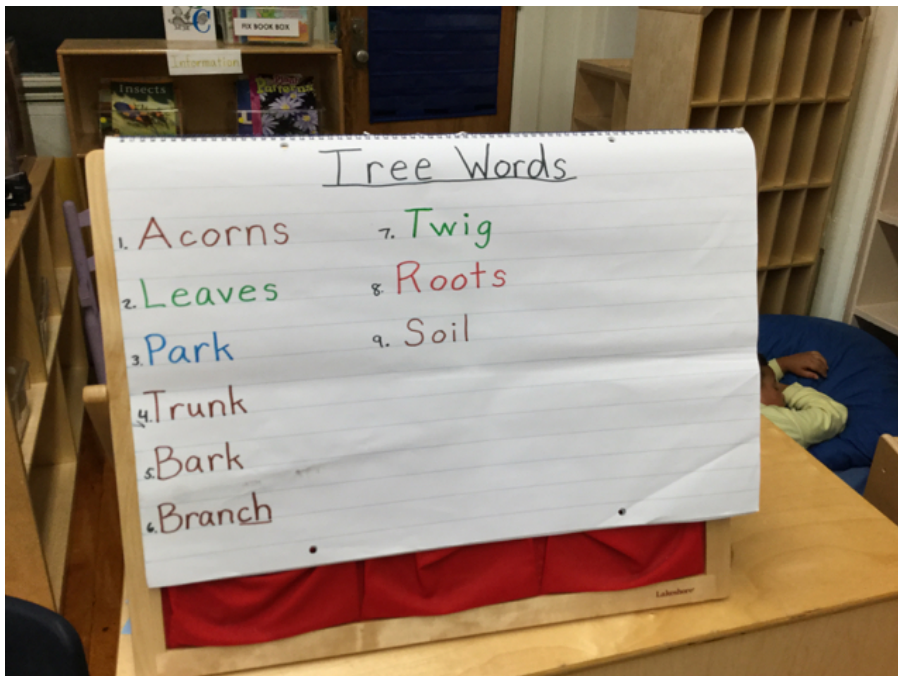
Figure 28. Tree words list taken from read aloud.

Figure 29. Soil and wood in the sensory bin.

In the previous inquiry on recycling, Clare was able to negotiate a curriculum network among a "company of actors" that included DOE and Sanitation officials, curriculum specialists, trash cans, and her principal, the teacher evaluation system, and her own materials into a curriculum network suitable to each group's own interests. In this, what became a tree inquiry, students and the "outside" classroom played more significant roles. That is, the network provided space for student input, positioning them as "curricular informants" (Harste, 2003; Heydon et al 2015) with significant effects on its enactment. It is possible that the tree gained traction into the curriculum so quickly because it mapped onto Clare's vision of a progressive curriculum network so well. It came from student interest, and bringing outside inquiries

inside, and allowed her to pull from a wealth of her own materials already accessible through existing networks. It was the most organic of inquiries, and the easiest to accommodate into the preexisting materiality of the classroom.

The materiality of the tree curriculum. How, though, do student-centered curriculum networks persist despite the pressures of outside networks? For Clare, this question was at the crux of how a "progressive" curriculum could survive within the current climate of the public school system, as over the next month there were several other actors that pushed against this inquiry. These networks included school walkthroughs, having to introduce guided reading, and the proliferation of special programs that began in November.

In order to prevent these inquiries, utilizing students' interests, from being derailed by the interests of distant actors, she had to buffer them from other networks seeking to occupy classroom time and space. To do so, Clare fought back by trying to document the inquiry in ways that supported the "3 reasons": supporting the students, satisfying demands of administration, and educating parents, teachers, and other visitors on the class's learning. Anchor charts, story maps, and student art were prominently displayed, especially during times when her classroom was to be observed. In doing so, the materials translated different messages to multiple groups: they reinforced the inquiry to students, they educated parents about their student's learning when they picked up their children, and they upheld accountability systems enforced by the school system

for having taught required material. They also incorporated the interests of external program providers, like the school garden.

Figure 30. "Our Tree Story."

According to Fenwick and Edwards, translation has succeeded when, "the actor-network is mobilized to assume a particular role and perform knowledge in a particular way" (2010, p. 10). What is unique to Clare's point of view, then, is that success is achieved when multiple actor-networks are mobilized to perform different roles, or rather allow their roles to coexist, changing in some ways but remaining distinct in others. While she may be able to perform this intermediary role through interactions with the different groups, some materials

like bulletin boards or anchor charts, can be delegated the role of intermediary.

The anchor chart, then, like an anchor, provides a stability to multiple networks

that can mobilize their own diverging interests but allow them to coexist as they

intersect in the classroom.

Act III: Paper

A new easel chart with the title "Question of the Day…"

A picture book in a basket underneath the easel…

Water bottles falling out of an opened package on the back table…

A brown bin for food scraps parked next to the sink…

A decomposed jack-o-lantern trapped within a used animal cracker container…

On a Wednesday in February, 19 children arrived at 8:00, some wrapped

in large jackets and snow boots, and their loved ones signed them in at the front

door. Some adults left immediately and some lingered, chatting with the teacher

or other parents or following their children to a table for a morning activity.

Clare directed students to the "science" table where small rectangles of white

paper were in a pile. Students took a rectangle to the easel on the meeting, and in

pairs, with a parent or by themselves, they pointed to the words on the sentence

strip that read, "What do you want for lunch today," the choices being "home

lunch," "Peanut Butter and Jelly," "Cheese sandwich," or "hot lunch."

At 8:30 it was morning meeting time, and the children, now 20, sat around

the rug. "What do you notice?" Clare asked while pointing to the new chart. It

was the third day the chart had been incorporated into their agenda, after the

"Hello song," greeting their neighbor in other languages, and reading the

calendar.

"No one wants hot lunch," says one student.

"I noticed yesterday that the hot lunch was more," said another.

"Let's figure out how many there are for each group" said Clare, and

students volunteered to count each column.

At 11:00, students were playing "Tom and Jerry" a recess game led by a

young adult as part of a new recess program the school had adopted. Two men

just delivered lunch to the class in aluminum trays. Pesto from the hot lunch

seeped through the plastic wrap onto the back table. As with most days, the

smell emanating from the hot lunch dispersed in the room and was noticeable

from the rug. The brown bin for food waste was moved next to the back table.

After the recess game, Clare asked the students to sit down around the rug. She

showed them the book she planned to read as part of Black History Month,

based on an Alice Walker poem, but told the class that they will have to read it

another time. Instead, she began an impromptu story:

> Once upon a time a Kindergarten class came to school, and they had a new "Question of the Day" chart, and all the kids voted with their white card. Ten voted for cheese sandwich. No children voted for hot lunch. But then when lunch came, there were no cheese sandwiches…

In this moment, rotting pumpkins, pocket charts and cheese sandwiches, doing

the work of Department of Education and Department of Sanitation officials,

school gardeners and cafeteria staff, all become entangled with Clare and her students in solving a problem brought to the class: too much food waste at lunch.
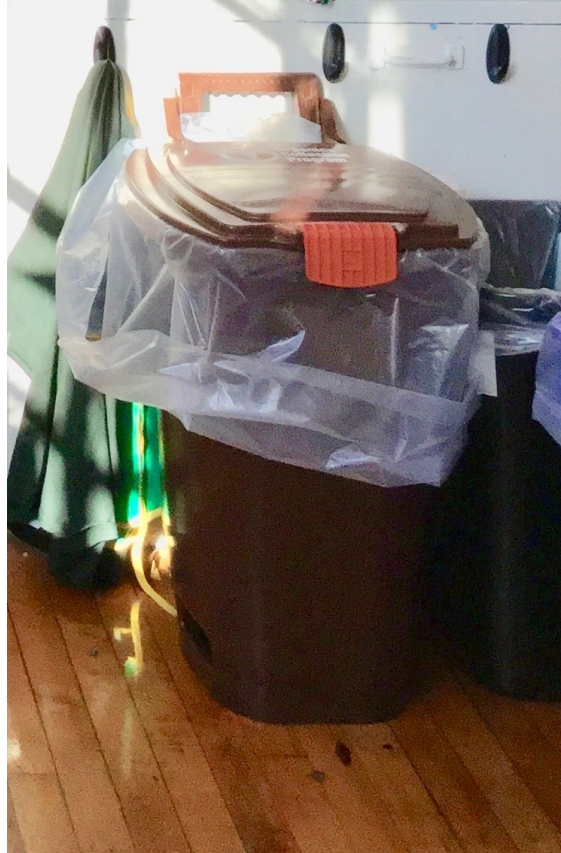
Figure 31. The brown bin for organic waste.

The brown bin. The brown bin for organic waste came from the same pilot recycling project by the Departments of Education and Sanitation that instigated the first recycling unit. Because lunch is served inside Clare's classroom, the food and paper trays can be placed in the bin and collected by the Department of Sanitation. A latch on the lid helped to keep the smell from dispersing, but not enough to attract fruit flies already multiplying in the classroom.
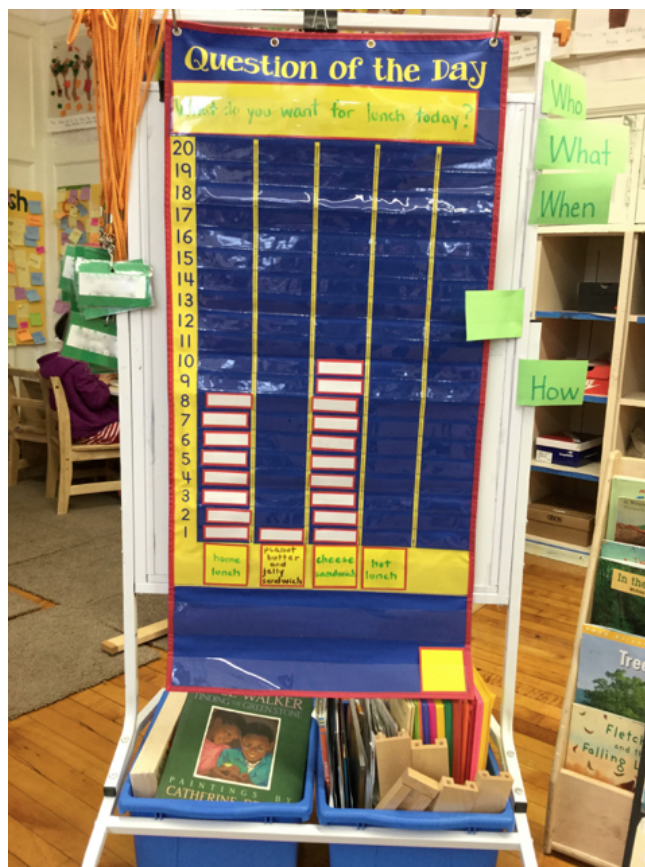
Figure 32: The new easel chart for counting lunch choices, and the picture book.

The easel chart. The new chart was salvaged from Clare's closet, after someone in charge of the recycling program asked all classrooms with brown bins to count how many lunches they need from now on to reduce waste collected in the bins. While Clare used the chart to incorporate this new task into morning meeting, the information was not collected by cafeteria staff on Wednesday.

Figure 33. The pumpkin and jar in three stages.

The rotten pumpkin. In October, one of the pumpkins Clare got upstate was cut into a jack-o-lantern, then placed into a used animal cracker jar after students were taught about composting from school gardeners. Clare had made a connection to the jar when explaining the new food waste policy as a visual reminder of what happens to food when it decomposes.

The picture book. The picture book pushed out of the lesson, seen in the basket below the easel chart, was based on an Alice Walker poem, and taken from Clare's personal collection after a letter was delivered to her room about a required all-school Black History Month assembly that she must prepare the class for.

The water bottles. The water bottles were brought to school on Tuesday after it was reported that lead was detected in some of the school pipes, and because they filled the back table, the tray of sandwiches were placed on another table. Because Clare did not see them, she began her impromptu discussion.

The materiality of the paper curriculum. In order to stabilize the curriculum, Clare needed to mobilize a company of actors into a durable network. Clare begins, "We figured out what kinds of lunches everyone wanted, but the cafeteria staff didn't know what we decided. What could we do differently from now on?"

One student is called on, "We could bring this whole question [the entire easel with the chart] to the lunchroom so they can see our answer."

Another student chimes in, "We'll have to take the elevator cause we can't wheel it down the stairs."

Clare, "Is there another way we could share this information with the cafeteria?"

Another student, "We could borrow someone's phone and take a picture and show it to them."

Another (building off the first idea), "We could work together and hold it [the whole easel] and bring it carefully to the kitchen."

The absence of some students' choice for lunch lead Clare into a dialogue with the students about sharing information with cafeteria staff. Later, she shared how fascinated she was with their thinking, assuming someone would have suggested they write their lunch choice down on paper. The comment about taking a picture with her phone she attributed to what she usually does after writing the daily news on the whiteboard, so she can type the news into their weekly newsletter before the board is erased.

The student teacher and I noticed the sandwich tray on the tinkering table and count the sandwiches inside, I write a note and pass it to Clare so as to not interrupt their conversation: *There are PB&J and cheese sandwiches on the tinkering table (but not enough cheese sandwiches)!* Clare counted out sandwiches (individually wrapped in plastic) and placed them into two columns on the rug of four and four.

Figure 34. Sorting the peanut butter sandwiches and cheese sandwiches.

     Clare: So what's the good news?

     Student: They're equal.

     Clare: [sarcastically] Yes, so everything is solved! Wait, no?

     Another student: But there aren't ten cheese sandwiches!

Students with home lunches and any that now want a hot lunch were sent to the

tables to start eating, while the children who wanted sandwiches stayed on the

rug. There were now six children from the 11 that originally wanted sandwiches.

As one student examined them more carefully, she noticed that they were cut

with the halves stacked on each other. "There was a whole square and then they

splitted [sic] them and wrapped them together so we could share the pieces!"

Clare put on gloves, opened the sandwiches and started putting them

onto paper plates. "Splitting, that's a good word, so everyone can get a half."

Clare returns to the discussion of how to prevent getting the wrong

lunches, and eventually, the idea ("the power of writing move") is generated

after making connections to signs that children had made in the past. One sign in

particular was spontaneously made by students in December letting the class

know that the bucket of Play-doh couldn't be found (see Figure 47). Shortly after

Clare had the students post their sign in the front of the room during morning

choice, the bucket was found. The way, in this moment, that students mobilized

their writing to enroll others in solving a problem, became a reference point in an

already familiar curricular network that also became useful in solving this

problem.

After this and more conversations throughout the week, a durable

curriculum network around writing letters formed. The next day, the class wrote

to the cafeteria staff and to administrators. They responded, students wrote more

letters, I received a letter sent to my home address asking whether I had read

Stephen Kellogg's version of *Chicken Little*. and soon letter writing was woven

into an inquiry around "paper," with connections back to recycling and trees.
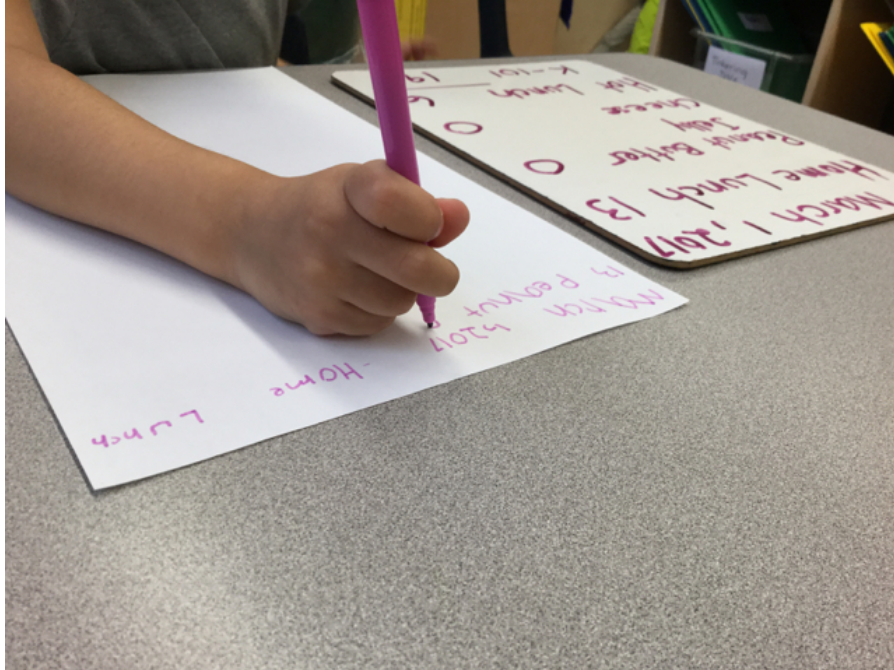
Figure 35. A student recording the lunch choices.

All of this upheld Clare's progressive education philosophy by solving

real problems in the moment by weaving connections together across the entire

curriculum, rather than following a prescribed program. While the school had

officially adopted a writers' workshop program (and unofficially a readers'

workshop program), Clare pushed against the requirements of their use in favor

of instruction connected to other inquiries throughout the year.
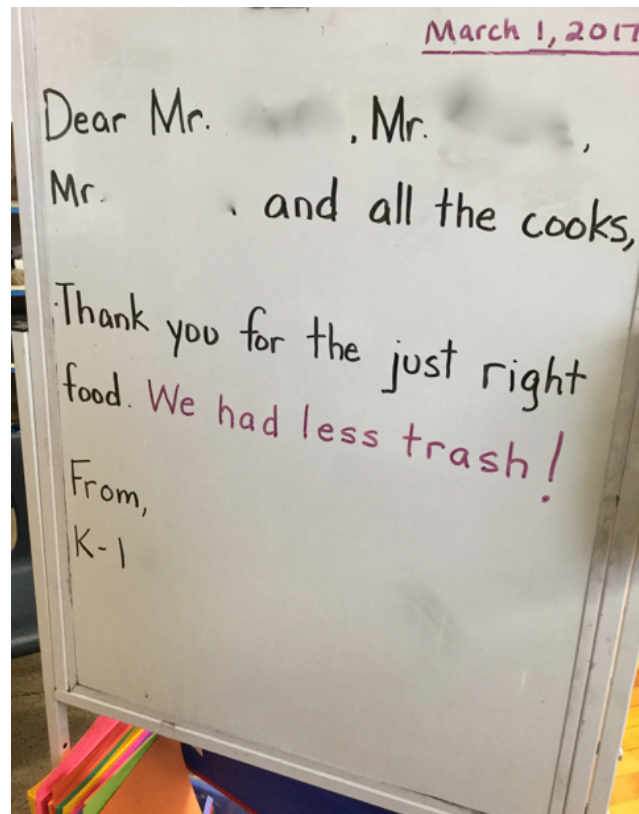
Figure 36. A class written letter to school administrators.

Figure 37. Students writing letters to administrators.

Reflecting on the Materiality of Curriculum Enactment

Figure 38. Curriculum map at end of the year.

At the end of the 2016-17 school year, after much discussion and revision,

Clare took down the "Name Wall" from the magnetized blackboard, placed a

line of green tape across the middle to represent the school year, and mapped the

class's progressive curriculum around five major themes: trees, recycling, maps,

paper, and pond (water). From these three moments that I have analyzed in this

chapter, three durable curriculum networks were produced out of five that

ultimately were represented in Clare's curriculum map. This was made for

parents to see during their end of the year celebration. In my analysis of three of

these major themes, and with the help of Clare through conversations and

meeting outside of school hours, I have tried to expose a much wider and more

complex set of interactions that could not all fit on the curriculum map on the

blackboard. This was the benefit of "looking down" at particular moments, in that it revealed a much larger company of actors, including distant actors working through these materials that are part of these enactments. To act, or in the case of curriculum, to enact, in this sense is, "to mobilize an entire company of actors" (Olsen, 2010, p. 127). Often, multiple networks mobilized competing agendas into the classroom, translating some actors into new stable networks but also destabilizing others. While I have tried to document some of those conflicts and forged alliances, the overall network effect, as depicted in Clare's curriculum map, was a curriculum that privileged student input and teacher choices over prescribed curricula, and that connected outside learning with inside classroom conversations and activities.

What one also does not see in the map are the traces of many actors who intruded, coopted, or allied with other networks. And yet, to Clare's credit, some order was achieved amidst the chaos of competing interests, not by "shutting her door and teaching" but by mediating between these several networks. What Olsen (2010) said of the "lone skier" who still relies on a "company of actors" to trek across Antarctica could just as easily be said about the work of teachers, "What [they] should actually be credited for, apart from [their] stamina and strength, is [their] ability to translate and delegate, uniting the different forces into a well traveled collective" (p. 128). These moments were not a solo design by the teacher, but there are ways that Clare was able to orchestrate companies of actors to achieve some semblance of stability in her units of inquiry. To conclude

this chapter, I look at three stable materials, or actor-networks, that Clare

enrolled in the work of maintaining a "progressive" curriculum in her room.

The Closet

Much of my first discussions with Clare centered on the kinds of things stored in

her closet and how to better organize them. Clare viewed this work, however, as

integral to teaching. As I quoted Clare saying earlier, "that's going to be years in

the works…there's so many directions, but those materials back there are

allowing for all those directions." As a result of this work, though, Clare's closet

functioned throughout the school year less as a repository for abandoned

materials and more as a circulatory system for enacting curriculum. Because she

had curated and periodically taken inventory of the collections of materials in

her closet, she was often able, at a moment's notice, to bring out a particular

object that could facilitate an activity or make a connection. For instance, in one

moment in the middle of the class's unit on trees, a child used the word soil in a

discussion during a read aloud, and in less than a minute Clare poured the sand

in a sensory table into a bucket, went into her closet and came out with a bag of

potting soil, and poured it into the sensory table. She also found bark samples

and added those to the science area. Thus, in order to be responsive to student's

emerging interests, the closet enabled new materialities to be brought into

relations with students before the thread was lost.

The Schedule

Schedules are a way of organizing the use of space and materials by time. It is an effort to manage the flows of bodies and materials from the time school begins at 8:00am to 2:20 dismissal. Clare's room had two schedules; one was printed on paper posted by the door. This was her official schedule required by administration (and the DOE) to be posted by the door for easy access during observations or walk-throughs. This was meant to be official, although it also changed through the year.
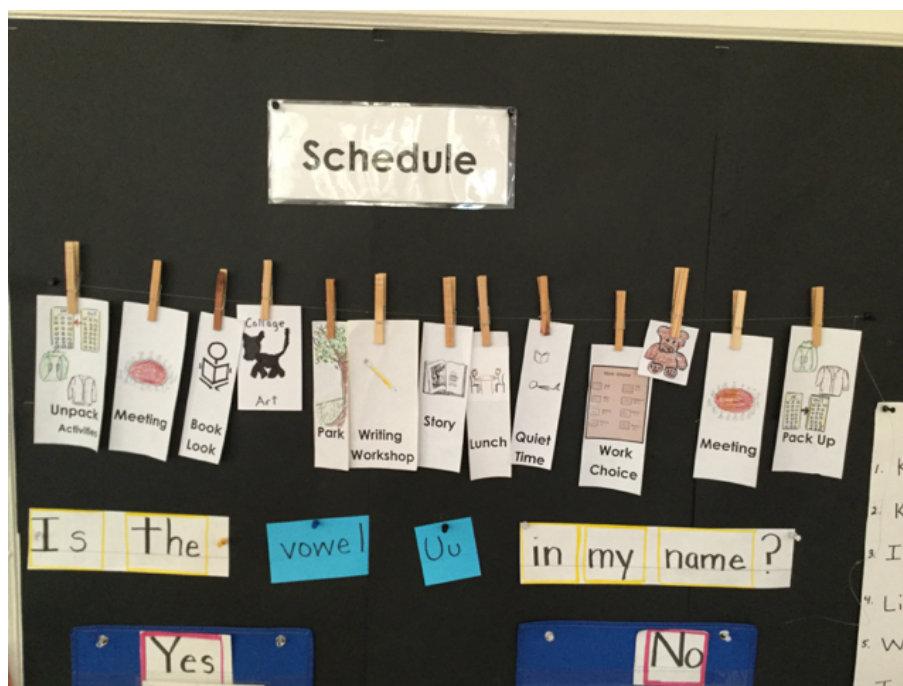
Figure 39. The class schedule.

The second schedule was one that students used and read during every morning meeting. This schedule was not printed, but rather constructed by hanging papers with different activities onto a string, as one would hang socks

on a clothesline. This allowed for changes to be made throughout the day, such as when the representative from the recycling program spoke to the class. Several outside factors often required adjustments to be made to the schedule. During morning meetings, Clare would sometimes think out loud through the schedule, and any changes could produce cascading effects for other events. For instance, on Tuesdays students were scheduled to go to the pool in the basement at 8:30, which was facilitated through a nonprofit organization. On one day, however, because the temperature of the water was one degree below the regulation for students to swim, the morning pool class was cancelled. On another morning before school, just as Clare and I were talking about something that could be discussed during the morning meeting, an intercom message said the fire drill had been moved to 8:30, which is when her meeting time began. I mention these examples as they reflect all too common but rarely mentioned interruptions to "official" schedules. While the official schedule divides the school day into subjects, encasing the curriculum into notions like "literacy block," the second schedule opens up these cased notions by acknowledging the contingent and ephemeral nature of the typical school day, treating events like "writing workshop" as possibilities held up only by string. However, this also gives Clare the flexibility to seize on unexpected opportunities, such as finding a tree on the sidewalk.

The Bulletin Board

It was a requirement that student work be displayed on a bulletin board in the hallway throughout the year. It is one way that schools are evaluated by DOE officials and independent evaluators through school walkthroughs, as evidence of student learning. In the middle of the year, Clare commented on the requirement that such artifacts (student work and anchor charts), must reflect the "current learning focus," as being limited to one unit, not multiple, so she feels she must prioritize tree unit materials although the class has now become interested in maps. She also expressed concern that while "rubrics" and "feedback on student work" may be indicators of learning and teaching, it may foster comparisons and judgement from parents that also see the bulletin board. To avoid this conflict, Clare engineered a way to comply with the official policy without violating her own feelings about what curriculum is, and without inciting an issue with parents.

At the top of her bulletin board designed in October, she stapled a paper that explains the "academic task" as "writing a true story about an experience they had in our garden." Next to each piece of student work was a thought bubble, which she also created, cut, and posted, which suggested the academic standard achieved with a positively framed sentence written from the perspective of the student: "I told, drew my story," "I labeled my pictures," or "I used the word wall to help me spell!" Student writing was also transcribed and stapled onto the student writing page. Also required, on the learning

environment checklist and other documents related to Quality Review, were

rubrics and teacher feedback attached to all student work. Clare adopted the

language "glows and grows" from the checklist to use for listing one positive

comment and one area to work on.
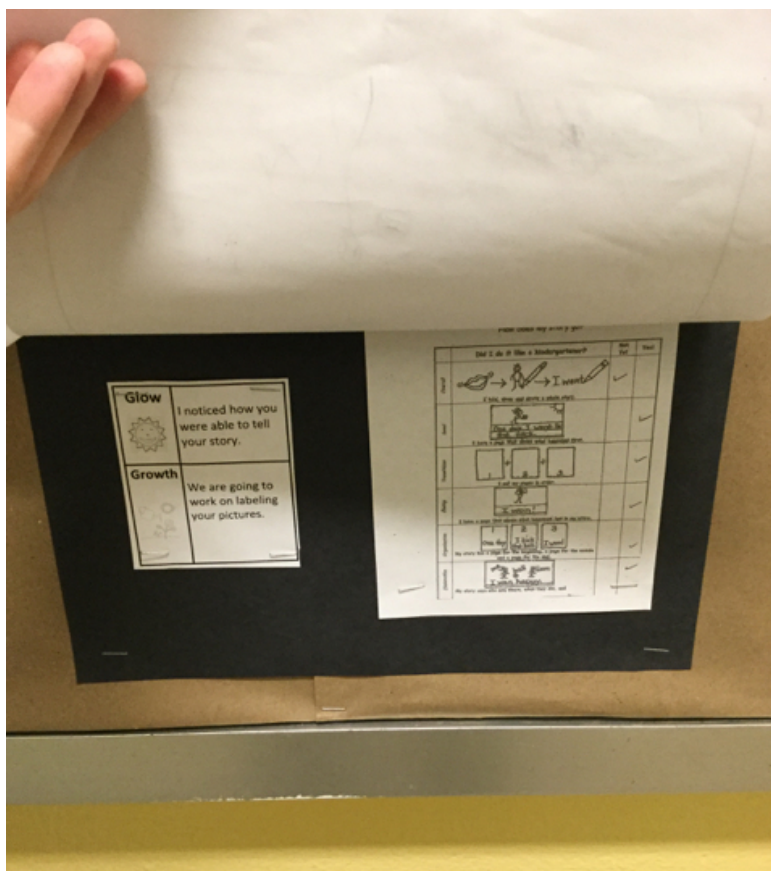
Figure 40. Rubric on a bulletin board.

However, considering the parents who may also see this display and have

opinions about the public display allowing students' work to be compared to

others, Clare staples the rubrics to the back of the pages, leaving the bottom two

corners open so they have to be flipped up to see. This allowed her to satisfy two

of her three concerns for doing things: following policies dictated by

administration, and maintaining the trust of parents that the class is engaged in

"progressive" education. It delegated the responsibility to the board to

communicate individual messages to different observers of the board.

Literacy Curriculum Networks

Figure 41. Commercial reading curriculum, unopened, in the closet.

From day one, literacy curriculum posed a pedagogical problem for Clare:

how does curriculum designed to be delivered in a literacy "block" fit into a

larger curriculum designed on integrating, and networking, subjects across the

day, both inside and outside the classroom? This also posed challenges for me,

who had initially expected that it would be easier to "cut the network" as I

collected data around literacy materials specifically, not realizing just how interconnected and rapidly translateable materials would be for a variety of enacted curricula. In this final section, I address these materials that I had expected to write mostly about: the picture books, writing samples, and pieces from past commercial reading curricula.

Typical artifacts of literacy curriculum were often present in Clare's classroom. Technically the school had adopted both the *Teachers College Reading and Writing Workshop* programs, but were working through how they fit into their progressive mission statement. Occasionally, a formal lesson plan of an ELA lesson, aligned to Common Core standards, was required to be submitted as part of the system's teacher evaluation system. In November, Clare was told make guided reading with leveled readers a part of her regular schedule, and so I worked during her planning period sorting through the box of readers we had left on top of the book shelf in her closet that summer (see Figure 41). On a regular basis, Clare incorporated Writing Workshop into the daily schedule, along with blocks of time for independent and guided reading, and while the programs were not followed as prescribed, I noticed the teacher's guide to the writing program under her easel often with several page markers attached. She also told me that she felt responsible for introducing language from both programs in order to provide some continuity between Kindergarten and 1st grade where these programs were used more explicitly. An example of this was creating a "Snap Words" chart for students to reference during writing. This was

an idea that Clare saw in another classroom and gleaned after borrowing a book from a 1st grade teacher.
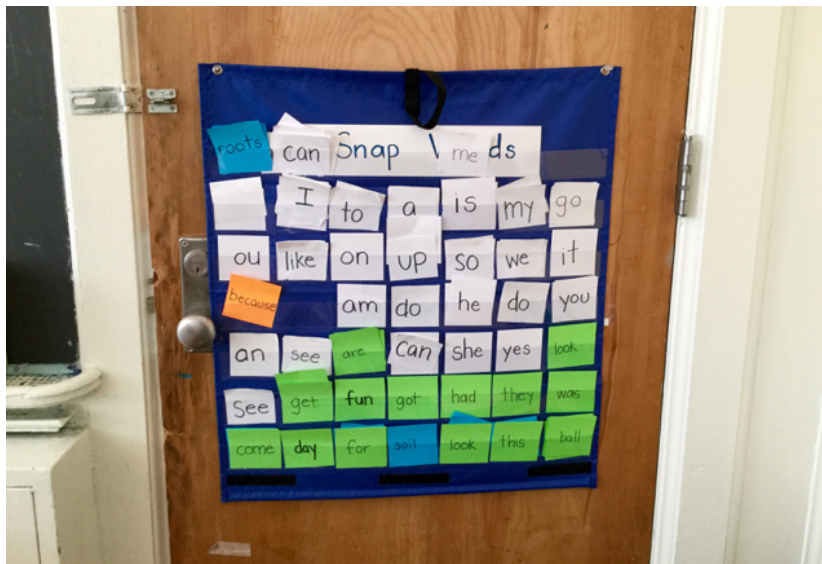
Figure 42. "Snap words" hung low on the closet door.

Figure 43. Leveled readers in individual student book bags for independent reading time.

But as the curriculum map at the end of the year showed, these activities were hardly represented. Ultimately, the materialities mapped were unique alliances beyond that of the "official" reading curriculum, such as a 14-foot tree salvaged from a trash pile on the sidewalk, eliciting a 2-month long class inquiry and a long list of tree-related literacy activities. At the end of the year, the mandated reading program's teacher guides, while not completely ignored, sat in the closet still wrapped in the plastic. Similarly, official Writing Workshop writing artifacts did not travel far beyond the students' writing folders.

Figure 44. Reading curriculum teaching guides in the closet, May 2017.

Independently created student work, however, did appear. Student-made signs eventually were connected to the unit on paper. Similarly, hand-drawn

maps of the park helped to inspire a maps unit after the tree unit. Heydon and

colleagues (2013) argue that ANT perspectives provide ways of identifying how

"asymmetries of power" in curriculum are produced. In this study, the ways that

these materials produced by students were able to mobilize entire curriculum

units was evidence of how asymmetrical power structures could be shifted in

favor of students and their interests. By Clare posting these signs and maps in

prominent classroom spaces, such as the SMART board or easel, she privileged

these materials, networked to students' interests, over those of other materials,

which may have been networked to other actors like education officials or

curriculum providers.

Figure 45. Student drawn maps of the park.

Conclusion

As previously described, studies of curriculum have often delineated between prescribed, adapted, and enacted notions of curriculum (Pinar et al., 1995; Snyder, Bolin, & Zumwalt, 1992). The purpose of this study was, in part, to uncase these notions and expose a much wider set of actors. Prescribed notions of curriculum, whereby a material, such as a textbook or teacher's guide, dictates to a teacher and students the wishes of a distant curriculum designer what the classroom curriculum should look like, are encased, in part, by not acknowledging the agencies of student and teacher (see Figure 46). The prescribed notion of curriculum has already been complicated through ANT perspectives, arguing that any semblance of linearity in this process is a "fantasy" (Edwards, 2011). As detailed in this chapter, materials brought into classrooms, be they "official" curriculum materials are not, have the power to produce effects on both students and teachers. Further, I argue that the notion of prescribed curriculum is *uncased* when the agencies of teachers and students, in association with prescribed materials, are traced.

Of greater interest to this particular study, which occurred in a school that was moving away from prescribed notions of curriculum, was to rethink our understanding of enacted curriculum from a network perspective. Typically, enacted curriculum has, in contrast to prescribed, acknowledged the agencies of students and teachers in deciding what materials were needed for curriculum, but this notion, too, becomes *uncased* when the agencies of the materials are

considered. Furthermore, notions of both prescribed and enacted curriculum are *uncased* when actors from beyond the classroom—publishers, administrators, DOE officials, and parents but also the Sanitation Department, the park, the gardeners, the weather—are made visible.
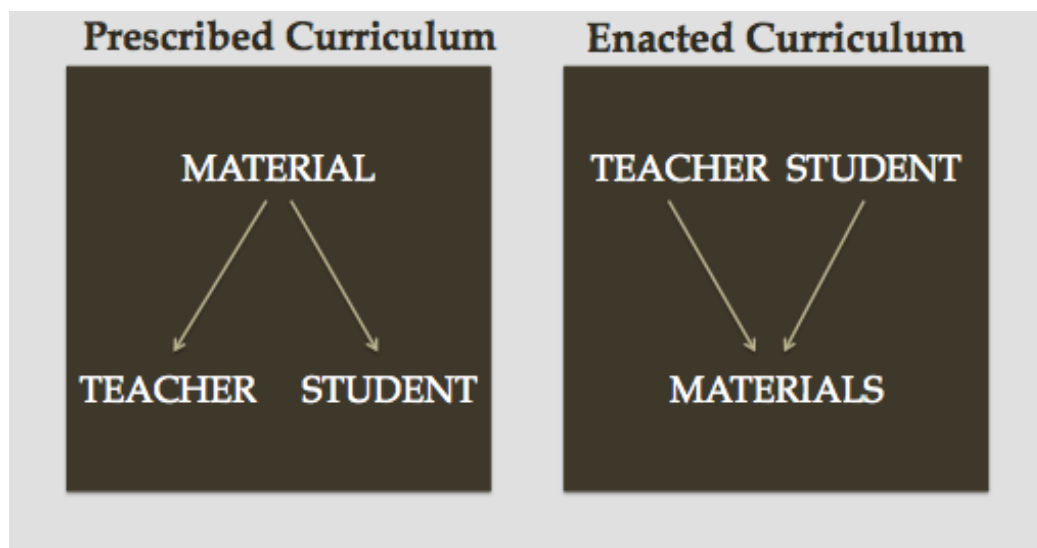
Figure 46. Encased notions of prescribed and enacted curricula.

In this study, by "looking down" at the specific material details of particular moments, enacted curriculum was seen as more complex than a negotiation between students and teachers. Rather, it was both expanded and constrained by the changing materiality of the classroom, and the networks of distant actors whose work was also connected to the moment.

Lastly, network tracings provided a way to expose "asymmetries of power" that existed in curriculum enactment. In the figure, if one assumes the teacher, students and materials to be equal actors, then both depictions of curriculum reveal an asymmetrical relation in the production of curriculum. In

the examples I have detailed in this chapter, a much more dynamic network of power relations is revealed, whereby multiple networks are simultaneously present and shaping the events that ultimately become what is enacted. The school's vision of progressive education required certain shifts in power towards students, and in Clare's vision, a shift towards outdoor materials over commercial materials. Just as the curriculum itself was never stable, these channels of power produced different dynamics at different moments. In the next chapter, I further consider what asymmetries of power can be exposed in the networks that enacted curriculum in Clare's classroom.

Chapter VI

THE MOBILITIES BEYOND THE MATERIAL
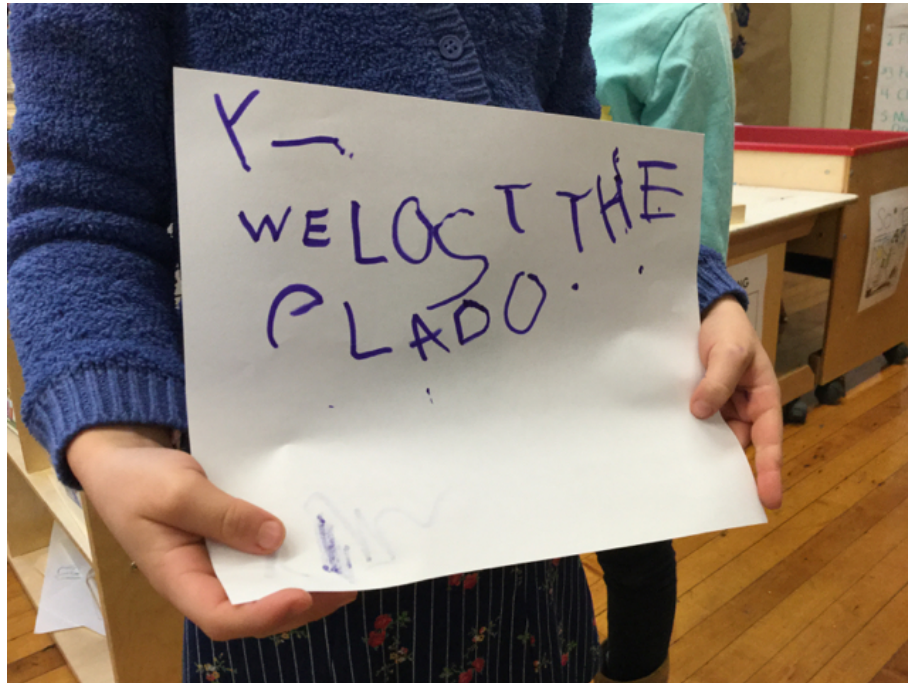
Figure 47. Student-made sign: WE LOST THE PLADO.

One morning in December, in response to discovering there was no clay on the art table for morning choice, three students worked together to create a sign, then interrupted a conversation between Clare and a parent to share their work with her (see Figure 47). Clare paused the conversation, thanked the students and asked them to post it at the meeting area. This is the sign I mentioned previously in the last chapter as an example of writing that got

mentioned when the class needed to figure out a way to share information with the lunch staff about their lunch choices. I watched and took notes as the children made the Play-Doh sign, let everyone know to look out for the bucket, and when it was found soon after.

I also watched as another parent, lingering in the classroom, oversaw this moment as his child and two others showed the paper sign they had made to Clare. He was standing by the "Hello in Many Languages" chart, as he had been asking his child what the different languages were before she left him for the art table, where there was no Play-Doh. After the students' spoke to Clare and posted the sign, he came over to Clare commenting how much he loved seeing kids engaged in these kinds of activities. Two weeks later, he would bring gifts to Clare thanking her for the wonderful experiences in her room, regretting that they were moving back to Europe at the end of the year.

For this parent, their decision to enroll their child in a "progressive" kindergarten, even if temporarily, was fulfilled in moments like the "PLADO" sign event. In fact, while families are typically offered a school placement within the zone that they reside, many families across the city, and at Parkside as well, pursue alternative choices, be it schools in other zones or districts, or private schools. The number of families who have chosen to enroll their children (and stay enrolled) at Parkside has grown for the last three years, after a steady decline of over half its enrollment the previous seven years. Three years ago was also the beginning of when parents of Pre-K students lobbied the school

administration to allow their children, and their "progressive" teacher Clare, to continue together in Kindergarten, thus beginning the schools "progressive" curriculum reform. Progressive curriculum, then, is not just the network effect from mobilities of materials, but also the increasing enrollment of students as well. Without a steady enrollment, Parkside Elementary, or any other school, could be closed.

In the previous two chapters, I have connected the materiality of the classroom to larger actor networks that together enacted various curricula throughout the school year. Premised within my research question was that understanding materiality was significant to understanding curriculum enactment. I entertained a third research question, which had to do with whether other networks constrained or allowed students and teachers to inform the curriculum. Within the course of collecting data, however, I felt that I was neglecting a larger network of actors by which to understand curriculum enactment, and so I amended my third question to: what other networks are implicated in the enactment of curriculum? The story above reveals a sizeable portion of data that was "cut from the network" in my proposed data collection: parents and their decisions to enroll their children at Parkside, and in this chapter, I intend to pursue it as a counter-analysis of the networks implicated in curriculum enactment.

ANT-inspired case studies are premised in presenting a case as assemblages of disparate actors, uncased. But for a theory of endless networks, a

researcher must decide where to "cut the network" (Strathern, 1996) put

boundaries somewhere, be it for the limitations of their own ability to collect

data, or of grant funding, or the constraints of manuscript or a conference

presentation. Cutting, however, comes with consequences, as the researcher

ultimately privileges one part of the network over another. Deciding, then, where

to "cut the network" becomes an ethical choice of the researcher involving

inclusion and omission.

Furthermore, Jan Nespor warns that too insular a view of networks may

blur "deeply worn channels" (1994, p. 15), trends or patterns that reflect larger

forces of inequity or injustice shaping the network. At a distance, a researcher

may be more aware of patterns of inequity, of divisions between groups, or

disparities between access to different networks. Such inequities are

commonplace in schooling, but not always addressed in micro-analyses of

curriculum production. I can point to the flaws in my own study's original

design to highlight this larger critique of ANT analysis.

Amending My Study

In the spring and summer before I began collecting data, I finished my

proposal for dissertation research, where I made a conscious effort to place

emphasis on classroom materials as actors in curriculum enactment. I justified

my reasoning, first, through arguments made in social-science, and increasingly

in education research, to reconsider ways that nonhuman actors are positioned

within analysis of social processes. "Matter matters," it has been said, and the networks that circulate, mobilize, and delegate require more than a static, inanimate reading. Secondly, I felt this argument responded to longstanding conversations on curriculum that I had engaged in since I first began teaching. After I earned my Masters in Education, my teaching certificate, and "highly qualified teacher status," I was handed a scripted curriculum to follow on my first day as a Kindergarten teacher and told to follow the program. In subsequent experiences in schools as a teacher and a researcher, I saw not only similar programs, but also rapid turnover of programs to newly promoted ones, like the school in my mini-study that had adopted four different reading programs in the last five years.

For these reasons, I remain convinced that a socio-material perspective, especially in early-childhood, is useful for research on curriculum enactment. Emphasizing the stuff of classrooms—the boxes of new materials that are bought by schools and the reasons for doing so, the space they occupy, and what materials are displaced by their movement—offers a way to see the complex networks of actors that become implicated in any curricular event occurring within the classroom. By June of 2016, I had communicated these thoughts to Clare, and we were both excited about what would be found in the coming school year, and the contribution it could make to a larger discussion about how the circulation of various materials bring complex networks of actors into curriculum enactment.

Figure 48. New York Times Magazine cover for June 6, 2016, taken by Henry Leutwyler.

Shortly after this conversation, I received this *New York Times Magazine* cover story by Nikole Hannah-Jones (2016). Titled, "Choosing a School for my Daughter in a Segregated City" the cover image is a single child with no background, and the only material present is a school uniform. It traces the history of school segregation in the United States through two schools undergoing district rezoning in gentrified Brooklyn, and the lengths that the mostly white and affluent parents would go—mobilizing state senators and other community leaders into packed town hall meetings—to keep their children

from being rezoned to a school primarily serving a large housing project, where Hannah-Jones had decided to send her daughter.

I read this article as a counter narrative to my study, that in addition to networks that mobilize materials into schools effecting curriculum, there too are networks, "deeply worn channels" rather, that mobilize the bodies of children into unequal school spaces. By starting with materials and tracing out, I was privileging those networks in a way that missed these larger issues, namely that my study, as Hannah-Jones points out, is set in the most segregated school system in the United States (Kuscera & Orfield, 2014). In weighing the decision of where to send her own child, Hannah-Jones (2016) considers both a wide-angle and narrow lens:

> I understood that so much of school segregation is structural—a result of decades of housing discrimination, of political calculations and the machinations of policy makers, of simple inertia. But I also believed that it is the choices of individual parents that uphold the system.

In ANT terms, one could argue, then, that school segregation is the network effect of many actors, collectively forming "deeply worn channels" that spill into new districts and neighborhood schools. And in "looking down" on one case, one classroom for instance, one may not realize that all the actors present are swept up in a deep channel, like a passenger being unaware that a train is moving.

Other scholars applying ANT to education research have addressed this methodological issue in different ways. For instance, Nichols et al. (2012) sought to network multiple case studies together into one study, tracing connections

across sites to construct a notion of "early learning resources" as an assemblage. Patterns of mobility, then, can be seen across cases from the assemblage. In many ways, Hannah-Jones' investigative journalism is its own network case study because, over several pieces, she has uncased patterns of school segregation by exposing the networks that stabilize it, be it in liberal Brooklyn neighborhoods (2016), Ferguson, Missouri (2015), or The Deep South (2014, 2017).

The remainder of this chapter details these amendments to my study, which trace how both the circulations of materials and children's bodies were constituted in the production of curriculum. My research question, originally, asked how the materiality of the classroom related to the production of curriculum, but in order to answer this question, it is important to first consider how other networks may relate to the production of curriculum as well, such as the enrollment of students into Kindergarten. In this section, I uncase the student body of Parkside Elementary to reveal the actor networks that enrolled students into Clare's classroom, and that worked to uphold progressive curriculum reform.

The Role of Parent Networks: School Enrollment

In combing through the history of Parkside elementary, parents have on many occasions played active and critical roles in shaping the school's curriculum, using a variety of means to do so. When the original building was sold to the DOE, it was a network of parents that fought to keep the school open,

and ultimately bought the charter and moved the school out of its changing neighborhood and into a more wealthy and white area.

As a public school in the 1960s, when the DOE announced a plan to locate another public school across the street, hiring only one principal to oversee both schools, I read accounts of another network of predominantly African-American parents that staged a boycott to advocate for more local control of the school. Over a thousand students boycotted Parkside Elementary and for a few weeks attended a Black Liberation opened in nearby facilities and led by a professor and protégé of Malcolm X, until the DOE agreed to allow parents more participation in the hiring and in the curriculum of the school. The DOE also agreed to hire an African-American principal for Parkside. Similar protests also occurred in later years, signaling a strong presence of parents as actors in the action of the school during this time.

More recently, it was a network of parents of Pre-K students that actively lobbied the school to adopt a progressive mission statement. According to a school document on the change to their mission statement:

> Parkside pre-kindergarten parents have spoken about the extreme differences between the philosophy of teaching in pre-kindergarten and what happens when a child graduates to kindergarten. The pre-kindergarten families shared how they wished for a whole-school environment that was more aligned to the philosophy of pre-kindergarten. In addition, parents that are new to district x and the school's zone also expressed their desire for a school that embraces more progressive practices.

Specifically, it was a group of parents, with the means of sending their children to other schools, that propositioned the school to have Clare move with their

children from Pre-K to Kindergarten so their children could continue to receive a "progressive" education, otherwise they would likely enroll their children elsewhere. This movement was the genesis of an effort to reform the school's curriculum, Pre-K through 5th grade, to a progressive approach by the year 2020. Subsequently, its low enrollment grew by 33%, in a district that lost 12% in the same time frame, and where only half of the neighborhood school age children attend their local school in this district.

As previously mentioned, from a report by the Center for New York City Affairs titled, "Segregated Schools in Integrated Neighborhoods" (Hemphill & Mader, 2016), researchers mapped and described the disparities between housing and schooling in NYC. In that report, I learned of Parkside's zone and district in 2014-15 that:

- both had high percentages of students living within the school zone but attending schools in other zones or districts

- Parkside Elementary students came from families whose household incomes on average were almost half the average for the families residing in the school zone

- the proportion of Black and Latinx students attending Parkside was more than twice the proportions of those living within the zone

Although I did not have complete demographic records of Parkside's student body throughout its history, it is indicated in several historical accounts that the school, since becoming public, served populations of predominantly Black,

Latinx and immigrant communities, while the overall enrollment of the school has varied. However, in 2016-17 as the enrollment began to increase, white students were the most rapidly growing demographic, and the school's economic index beginning to decrease. In the next section, I use parent interviews, collected at the end of the year, to begin to trace the networks that may be leading more parents to enroll in Parkside.

Interviewing Kindergarten Parents

At the beginning of the year, I distributed permission forms from parents to photograph and record small conversations about student work, as per my original research plan. Out of the 21 original students, I received 19 permission forms. Three of those students left before the end of the year, and four new students joined the class in the second semester. In the Spring, I sent the IRB committee an amendment to my original application to include parents as research participants and collect short interviews as an additional data set. I was informed that this did not require any amendment to my original because I had asked parents in my original participation form for permission to follow-up with them at a later date. I distributed a letter to all parents requesting 5-10 minute conversations about the Kindergarten application process and their decision to enroll. Thus, of the original remaining families, I was able to speak with 13 parents about the Kindergarten enrollment process. My two questions were:

1. What was the Kindergarten application process like, and were there resources you used to guide you?

2. How did you learn about Parkside Elementary, and how did you
    ultimately decide to enroll your child here?

What I can present in relation to the networks that brought students are

incomplete because I was not able to interview all families. While I was able to

speak to families from a wide variety of backgrounds, I did not ask families to

identify their socio-economic status, nor their racial identity. I did ask as part of

question one whether they live in the school's zone or district, but because I did

not obtain a complete data set, I cannot provide accurate percentages of students

residing in or out of the zone. What the data do provide are traces of a variety of

outside actors informing families from both within and beyond the school and

district zone about Parkside Elementary, and a variety of interests in the school

with some commonalities among families.

Of the 13 parents I spoke to, six lived within the school zone, another five

within the district, while two lived in a neighboring district. While some parents

within the zone chose Parkside as the first choice, some parents from outside the

zone and district spoke of visiting many schools before applying, as many as 20.

Some considered and applied to private schools, some "progressive" schools

specifically, and either were deterred by the cost or were waitlisted. Seven

students attended Pre-K at Parkside.

I anticipated that parents might mention online resources or books that

review schools as sources of information, especially with families outside of the

zone, but word-of-mouth was much more commonly mentioned. Three parents

from outside the zone mentioned a parent of older students, active in the school's Parent Association as someone who introduced or "recruited" them to visit and apply. Two students outside of the zone learned about Parkside from members of a Japanese community group, some families of which were in the first Pre-K class to advocate for progressive reform. Three parents first learned about the school through affiliations with a nearby university, but none of their contacts overlapped other than being associated with the university. In another encounter, one parent was advised by a member of the university to move to another district, but obviously declined. One parent mentioned coming from a tradition of progressive education, but many stated an interest in progressive education after touring the school. One parent mentioned that her child's grandfather attended Parkside in the 1970s.

I met one student's father when he was invited to class as a guest book reader. He greeted the class in two languages spoken in their home—Spanish and Thai—from the "Hello in Many Languages" chart (Figure 49). When I asked him about choosing Parkside (he did not reside in the zone), he talked about wanting to be a part of the community, but also raised concerns about whether the school will maintain the community it currently has.

> Right now this school seems really diverse and we're all about that, not just ethnicity but LGBTQI, and it can't be all middle class. I hope the school stays that way though and brown and black kids aren't slowly pushed out.
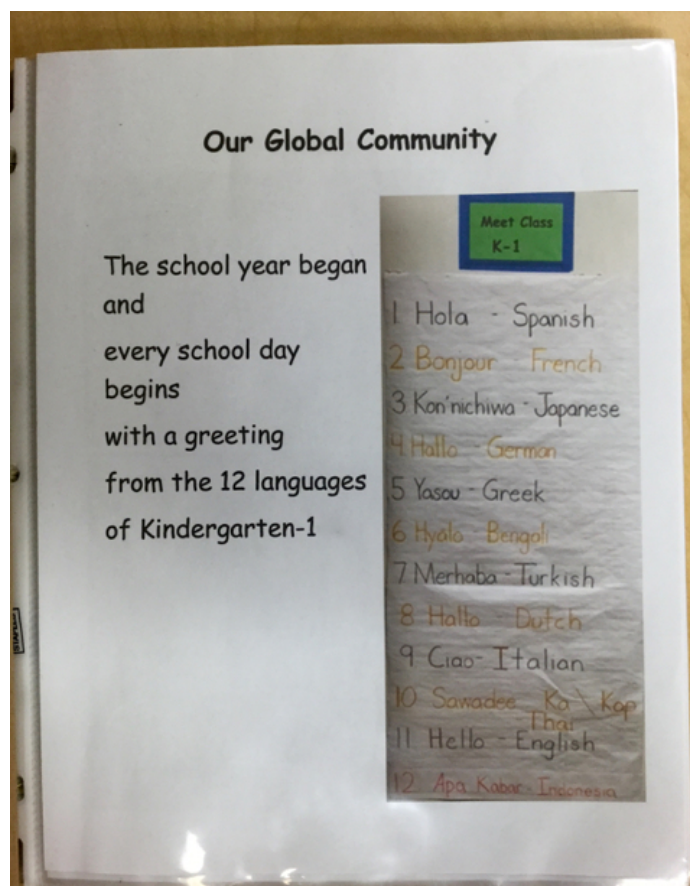
Figure 49. Chart of "Hello" in the home languages of students.

While Parkside at the time was quite diverse compared to other schools in the area, another parent expressed disappointment in how DOE policies seemed to do nothing, if not exacerbate the racial segregation in most schools in the area by the ways that families were matched with schools through the application process.

Another concern raised by multiple parents was that while they were happy with Kindergarten, they would "wait and see" about upper grades. Another mentioned that some families were "testing the school out in Pre-K"

then making decisions about the next grade each year. This was an original

concern with the Pre-K program, that parents were coming for Pre-K then

leaving (I did check enrollment numbers, and between 2012 and 2015, the first

year of progressive reform, Pre-K enrollment was higher than Kindergarten

enrollment by 6-11 students). It was not always stated what concerned these

parents about the upper grades, and how much they knew about them, but some

parents did express a concern over increased emphasis on testing, while another

mentioned differences in behavior management styles of different teachers.

It is important to acknowledge here that while these differences in

pedagogy and behavior management are complicated, so too are the effects that

reforming the school's curriculum towards a progressive philosophy carry for

teachers and parents of Parkside who for years have practiced curriculum in

ways considered more traditional. While I have tried to show in previous

chapters how curricular labels are not fixed or contained, the networks that

stabilize them can produce "asymmetries of power" that constrain the agencies

of students, teachers or parents in the production of curriculum. Given that

Parkside Elementary has traditionally served communities of lower income, and

students of color, these asymmetries of power may also intersect with

asymmetries across lines of race and class as to how, and for who, school is

designed to serve.

Nonetheless, for whatever the individual decisions were that led parents

to enroll their children in Parkside, specifically Clare's classroom, the effect was

collective: rising enrollment supplied the school with more funding from the city, and it strengthened the school's rationale for their curricular reforms. Progressive education, in this sense, was stabilized in part by an increasing flow of student enrollment. However, as I will discuss further in the next section, that network of enrollment may have other effects on the communities for which the school has traditionally served.

The Intersection of "Good Schools" and Good Neighborhoods

In February of 2017, I read two things over Saturday morning coffee that seemed to be in deep conflict with each other. The first was a tweet by Nikole Hannah Jones on how many parents had contacted her after reading her last piece on enrolling her daughter in a segregated school and rethought their decision or acted differently as a result of reading her article. The second was a piece in the *New York Times* Real Estate section titled, "A Move to the West Village for a Good School" (Velsey, February 2017). The first few sentences will be helpful to unpack the conflict:

> This is a story about how the hunt for a good public school can move a New York City family out of their home. After the birth of their first son, Jeanne Kempton and Damien Corr followed a trajectory familiar to many New York families, buying in an area—Cobble Hill, Brooklyn—with excellent public schools and biding their time in a two-bedroom condo until their second son was also safely ensconced in District 15... Their children's education seemingly settled, they bought and moved to a six-bedroom townhouse in Prospect-Lefferts Gardens and adopted a yellow lab. The boys commuted to their old school. But two years later, their older son failed to land a seat in one of District 15's excellent middle schools and was assigned to a struggling school by the border of Boerum Hill and Cobble Hill. They balked at sending him there, but neither

> ponying up for private school nor moving to the suburbs seemed a viable, or at least desirable, option. Then a third possibility occurred to Ms. Kempton: Why not rent an apartment in the West Village, which was in a school district that had both good middle schools and open seats?

There were many phrases to unpack here, such as what constituted a "good school" and a "struggling school," what it meant to be "safely ensconced" in a school district (safely ensconced from who). At minimum, it showed the extent to which the mobility of a family, with the means to do so, participate in the encasing of notions like "good schools" and "good neighborhoods" and the effects this has on the makeup of neighborhood schools.

Putting these two conversations together, I tweeted at Hannah-Jones, "I wish you wrote for the Real Estate section too," with a link to this article, and to my surprise she replied, "Sigh. Yes, we need to talk about this," then retweeted the link (to a much wider audience), mobilizing dozens of other voices into a large thread of comments growing and spreading throughout the morning. Many responses to Hannah-Jones tweet did the work of uncasing concepts like "good schools" presented matter-of-factly in the article. Residents of the neighborhoods mentioned quickly identified the schools that were inferred in the article, going as far as comparing test scores and arts programs, and concluding that the main differences between the two schools, other than their perceived reputation as represented in the article, was the student demographics. A local author, of a novel published that year on gentrification in Brooklyn, framed the issue with her own tweet, Alternate title: "White People Flee 3M$ Bklyn Townhouse Due to Presence of Black Children in Public Middle School!"

Ida Bae Wells @nhannahjones · Feb 4

Since I wrote the piece on choosing a school for my daughter in a seg system, I have heard from dozens of parents, black and white...(1)

💬 4   ⟲ 13   ♡ 52   ✉

Daniel Ferguson
@DanielEFerguson

Replying to @nhannahjones

I wish you wrote for the Real Estate section too. 😒

A Move to the West Village for a Good School
Seeking good public schools, a family leaves their Brooklyn townhouse for a two-bedroom in the West Village.
nytimes.com

6:32 AM - 4 Feb 2017

Ida Bae Wells
@nhannahjones

Following

So, so many thoughts about this article. Child was "safely ensconced" in an "excellent" public school zone.

A Move to the West Village for a Good School
Seeking good public schools, a family leaves their Brooklyn townhouse for a two-bedroom in the West Village.
nytimes.com

7:47 AM - 4 Feb 2017

114 Retweets **253** Likes

💬 33   ⟲ 114   ♡ 253   ✉

Ida Bae Wells @nhannahjones · 4 Feb 2017
So, so many thoughts about this article. Child was "safely ensconced" in an "excellent" public school zone.

A Move to the West Village for a Good School
Seeking good public schools, a family leaves their Brooklyn townhouse for a two-bedroom in the West Village.
nytimes.com

♡ 33   ⟳ 113   ♡ 251   ✉

Sarah Ryley ✔ @MissRyley · 4 Feb 2017
Putting aside that they gamed system to avoid PLG/ D17 schools, which are less white but in some cases better scoring than D15

♡ 3   ⟳ 1   ♡ 13   ✉

Sarah Ryley ✔
@MissRyley   Follow

Replying to @MissRyley @nhannahjones

I was surprised to see D17 schools only single-digit white bc it's pretty diverse area. Means many parents are gaming system.

9:15 AM - 4 Feb 2017

Lucinda Rosenfeld
@lucindaros   Follow

Alternate title: "White People Flee 3M$ Bklyn Townhouse Due to Presence of Black Children in Public Middle School!"

A Move to the West Village for a Good School
Seeking good public schools, a family leaves their Brooklyn townhouse for a two-bedroom in the West Village.
nytimes.com

8:22 AM - 4 Feb 2017

Figure 50. Excerpts of a Twitter thread on gaming the NYC school system.

In examples like this, one can begin to understand the network effects of family (im)mobilities that produce severe school segregation in NYC public schools. However, family mobilities also work to gentrify schools that appeal to more affluent families but have traditionally served students of color and lower socio-economic status (Freidus, 2016; Hemphill & Mader, 2016; Posey-Maddox, 2014). It had only been recently that the neighborhood gentrification had impacted the student enrollment of Parkside Elementary. In 2010, while the school's enrollment was in deep decline, their Pre-K program which started in 2010 was at full capacity. At one point, three Pre-K classes were available but only two Kindergarten classes, knowing that parents were coming for preschool but leaving afterward. One teacher at that time was popular in the area for her "progressive" approach to early childhood education. Parents, however, were taking advantage of the local Pre-K, but enrolling their students in other elementary schools later. As stated before, this changed when parents were able to mobilize another Pre-K teacher, Clare, into Kindergarten.

As enrollment began to increase at Parkside, the demographics of the school became more representative of the neighborhood gentrification, becoming a school with almost equal Latinx and Black populations to one with white and Asian populations as well. However, while the school's white and Asian populations were 7% and 6%, respectively, Clare's Kindergarten had near equal representations of Black, Latinx, white, Asian, and mixed-race identifying students. During morning meetings, students in Clare's classroom would choose

from 12 home languages spoken collectively by her class of 20-21 to greet each other. This classroom more closely resembled the average demographics of the NYC school system, which was 16% Asian, 27% Black, 40% Hispanic, and 15% White in 2016. A truly integrated system would mirror these proportions more closely, and in this sense Clare's classroom, more than Parkside or its district averages, was racially integrated. However, in terms of mobility, the most significant demographic group to change was White students, who increased from 5-12% of the school population between 2015 and 2016, (and in 2017-18 it increased again to 17%). While diverse in some ways, Clare was aware of these changes in demographics, and acutely aware that her class, even compared to the other Kindergarten class, was the whitest in the school.

If the progressive education that is attracting more students continues to expand, and those students stay enrolled at Parkside, the entire student body would be significantly impacted. In fact, in 2017, when Kindergarten placements were returned to parents for the next school year, there was a waitlist due to growing popularity for the first time. As explained in Chapter 4, while zoned students are given priority for their neighborhood school, high popularity can push out parents who apply late, or put pressure on officials to consider rezoning to accommodate group that are interested in the school. Thus, the school's curriculum is not only dependent on student enrollment (the mobilizing of students into school) but also vice versa.

The "Network Effect" of Student Mobility on Enacted Curriculum

      Here, I would like to return to a material object mentioned on the first page: the progressive banner hanging above the school door. From the inside, this banner reflects how progressive curriculum was enacted through an intricate weaving of disparate actors, material and human, connecting student inquiries and learning in both indoor and outdoor spaces. In looking beyond those material networks, however, it appears that access to this kind of curriculum is increasingly subject to larger networks that compete for limited real estate, school funding, and placements in popular schools and classrooms in the city. In other words, a focus on the banner as an actor in relation to the materialities of progressive education, can also function as a cloak over the effects of school gentrification. Given that school funding is tied to student enrollment, tracing how both materials and student's bodies were mobilized through one classroom offered a completely different perspective on curriculum as a network effect. And it is here where these dynamics of school, district, and student enrollment all intersect with curriculum. In an interview I conducted with Parkside Elementary's principal, I learned that funding for curricular materials is heavily tied to student enrollment, and so unless Parkside can compete with other zoned schools, the rising number of charter schools in the area, or unzoned schools with attractive programs, there is little flexibility. Here's Mr. Gibson:

I get it. If [a charter school] opens up at six thirty in the morning, and you know that your kid can be there until seven o'clock at night and you're a working parent, in this kind of community? You're going to put your kid in there. That's the reality and that's what we deal with. If we could offer things that are similar to charter schools maybe we could compete. But this is where we are.

In my conversation with the principal, an African-American male whose parents were educators in NYC, he spoke about how the school population has changed, "last year we were at 86% free and reduced lunch and this year we're at 68%, in one year!" I then asked Mr. Gibson directly, "how does Parkside become a progressive school that does not ultimately just end up serving the gentrifiers of the neighborhood?" and he told me about his effort to apply for Parkside to become a PROSE school, a new school program started in 2016 that allows schools to negotiate more flexibility in their contracts. PROSE, which stands for Progressive Redesign Opportunity Schools for Excellence, has given permission to now 140 schools to "implement innovative practices that fall outside the existing DOE and [teacher union] contracts" (NYCDOE, 2017b). Schools may also implement new enrollment protocols that would reserve a certain percentage of seats for zoned students or students from low-income families. It was unclear what percentage Parkside could reserve that would protect the school from flipping to predominantly White and affluent, but in addition to this, Parkside had increased outreach efforts to the nearby housing projects. What ultimately happens to the student body at Parkside remains to be seen, but these efforts of the principal, and the awareness of teachers and parents to how the student body is changing, sense that new actor-networks need to be mobilized in an effort to

preserve the diversity of the student body before it is swept away in deeper channels.

Conclusion

All parents, whether in organized groups or not, participate in enacting curriculum by the act of where they enroll their children in school. As stated previously, the New York City school system, the largest system in the nation, provides elementary education in approximately 1000 schools, divided into 32 districts, and each district divided into a number of school zones. For Parkside Elementary, the progressive school banner that hung over the front door communicated outward to a heavily gentrified neighborhood, whose children in great numbers have typically attended school elsewhere, to enroll their children there. In turn, Clare as a school leader in progressive pedagogy, as well as a White teacher in a school of predominantly students of color, was given more autonomy (although not totally) to "mobilize a company of actors" that achieved her vision of progressive curriculum. Although I did not observe other classrooms, it was clear through the number of parent tours given in her classroom as opposed to others, that this curricular autonomy, and its perceived benefit to the school, was not something given to all teachers equally.

As another effect of increased enrollment, the school's economic index rose, and while greater number of enrolled students increased the schools funding for things like curriculum materials, it neared a potential compromise of

Title I funding. If the popularity of the school exceeded its enrollment capacity,

then some families' applications would be waitlisted or rejected, which just

happened for the first time the following school year in Pre-K. This is how

schools, like those in Brooklyn that Hannah-Jones (2016) described, flip from

predominantly Black and Latinx to White, and how beyond classroom materials,

"resegregation as curriculum" (Rosiek & Kinslow, 2015) can also be traced.

In combining this analysis to that of classroom materiality and enacted

curriculum, one can see the danger in where an ANT research "cuts the

network," and what is left out of the picture. Herein also lies a methodological

problem to consider when "looking down": how is one to capture a sense of the

network beyond the moment, or to larger structural forces that, too, mobilize

actors and shape enactments of social activity. Within school systems as deeply

entrenched in inequity as in NYC, I am reminded of another question I read

recently: can one understand schooling in America at all, "without weaving a

tale inclusive of how segregation, race and economics have combined to become

the story of public education in America" (Rooks, 2017)? What if, instead of

beginning with the premise that research on schooling and literacy has

privileged the human and a material focus is warranted, ANT research on

schools began with this premise of schooling, tracing networks that case and

uncase these issues, and revealing trends, or complicating them. Considering this

view, the question for researchers becomes: how does the materiality of one

classroom help to make sense of school as a network effect of racism,

segregation, and economics? I do believe ANT sensibilities offer productive pathways for these issues, but it may require at times a change in scope, or a pause from looking down to, say, "looking out for" the human participants in a study fairly in addition to materials, looking out for how one's own biases skews the network, and looking out for deeply worn channels.

Chapter VII

NETWORK EFFECTS: DISCUSSION AND IMPLICATIONS

What Matters?: A Shift from Matter to Networks

"Matter matters" (Barad, 2003) has been an often cited refrain in reference to new materialism or posthumanism, of which ANT may be considered an ally. In the year that I collected the data for this dissertation, it was made the theme of a special issue to a well-known literacy journal (Kuby, Rowsell & Rucker-Gutshall, 2016). It was the theme to many papers presented at the Literacy Research Association annual conference, of which I attended that same year. It seemed more common for literacy scholars to take up and discuss nonhuman actors and their agencies than at least when I first began writing my dissertation proposal.

This refrain certainly resonated with me as a former classroom teacher: the idea that stuff lingers, accumulates, and gets replaced by new stuff carrying new ideas and policies, relegating older stuff to back cabinets, shelves or closets. So much of my day, especially after school before I could go home, was sorting through stuff, putting it into students' bins, folders, cubbies or desks, throwing away unnecessary things, and taking some of it home with me to work on it more. In light of this daily reality, accounting for the materiality of a classroom seemed integral to understanding the "concrete realities" (McGregor, 2004) of

literacy teaching and learning. In some ways, I can see how the questions on which this dissertation was based are directly connected to the day that I was handed keys to my first classroom as a public school teacher.

In taking up a network perspective in this dissertation, my goal was to show how material perspectives, like critical theories, could probe alternate readings of a case by attending to these dynamic material networks. In this final chapter, I wish to reflect on some of the main contributions these readings helped me to understand in regards to the production of literacy curriculum in a Kindergarten classroom. I also wish to discuss how the purpose of these readings of classroom materiality were not done for materials' sake, but for those whose education is impacted by them.

Curriculum as the Effect of the Mobilization of Materials and Bodies

Both material inventories and network tracings of data exposed a much wider cast of characters acting on literacy curriculum than typically associated with the production of curriculum. In the days before school began, setting up the classroom with Clare showed just how much, in regards to planning for classroom routines and curriculum, was entangled in the materiality of the classroom. Furthermore, "looking down" at particular moments of the school year made visible the "company of actors" effecting curriculum enactment.

In doing so, this study problematizes the notion of teacher agency. It is no slight of compliment to Clare or any other teacher to state that the greatness of teaching is less a function of what they do themselves, but in how they are able

to recognize resources and orchestrate companies of actors towards curricular ends. Consider Clare at the rug with a picture book at her feet and the wrong lunches on the table. While in that moment, she had to act quick, she as any teacher was at best orchestrating a company of actors towards a potentially productive end. Attending to classroom materiality in relation to curriculum enactment matters for teachers who, before they interact with students on the first day, must interact with the materials of their classroom. They decide what to pull out and what to keep in the closet, making some things possible and others not. However, they are not in full control of the flows of new materials and the forces carried through them that enter, and often, as in NYC, they are subject to teacher evaluations that seek to assess them as lone actors.

Uncasing these moments of enacted curricula also offer examples of how literacy curriculum networks distribute the agencies of literacy design and designer across a wider set of actors. In other words, to design is also to be within a company of designers. While a design metaphor for literacy has enabled scholars (Kress, 2000) to consider how people draw from wide resources to (re)design literacy practices, the metaphor of literacy network considers further the ways that literacy can be expanded or constrained by the networks of which they are connected (Leander et al, 2010). Additionally, the network perspective unveils the cloak or case around material actors to reveal the multiplicities and mobilities of actor networks that are continually redesigning by these forces. This is especially the case in the context of literacy curriculum in school spaces where

the networks are expanded and constrained by both human/nonhuman, local/distant, invited/uninvited actors competing for space and attention, and in many cases reproducing social inequalities within schooling institutions.

More broadly, this work contributes to an understanding of curriculum enactment as the work of a "company of actors" rather than a few. While some ANT scholarship has already made a critique of the notion of prescribed curriculum (Edwards, 2011), this study also asks us to rethink what it means to say curriculum is enacted. And while literature in curriculum studies, as detailed in my literature review, tended to discuss either prescribed or enacted notions of curriculum, in some ways what this study offers is a reconsideration of "mutual adaptation" the less talked about middle option (Snyder, Bolin & Zumwalt, 1992). While the original meaning referred to the adaptations made by both the "designers and the practitioners," as I reread mutual adaption through a network perspective, I was reminded of the multiplicity of actors that work on each other in the production of curriculum. From this, I believe describing the production of curriculum as a "mutual adaptation" or as a translation among a series of actors and networks mobilized in and through the classroom at one particular moment, may be better suited to describing the "company of actors" that are visible in an ANT inspired networks perspective of curriculum.

If curriculum is the effect of networks of "mutual adaptations," then it becomes difficult to *encase* any one notion of curriculum, be it literacy curriculum, early childhood curriculum, or progressive curriculum. At best, one

can trace the networks that continually make and unmake these notions. It was not my intent, then, to leave the reader with a complete picture of what one particular kind of curriculum is or looks like, but rather describe the forces that, in this particular case, are continually shaping and influencing it.

Last, this study also addresses ways in which larger networks that are part of structural inequities of schooling in the United States are also connected to the enactment of literacy curriculum. For instance, racial and economic privilege are "funded" (Ladson-Billings, 2017) by parent networks that utilize the system's school choice allowances to literally enroll their children's bodies into their notion of a "good school." In the case of Parkside, the networks holding together the notion of "progressive school" intersected with those that hold together the notion of "good school." Consequently, these networks speak to more than just the enactment of curriculum, but the ways in which access to schools can become commodified in a system where school choice benefits consumers with the greatest power. While these policies, be they school enrollment policies or neighborhood zoning, are themselves *designed* for particular effects, analyzing their networks provides insight into the ways they can take a life of their own once mobilized.

Implications for Future Research

From here, I can imagine a variety of related network case studies that could address the kinds of questions raised around the production of curriculum. Some studies could pursue uncasings at a more microscopic level,

such as studies of smaller spaces like classroom libraries, bookshelves, bulletin boards, or closets. Additionally, *networked* case studies could link multiple sites together, as well as pursue longitudinal approaches to studying classrooms over multiple years. *Networked* case studies could offer ways to examine and compare classrooms of entire teacher teams or schools, new teacher classrooms and veteran teachers, in-school and after school learning spaces, and Pre-K and elementary spaces.

Furthermore, network case studies can work towards addressing larger systems of school inequity, but only if researchers make critical moves in where to shine the spotlight, and in what direction to trace the networks. The ethics of a materialist or posthuman research do not come with the theory but still reside with the human researcher, who carry their own biases and privileges entangled in intersections of race, gender, and class. For me, addressing this includes, as I discussed in the limitations sections of Chapter III, acknowledging how the networks of relations that extend from my histories as an early-childhood teacher, my experiences in academia, and the privileges that come with being white and male, actively shape the way I, as a researcher, saw other actors, and traced their networks. A critical network perspective, addressing both the center and the margins of a network, may open more possibilities for researchers in this field to examine the intersections of materiality and inequality in school spaces. I offer the following inquiries for further consideration:

- How do networks provide access to different literacies in schools?

- How are unequal distributions of literacy resources formed?

- How do some materials become privileged in certain school spaces?

- What "deeply worn channels" feed into enacted curriculum, and what challenges do they present for teachers?

Implications for Early Childhood Education

I also believe this work to be of particular importance in the contemporary landscape of early childhood education, a space with a rich tradition in appreciating the materials of early learning. As access to preschool education is expanding in cities like NYC, so too are debates over what kinds of materials and activities are best for young children to reap the greatest benefit from early childhood education. In Clare's classroom, parents advocated that the Pre-K aspects of her classroom—the blocks, pretend area, and sensory bins—remain in Kindergarten in lieu of commercial curricula. In some ways, these preferences harken back to arguments made by progressive educators of NYC, like Caroline Pratt (1921) who first created the unit blocks that have become ubiquitous in Pre-K classrooms, and were also in Clare's classroom. Thus, more research is needed that exposes the ways that blocks, sensory bins, and pretend areas, all rich with materiality producing a variety of sights, sounds and smells, are also rich in connections to the kinds of curricular demands, particularly those related to literacy that are being pushed down into early childhood spaces. In other words, research attuned to these "intensities" (Stewart, 2007) of sensory experience is

needed that exposes how materials of early childhood are often doing the work of literacy curriculum, and need not be dismissed as old fashioned or replaced by commercial curricula.

Implications for Teaching and Teacher Education

There are a variety of ways in which teacher educators could also build upon these same network perspectives of teaching and learning. In recognizing the work of teaching as being in "a company of actors," and recognizing the networks of mobilities that can be orchestrated into curricular resources streaming through classrooms. I can imagine assignments for preservice teachers required to conduct field observations, to conduct material inventories of classrooms, sensory observations, and mini network tracings of an observed lesson, to "look down" and notice, beyond the teacher and students, the kinds of actors that often, unexpectedly, show up or interfere with a lesson. Then, I can imagine preservice teachers bringing these tracings into conversation with each other in ways that would offer nuance and complexity to what have at times been challenging divides between theory and practice in teacher education. Helping teachers to recognize the networks of actors streaming through classrooms may serve to offer clarity or possibly alleviate some of the frustrations that come in following prescribed lessons, or viewing oneself as a lone teacher.

Critique of the Study

The network ontology is, in part, a critique of methodologies that have encased, or treated objects of inquiry as contained, fixed, or local (Leander et al., 2010). The network ontology, however, is also not without critique, and in my own study I highlight moments where I found myself pushing back on ANT sensibilities that influenced me, namely the notions of cutting the network and looking down.

In my study there were both intentional and unintentional cuts to the network. Intentional cuts involved parameters of space, time, and participants. For instance, I chose to center my focus on the curriculum produced in one Kindergarten classroom, with an emphasis on the materials as actors. I chose not to cut the week prior to the school year when the room is being set up from my network study. Unintentional cuts were those produced by my own interests and biases, which could focus attention on certain aspects of a network, at the expense of other parts. Ultimately, these cuts make network research more manageable, but also come with consequences for that research, which are all subject to serious critique. For Fenwick and Edwards (2010),

> The critical issue is that wherever one puts boundaries around a particular phenomenon to trace its network relations, there is a danger of both privileging that network and rendering invisible its multiple supports and enactments. (p. 15)

Similarly, Nespor (1994) critiques network analyses as being better equipped to capture what appears in the center of the network, with less to offer for what lies at its margins.

Because many studies of curriculum enactment have attended to the actions of students, I hoped that a material perspective that decenters teacher and student agencies may offer new insight into the ways in which we speak about curriculum enactment. As I later considered, however, emphasizing materials may have had the consequence of missing other parts of the network I felt would be unethical, and less trustworthy a study, to be left at the margins. Still, in a theory of endless networks, there must be cuts made, and this study is subject to criticisms for what I was not able to trace. I also recognize the limitations in centering a network study within a class, and how this could have been aided by decentering the site of research more than I did. In hindsight, I see how making more time for me to collect data at the margins, be it in adjacent classrooms, in the school office, or in conversation with parents in the hall, captures a richer, and perhaps more trustworthy, network tracing than by staying centered in the classroom.

On that note, I close this section with an email I received after soliciting information from parents about their experiences with Kindergarten enrollment process in NYC. One parent wrote,

> You said that you were interested in knowing the different ways that students came to 'this particular classroom' but you didn't ask any questions about how students got to be in this class as opposed to [the other Kindergarten] class, so I'm afraid you will not get the whole story. Neither the students nor the materials are equally as likely to be placed in one classroom as the other.

This is a concern that Clare brought up frequently, that when the two classes passed in the hallway, it was abundantly clear hers was more white, and the other more black and brown. Clare worried about materials that she brought into her classroom, like wooden games and stumps that would evoke an aesthetic to visiting parents different than that of other classrooms, an aesthetic of affluence. She worried of what effects her being read as a white teacher, in a position of leadership on progressive education, had on non-white teachers in the school. This led Clare on several occasions to introduce activities that were aligned or similar to other teachers' classes. These moments could have been explored in more depth had I collected data in multiple classrooms, and in doing so would have offered insights into network effects of enacted curriculum in one classroom, felt in another.

Interviewing this particular Kindergarten teacher would have offered a richer perspective on networks that ran between Clare's classroom and others. However, due to scheduling constraints and difficulties I was not able to interview this teacher, nor other teachers in other grades who had worked in the school years before Clare and the principal arrived. Also, while the focus of my study and the constraints of data collection did not allow me to trace multiple classrooms, I do believe this parent was absolutely correct in arguing it would

have added more to the story, revealing further everyday inequalities present in the school.

I offer this story as a critique of the study, but also as a reminder of why it is important for researchers to read these networks, and their roles in shaping them, critically. It also furthers a case for the ways in which this body of research could benefit from *networked* case studies of multiple classrooms, where the networks traced from one study may be able to pick up where another left off, offering further mobilities and multiplicities of understanding to the study. Additionally, it offers an ethical decree to those that research networks, especially those of young children or marginalized groups. It warns us of the potential consequences of "looking down" as a research method, and considers why it may be necessary, too, for researchers to *look out for* as well for marginalized actors, and *look out for* deeply worn channels of systemic injustice.

Conclusion

As Dyson and Genishi write of case study research, "the way we come to know one thing well is a complicated humanistic process" (2005, p. 58). This, even within ANT, new materialist, or posthumanist research, is especially true where an attention to material agencies can offer new insights into the human condition. However, a focused attention on the material, if not critically analyzed, can also come at the expense of the human, both participant and

researcher. Looking forward, it is imperative that as we continue to make a case

that "matter matters," it should not come without also asking, *matters for whom*?

REFERENCES

Anand, A. (2013, September 5). Many teachers still waiting on textbooks for new city curriculum. New York, NY: Chalkbeat. Available at http:// ny.chalkbeat.org/2013/09/05 /many-teachers-still-waiting-on-textbooks-for-new-city-curriculum/

Apple, M. W. (1984). The political economy of text publishing. *Educational Theory, 34*(4), 307-319.

Apple, M. W. (1990). The text and cultural politics. *The Journal of Educational Thought (JET)/Revue de la Pensée Educative*, 17-33.

Bakhtin, M. (1981). *The dialogic imagination: Four essays* (M. Holquist, Trans.). Austin, TX: University of Texas Press.

Baldwin, J. (2008). A talk to teachers. *Yearbook of the National Society for the Study of Education, 107*(2), 15-20.

Ball, D. L., & Cohen, D. K. (1996). Reform by the book: What is: Or might be: The role of curriculum materials in teacher learning and instructional reform?. *Educational Researcher*, 6-14.

Ball, S. J. (2012). *Global education inc: New policy networks and the neo-liberal imaginary*. London: Routledge.

Barad, K. (2003). Posthumanist performativity: Toward an understanding of how matter comes to matter. *Signs: Journal of Women in Culture and Society, 28*(3), 801-831.

Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Durham, NC: Duke University Press.

Brandt, D., & Clinton, K. (2002). Limits of the local: Expanding perspectives on literacy as a social practice. *Journal of Literacy Research, 34*(3), 337-356.

Burnett, C., Merchant, G., Pahl, K., & Rowsell, J. (2014). The (im)materiality of literacy: the significance of subjectivity to new literacies research. *Discourse: Studies in the Cultural Politics of Education, 35*(1), 90-103.

Clarke, J. (2002). A new kind of symmetry: Actor-network theories and the new literacy studies. *Studies in the Education of Adults, 34*(2), 107-22.

Cody, A. (2013, December 11). The making of Common Core creation stories: Myth or fact? [blog]. Retrieved from http://blogs.edweek.org/teachers/ living-in-dialogue/2013/12/the_making_of_common_core_crea.html

Comber, B. (2016). *Literacy, place, and pedagogies of possibility*. New York, NY: Routledge.

Common Core State Standards Initiative (CCSSI) (2010). English Language Arts Standards [Website]. Retrieved from http://www.corestandards.org/ ELA-Literacy

de Castell, S., & Luke, A. (1987). Literacy instruction: Technology and technique. *American Journal of Education, 95*(3), 413-440.

Dyson, A. H. (1993). *Social worlds of children: Learning to write in an urban primary school*. New York, NY: Teachers College Press.

Dyson, A. H. (2003). *The brothers and sisters learn to write: Popular literacies in childhood and school cultures*. New York, NY: Teachers College Press.

Dyson, A. H. (2008). Staying in the (curricular) lines: Practice constraints and possibilities in childhood writing. *Written Communication 25*, 119-159.

Dyson, A. H. (2013). *Rewriting the basics: Literacy learning in children's cultures*. New York, NY: Teachers College Press.

Dyson, A. H., & Genishi, C. (2005). *On the case: Approaches to language and literacy research*. New York, NY: Teachers College Press.

Edwards, R. (2011). Translating the prescribed into the enacted curriculum in college and school. *Educational Philosophy and Theory, 43*(1), 38-54.

Fenwick, T. (2011). Reading educational reform with actor network theory: Fluid spaces, otherings, and ambivalences. *Educational Philosophy and Theory, 43*(1), 114-134.

Fenwick, T., & Edwards, R. (2010). *Actor-network theory in education*. New York, NY: Routledge.

Ferguson, D. E., & Kuby, C. R. (2015). Curricular, relational, and physical spaces in the Japanese hoikuen. *International Journal of Early Childhood*, *47*(3), 403-421.

Ferreiro, E., & Teberosky, A. (1982). *Literacy before schooling*. Portsmouth, NH: Heinemann.

Fertig, B. (2013, February 28). City picks new Common Core materials. *WNYC: Schoolbook*. Retrieved from https://www.wnyc.org/story/301892-city-picks-new-common-core-curriculum-materials/

Flesch, R. (1966). *Why Johnny can't read*. New York, NY: HarperCollins Publishers.

Freebody, P., & Baker, C. (1985). Children's first schoolbooks: Introductions to the culture of literacy. *Harvard Educational Review*, *55*(4), 381-399.

Freidus, A. (2016). "A great school benefits us all:" Advantaged parents and the gentrification of an urban public school. *Urban Education*, 1-28.

Geertz, C. (1973). *The interpretation of cultures* (Vol. 5019). New York, NY: Basic Books.

Goodman, K. S. (1986). *What's whole in whole language? A parent/teacher guide to children's learning*. Portsmouth, NH: Heinemann.

Goodman, K., & Goodman, Y. (1979). Learning to read is natural. *Theory and practice of early reading*, *1*, 137-154.

Goodman, K., Shannon, P., Freeman, Y. & Murphy, S. (1988). *Report card on basal readers*. Katonah, NY: Richard C. Owen Publishers.

Griffin, P., Burns, M. S., & Snow, C. E. (Eds.) (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academies Press.

Hannah-Jones, N. (2014, April 16). Segregation now: The resegregation of American schools. *Propublica*. Retrieved from https://www.propublica.org/article/segregation-now-full-text

Hannah-Jones, N. (2015, July 31). The problem we all live with: Part one. *This American Life*. Podcast retrieved from https://www.thisamericanlife.org/562/the-problem-we-all-live-with-part-one

Hannah-Jones, N. (2016, June 9). Choosing a school for my daughter in a segregated city. *The New York Times Magazine*. Retrieved from https://www.nytimes.com/2016/06/12/magazine/choosing-a-school-for-my-daughter-in-a-segregated-city.html

Hannah-Jones, N. (2017, September 6). The resegregation of Jefferson County. *The New York Times Magazine*. Retrieved from https://www.nytimes.com/2017/09/06/magazine/the-resegregation-of-jefferson-county.html

Harste, J. (2003). What do we mean by literacy now?. *Voices from the Middle, 10*(3), 8-12.

Harste, J., Woodward, V., & Burke, C. (1984). *Language stories and literacy lessons.* Portsmouth, NH: Heinemann.

Heath, S. B. (1983). *Ways with words: Language, life, and work in communities and classrooms*. New York, NY: Cambridge University Press.

Heath, S. B. (2000). Seeing our way into learning. *Cambridge Journal of Education*, *30*(1), 121-132.

Hemphill, C. (2002). *New York City's best public elementary schools: A parents' guide* (2nd ed.). New York, NY: Teachers College Press.

Hemphill, C. (2016). *New York City's best public elementary schools: A parents' guide* (4th ed.). New York, NY: Teachers College Press.

Hemphill, C. & Mader, N. (2016). *Segregated schools in integrated neighborhoods: The city's schools are even more divided than our housing.* New York, NY: Center for New York City Affairs, Milano the New School for Management and Urban Policy.

Hemphill, C. & Sant'anna Costa, A. C. (2017, April 5). Restoring parent trust in Harlem's beleaguered schools. *Urban Matters*. Retrieved from http://www.centernyc.org/parent-trust-harlem-schools/

Heydon, R. (2013). Learning opportunities: The production and practice of kindergarten literacy curricula in an era of change. *Journal of Curriculum Studies*, *45*(4), 481-510.

Heydon, R., Crocker, W., & Zhang, Z. (2014). Novels, nests and other provocations: emergent literacy curriculum production in a childcare centre. *Journal of Curriculum Studies*, *46*(1), 1-32.

Heydon, R., Moffatt, L., & Iannacci, L. (2015). 'Every day he has a dream to tell': classroom literacy curriculum in a full-day kindergarten. *Journal of Curriculum Studies*, *47*(2), 171-202.

Hultman, K., & Lenz Taguchi, H. (2010). Challenging anthropocentric analysis of visual data: A relational materialist methodological approach to educational research. *International Journal of Qualitative Studies in Education*, *23*(5), 525-542.

Ingold, T. (2007). *Lines: A brief history*. London: Routledge.

Jackson, A. Y., & Mazzei, L. A. (2011). *Thinking with theory in qualitative research: Viewing data across multiple perspectives*. New York, NY: Routledge.

Johnson, L. (2002). Making democracy real: Teacher unionism and community activism to promote diversity in the New York City public schools, 1935-1950. *Urban Education 37*(5), 566-587.

Kersten, J., & Pardo, L. (2007). Finessing and hybridizing: Innovative literacy practices in Reading First classrooms. Reading Teacher, 61(2), 146-154.

Khan, Y. (2013, August 8). Common Core training kicks off for teachers. *WNYC: Schoolbook*. Retrieved from https://www.wnyc.org/story/311475-teachers-prepare-another-year-common-core-now-curriculum

Kinloch, V. (2010). *Harlem on our minds*: *Place, race and the literacies of urban youth*. New York, NY: Teachers College Press

Kress, G. (1997). *Before writing: Rethinking the paths to literacy*. London: Routledge.

Kress, G. (2000). Design and transformation: New theories of meaning. In B. Cope & M. Kalantzis (Eds.). *Multiliteracies: Literacy Learning and the Design of Social Futures*. Melbourne: Macmillan.

Kuby, C. R., Rowsell, J., & Gutshall Rucker, T. (2016). Call for abstract submissions to a special issue of the Journal of Early Childhood Literacy: Early literacy and the posthuman: Pedagogies and methodologies. *Journal of Early Childhood Literacy*, *16*(1), 3-7.

Kucsera, J., & Orfield, G. (2014). New York state's extreme school segregation: Inequality, inaction and a damaged future. UCLA: The Civil Rights Project/Proyecto Derechos Civiles. Retrieved from: http://civilrightspro ject.ucla.edu/research/k-12-education/integration-anddiversity/nynorfle t-report-placeholder/Kucsera-New-York-Extreme-Segregation-2014.pdf

Ladson-Billings, G. (2017). The Social Funding of Race: The Role of Schooling. *Peabody Journal of Education, 92*(6).

Latour, B. (1987). *Science in action*. Cambridge, MA: Harvard University Press.

Latour, B. (1992). Where are the missing masses? The sociology of a few mundane artifacts. In W. E. Bijker and J. Law (Eds.). *Shaping technology/holding society*. Cambridge, MA: MIT Press.

Latour, B. (1994). On technical mediation: Philosophy, sociology, genealogy. *Common knowledge*, *3*(2), 29-64.

Latour, B. (1996). On actor-network theory: A few clarifications plus more than a few complications. English version in Soziale Welt 47:369-381. Available http://www.bruno-latour.fr/sites/default/fi les/P-67%20ACTOR-NETWORK.pdf

Latour, B. (2005). *Reassembling the Social-An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.

Law, J. (2007). Making a mess with method. In W. Outhwaite and S.P. Turner (Eds.) *The Sage handbook of social science methodology* (595-606). London: Sage.

Law, J. (2009). Actor network theory and material semiotics. *The new Blackwell companion to social theory*, *3*, 141-158.

Lawn, M., & Grosvenor, I. (2001). 'When in doubt, preserve': exploring the traces of teaching and material culture in English schools. *History of Education*, *30*(2), 117-127.

Leander, K., & Boldt, G. (2013). Rereading "A pedagogy of multiliteracies" bodies, texts, and emergence. *Journal of Literacy Research*, *45*(1), 22-46.

Leander, K. M., & Lovvorn, J. F. (2006). Literacy networks: Following the circulation of texts, bodies, and objects in the schooling and online gaming of one youth. *Cognition and Instruction*, *24*(3), 291-340.

Leander, K.M., Phillips, N.C., and Taylor, K.H. (2010). The changing social spaces of learning: Mapping new mobilities. *Review of Research in Education, 34*, 329-394.

Leander, K.M. & Sheehy, M. (Eds.) (2004). *Spatializing literacy research and practice*. New York, NY: Peter Lang.

Lefebvre, H. (1991). *The production of space* (D. Nicholson-Smith, Trans.). Cambridge, MA: Blackwell.

Lenters, K. (2014). Just doing our jobs: A case study of literacy-in-action in a fifth grade literature circle. *Language and Literacy*, *16*(1), 53-70.

Lenz Taguchi, H. (2010). *Going beyond the theory/practice divide in early childhood education: Introducing an intra-active pedagogy*. New York, NY: Routledge.

Lenz Taguchi, H. (2011). Investigating learning, participation and becoming in early childhood practices with a relational materialist approach. *Global Studies of Childhood*, *1*(1), 36-50.

Lewis, C. (2001). *Literary practices as social acts: Power, status, and cultural norms in the classroom*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry* (Vol. 75). London: Sage.

Luke, A. (1988). *Literacy, textbooks and ideology*. London: The Falmer Press.

Mahiri, J. (2005). From 3 R's to 3 C's: Corporate curriculum and culture in public schools. *Social Justice*, *32*(3), 72-88.

Mannion, G., Ivanič, R., & the Literacies for Learning in Further Education (LfLFE) Research Group 1 (2007). Mapping literacy practices: theory, methodology, methods. *International journal of qualitative Studies in Education*, *20*(1), 15-30.

Marshall, C., & Rossman, G. B. (2006). *Designing qualitative research*. London: Sage Publications.

Massey, D. (2005). *For space*. London: Sage Publications.

McGregor, J. (2004). Spatiality and the place of the material in schools. Pedagogy, culture and society, 12(3), 347-372.

Mehan, H. (1979). Learning lessons: Social organization in the classroom. Cambridge, MA: Harvard University Press.

Milner, H. (2013). Scripted and narrowed curriculum reform in urban schools. *Urban Education 48*(2), 163-170.

Mitchell, L. S. (1921). *Here and now storybook*. New York, NY: E.P. Dutton & Company, Inc.

Moll, L.C., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory Into Practice*, 31(2), 132- 141.

Moustafa, M., & Land, R. E. (2002). The reading achievement of economically disadvantaged children in urban schools using Open Court vs. comparably disadvantaged children using non-scripted reading programs. In *Yearbook of the Urban Learning, Teaching, and Research Special Interest Group of the American Educational Research Association*.

National Reading Panel (US), National Institute of Child Health, & Human Development (US). (2000). *Report of the national reading panel: Teaching children to read: An evidence based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups.* National Institute of Child Health and Human Development, National Institutes of Health.

Nespor, J. (1994). *Knowledge in motion: Space, time and curriculum in undergraduate physic and management*. London: The Falmer Press.

Nespor, J. (1997). *Tangled up in school: Politics, space, bodies, and signs in the educational process*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

Nespor, J. (2012). Devices and educational change. In T. Fenwick & R. Edwards (Eds.) *Researching education through actor-network theory* (1-22) Blackwell Publishing.

Neuman, S. B., & Celano, D. (2001). Access to print in low-income and middle-income communities: An ecological study of four neighborhoods. *Reading Research Quarterly*, *36*(1), 8-26.

New London Group. (1996). A pedagogy of multiliteracies: designing social futures. *Harvard Educational Review, 66*(1), 60-92.

New York City Department of Education (NYCDOE). (2013, October). Guidance around implementing core curriculum materials Pearson's ReadyGen. Available at: http://schools.nyc.gov/NR/rdonlyres/B43E4E7A-DEB4-4104-BBC6-868C4F056567/0/ReadyGenFAQs.pdf

New York City Department of Education (2015). NYC and the Common Core. Available at: http://schools.nyc.gov/Academics/CommonCoreLibrary/About/NYS Standards/default.htm

New York City Department of Education. (2016). NYC Kindergarten directory. Retrieved from http://schools.nyc.gov/ChoicesEnrollment/Elementary/Resources/default.htm

New York City Department of Education. (2017a). Demographic Snapshot SY 2012-13 to 2016-17. Retrieved from http://schools.nyc.gov/Accountability/data/default.htm

New York City Department of Education. (2017b). New schools and PROSE. Retrieved from http://schools.nyc.gov/community/newschools/New%20Schools%20and%20PROSE

Nichols, S. (2006). From boardroom to classroom: Tracing a globalised discourse on thinking through internet texts and teaching practice. In K. Pahl & J. Rowsell (Eds.). *Travel notes from the new literacy studies: Instances of practice* (173-194). Clevedon, England: Multilingual Matters.

Nichols, S. (2011). Young children's literacy in the activity space of the library: A geosemiotic investigation. *Journal of Early Childhood Literacy*, *11*(2), 164-189.

Nichols, S. (2015). Ecological approaches to literacy research. In Rowsell, J. & Pahl, K. (Eds.) *Routledge handbook of literacy studies*. New York, NY: Routledge.

Nichols, S. & Nixon, H. (2013). Space, place and early childhood literacy. In Larson, J., & Marsh, J. (Eds.). *The SAGE handbook of early childhood literacy*. London: Sage.

Nichols, S., & Rainbird, S. (2014). The mall, the library and the church: inquiring into the resourcing of early learning through new spaces and networks. *International Journal of Qualitative Studies in Education*, *26*(2), 198-215.

Nichols, S., Rowsell, J., Nixon, H., & Rainbird, S. (2012). *Resourcing early learners: New networks, new actors* (Routledge research in education). Florence, KY: Routledge.

Olsen, B. (2010). *In defense of things: Archaeology and the ontology of objects.* New York, NY: Rowman Altamira.

Pahl, K. (2014). *Materializing literacies in communities: The uses of literacy revisited.* London: Bloomsbury Publishing.

Pahl, K., & Allan, C. (2011). 'I don't know what literacy is': Uncovering hidden literacies in a community library using ecological and participatory research methodologies with children. *Journal of Early Childhood Literacy, 11*(2), 190-213.

Pahl, K., & Rowsell, J. (2010). *Artifactual literacies: Every object tells a story. Language & literacy series.* New York: Teachers College Press.

Pahl, K., & Rowsell, J. (2013). *Literacy and education.* New York, NY: SAGE Publications Ltd.

Parks, A., & Bridges-Rhoads, S. (2012). Overly scripted: Exploring the impact of a scripted literacy curriculum on a preschool teachers' instructional practices in mathematics. *Journal of Research in Chidhood Education*, 26(3), 308-324.

Peshkin, A. (1988). In search of subjectivity—one's own. *Educational Researcher, 17*(7), 17-22.

Pinar, W., Reynolds, W. M., Slattery, P., & Taubman, P. (1995). *Understanding curriculum.* New York, NY: Peter Lang.

Pink, S. (2015). *Doing sensory ethnography.* London: Sage Publications.

Posey-Maddox, L. (2014). *When middle-class parents choose urban schools: Class, race, and the challenges of equity in public education.* Chicago, IL: University of Chicago Press.

Pratt, C. (2014). *I learn from children: An adventure in progressive education.* New York, NY: Grove Press.

Rooks, N. (2017). *Cutting school: Privatization, segregation and the end of public education.* New York, NY: The New Press.

Rose, G. (2001). *Visual methodologies: an introduction to the interpretation of visual methodologies.* London: Sage Publications.

Rosenblatt, L. M. (1978). *The reader, the text, the poem: the transactional theory of the literary Work*. Carbondale, IL: Southern Illinois University Press.

Rosiek, J., & Kinslow, K. (2015). *Resegregation as curriculum: The meaning of the new racial segregation in US public schools*. New York, NY: Routledge.

Routman, R. (1988). *Transitions: From Literature to Literacy*. Portsmouth, NH: Heinemann.

Rowsell, J. (2001). *Publishing practices in printed education: British and Canadian perspectives on educational publishing* (Doctoral dissertation, University of London).

Rowsell, J. (2006). Corporate crossings: tracing textual crossings. In K. Pahl & J. Rowsell (Eds.). *Travel notes from the new literacy studies: Instances of practice* (173-194). Clevedon, England: Multilingual Matters.

Russell, J. L. (2011). From child's garden to academic press: The role of shifting institutional logics in redefining Kindergarten education. *American Educational Research Journal*, *48*(2), 236-267.

Scollon, R., & Scollon, S. W. (2003). *Discourses in place: Language in the material world*. London: Routledge.

Shannon, P. (1987). Commercial reading materials, a technological ideology, and the deskilling of teachers. *The Elementary School Journal*, *87*(3), 307-329.

Shannon, P. (1989). *Broken promises: Reading instruction in twentieth-century America*. University Park, PA: Penn State Press.

Shannon, P. (2007). *Reading against democracy: the broken promises of reading Instruction*. Portsmouth, NH: Heinemann.

Sheehy, M. (2004). Between a thick and a thin place: Changing literacy practice. In K.M. Leander and M. Sheehy (Eds.) *Spatializing literacy research and practice* (91-114). New York: Peter Lang.

Sheehy, M. (2010). *Place stories: Time, space and literacy in two classrooms*. Cresskill, NJ: Hampton Press Inc.

Siegel, M., & Panofsky, C. P. (2009). Designs for multimodality in literacy studies: Explorations in analysis. In *58th Yearbook of the National Reading Conference* (99-111).

Smagorinsky, P., Lakly, A., & Johnson, T. (2002). Acquiescence, accommodation, and resistance in learning to teach within a prescribed curriculum. *English Education*, *34*(3), 187-213.

Smith, F. (1981). Demonstrations, engagement and sensitivity: The choice between people and programs. *Language Arts*, *58*(6), 634-642.

Snaza, N., & Weaver, J. (Eds.). (2014). *Posthumanism and educational research*. New York, NY: Routledge.

Snyder, J., Bolin, F., & Zumwalt, K. (1992). Curriculum implementation. *Handbook of research on curriculum*, *40*(4), 402-435.

Soja, E.W. (2010). *Seeking spatial justice*. Minneapolis, MN: University of Minnesota Press.

Sørensen, E. (2009). *The materiality of learning: Technology and knowledge in educational practice*. Cambridge: Cambridge University Press.

Spodek, B. & Brown, P.C. (1993). Curriculum alternatives in early childhood education: A historical perspective. In B. Spodek (Ed.). *Handbook of research on the education of young children* (91-104). New York, NY: Macmillan.

Stewart, K. (2007). *Ordinary affects*. Durham, NC: Duke University Press.

Strathern, M. (1996). Cutting the network. *Journal of the Royal Anthropological Institute*, 517-535.

Street, B. (1995). *Social literacies: Critical perspectives on literacy in development, ethnography and education*. London: Longman.

Valencia, S. W., Place, N. A., Martin, S. D., & Grossman, P. L. (2006). Curriculum materials for elementary reading: Shackles and scaffolds for four beginning teachers. *The Elementary School Journal*, *107*(1), 93-120.

Vasquez, V. M. (2014). *Negotiating critical literacies with young children*. New York, NY: Routledge.

Velsey, K. (2017, February 3). A move to the West Village for a good school. *The New York Times, Real Estate*. Retrieved from https://www.nytimes.com/2017/02/03/realestate/a-move-to-the-west-village-for-a-good-school.html

Venezky, R. (1987). A history of the American reading textbook. *The Elementary School Journal, 87*(3), 246-265.

Williams, N. & Bauer, P. (2006). Pathways to affective accountability: Selecting, locating and using children's books in elementary school classrooms. *The Reading Teacher, 60*(1), 14-22.

Willis, A. I. (2015). Literacy and race: Access, equity, and freedom. *Literacy Research: Theory, Method, and Practice, 64*(1), 23-55.

Wohlwend, K. (2008). Play as a literacy of possibilities: Expanding meanings in practices, materials, and spaces. *Language Arts, 86*(2), 127.

Yoon, H. (2013). Rewriting the curricular script: Teachers and children translating writing practices in a kindergarten classroom. *Research in the Teaching of English, 48*(2), 148-174.

Appendix A

Institutional Review Board Approval Letter

TEACHERS COLLEGE
COLUMBIA UNIVERSITY

Teachers College IRB	Exempt Study Approval

To: Daniel Ferguson

From: Amy Camilleri

Subject: IRB Approval: 16-416 Protocol

Date: 07/19/2016

Thank you for submitting your study entitled, "*Early Literacy Curriculum Materials: a Network Case Study of One Kindergarten Classroom*;" the IRB has determined that your study is **Exempt** from committee review (Category **1**) on 07/19/2016.

Please keep in mind that the IRB Committee must be contacted if there are any changes to your research protocol. The number assigned to your protocol is **16-416**. Feel free to contact the IRB Office by using the "Messages" option in the electronic Mentor IRB system if you have any questions about this protocol.

Please note that your Consent form bears an official IRB authorization stamp and is attached to this email. Copies of this form with the IRB stamp must be used for your research work. Further, all research recruitment materials must include the study's IRB-approved protocol number. You can retrieve a PDF copy of this approval letter from the Mentor site.

Best wishes for your research work.

Sincerely,
Amy Camilleri
IRB Administrator
accamilleri@gmail.com

Attachments:
• Ferguson_Informed Consent Forms_FINAL.pdf

NYC

Department of Education

Carmen Fariña, Chancellor

Research and Policy Support Group

52 Chambers Street
Room 310
New York, NY 10007

August 18, 2016

Mr. Daniel E Ferguson
28-05 33rd Street Apt. 2D
Astoria, NY 11102

Dear Mr. Ferguson:

I am happy to inform you that the New York City Department of Education Institutional Review Board (NYCDOE IRB) has approved your research proposal, "Early Literacy Curriculum Materials: a Network Case Study of One Kindergarten Classroom." The NYCDOE IRB has assigned your study the file number of 1423. Please make certain that all correspondence regarding this project references this number. The IRB has determined that the study poses minimal risk to participants. The approval is for a period of one year:

Approval Date: **August 18, 2016**
Expiration Date: **August 17, 2017**

Responsibilities of Principal Investigators: Please find below a list of responsibilities of Principal Investigators who have DOE IRB approval to conduct research in New York City public schools.

- Approval by this office does not guarantee access to any particular school, individual or data. You are responsible for making appropriate contacts and getting the required permissions and consents before initiating the study.
- When requesting permission to conduct research, submit a letter to the school principal summarizing your research design and methodology along with this IRB Approval letter. Each principal agreeing to participate must sign the enclosed Approval to Conduct Research in Schools/Districts form. *A completed and signed form for every school included in your research must be emailed to* IRB@schools.nyc.gov . Principals may also ask you to show them the receipt issued by the NYC Department of Education at the time of your fingerprinting.
- You are responsible for ensuring that all researchers on your team conducting research in NYC public schools are fingerprinted by the NYC Department of Education. Please note: This rule applies to all research in schools conducted with students and/or staff. See the attached fingerprinting materials. For additional information click here. Fingerprinting staff will ask you for your identification and social security number and for your DOE IRB approval letter. You must be fingerprinted during the school year in which the letter is issued. Researchers who join the study team after the inception of the research must also be fingerprinted. Please provide a list of their names and social security numbers to the NYC Department of Education Research and Policy Support Group for tracking their eligibility and security clearance. The cost of fingerprinting is $135. *A copy of the fingerprinting receipt must be emailed to* IRB@schools.nyc.gov .

- You are responsible for ensuring that the research is conducted in accordance with your research proposal as approved by the DOE IRB and for the actions of all co-investigators and research staff involved with the research.
- You are responsible for informing all participants (e.g., administrators, teachers, parents, and students) that their participation is strictly voluntary and that there are no consequences for non-participation or withdrawal at any time during the study.
- Researchers must: use the consent forms approved by the DOE IRB; provide all research subjects with copies of their signed forms; maintain signed forms in a secure place for a period of at least three years after study completion; and destroy the forms in accordance with the data disposal plan approved by the IRB.

Mandatory Reporting to the IRB: The principal investigator must report to the Research and Policy Support Group, within five business days, any serious problem, adverse effect, or outcome that occurs with frequency or degree of severity greater than that anticipated. In addition, the principal investigator must report any event or series of events that prompt the temporary or permanent suspension of a research project involving human subjects or any deviations from the approved protocol.

Amendments/Modifications: All amendments/modification of protocols involving human subjects must have prior IRB approval, except those involving the prevention of immediate harm to a subject, which must be reported within 24 hours to the NYC Department of Education IRB.

Continuation of your research: It is your responsibility to insure that an application for continuing review approval is submitted six weeks before the expiration date noted above. If you do not receive approval before the expiration date, all study activities must stop until you receive a new approval letter.

Research findings: We require a copy of the report of findings from the research. Interim reports may also be requested for multi-year studies. Your report should not include identification of the superintendency, district, any school, student, or staff member. Please send an electronic copy of the final report to: irb@schools.nyc.gov.

If you have any questions, please contact Dr. Mary Mattis at 212.374.3913.

Good luck with your research.

Sincerely,

Mary C. Mattis, PhD
Director, Institutional Review Board

cc: Barbara Dworkowitz

Appendix B

Letter of Invitation to Teacher and Informed Consent

Protocol Title: Early Literacy Curriculum Materials: A Network Case Study of
One Kindergarten Classroom
Interview Consent for Teacher
Principal Investigator: Daniel E. Ferguson, Teachers College, xxx-xxx-xxxx

INTRODUCTION
You are being invited to participate in this research study on early literacy
materials and curriculum. You may qualify to take part in this research study
because of your current position and experience as an early-childhood educator
in a public school. One teacher and administrator will participate in this study
and it will take approximately 30 hours of your time over the course of 4 months
to complete.
This study is being conducted as dissertation research for completion of a
doctorate in Curriculum and Teaching at Teachers College, Columbia University.

WHY IS THIS STUDY BEING DONE?
This study is being done to determine how materials circulate in and through
classrooms and are taken up in literacy curriculum by teachers and students. As
school systems often spend funds yearly on new curriculum materials, a study
how new and old materials are combined and used in the teaching and learning
of literacy is warranted.

WHAT WILL I BE ASKED TO DO IF I AGREE TO TAKE PART IN THIS STUDY?
If you decide to participate, you will be observed during classroom instruction
and interviewed outside of instructional time by the principal investigator.
During the interview you will be asked to discuss your experience as a classroom
teacher, the materials of your classroom, and the planning and enactment of
literacy curriculum. With your consent, this interview will be audio-recorded.
After the audio-recording is written down the audio-recording will be deleted. If
you do not wish to be audio-recorded, you will still be able to participate. Each
interview will take approximately thirty minutes. You will be given a
pseudonym or false name in order to keep your identity confidential.
Secondly, classroom materials will also be documented through a material
inventory conducted outside of instructional time. This will involve taking
pictures of materials in the classroom at the beginning of the school year. This
will take approximately 3-4 hours. Interviews regarding the materials may also
occur during this time.

Last, enacted curriculum will also be studied through participant observation during literacy instructional blocks. Observations will be documented through field notes and photographs of materials. This will take place for approximately ninety minutes, once a week for three months. During this time, and at the direction of the teacher, the principal investigator may ask students about their work done during independent work time. These conversations should last no longer than five minutes and are not meant to interfere with the student's work during the instructional block. Questions to students will mimic the questioning a teacher or aide may ask, such as "Can you tell me about what you're drawing/reading/writing/building?"

WHAT POSSIBLE RISKS OR DISCOMFORTS CAN I EXPECT FROM TAKING PART IN THIS STUDY?

This is a minimal risk study, which means the harms or discomforts that you may experience are not greater than you would ordinarily encounter in daily life while at school. However, there are some risks to consider:

- Possibly feeling uncomfortable with audio-recording of interviews and/or observation of teaching.
- Possible loss of confidentiality: In order to share the findings with other literacy and/or curriculum researchers, the investigator may use data in presentations or in research articles.

The principal investigator is taking precautions to keep your information confidential and prevent anyone from discovering or guessing your identity, such as using a pseudonym instead of your name and keeping all information on a password protected computer and locked in a file drawer. The researcher will also minimize risk of loss of confidentiality by reminding participants that they can turn off the recording equipment at any moment, for any reason. However, even though these measures will be taken to best protect the confidentiality, complete confidentiality cannot be guaranteed.

Furthermore, if any participant feels uncomfortable at any time during the study, they can ask to delete specific sections of the audio recording. Furthermore, if the participant feels embarrassed to answer any question about their classroom or literacy curriculum, the participant may choose not to answer anything they do not wish to, and may also stop participating in the study without penalty.

WHAT POSSIBLE BENEFITS CAN I EXPECT FROM TAKING PART IN THIS STUDY?
There is no direct benefit to you for participating in this study. However, participation may benefit the field of literacy and early-childhood education to

better understand the material affordances and constraints of curriculum enactment in early childhood classrooms.

WILL I BE PAID FOR BEING IN THIS STUDY?
You will not be paid to participate in this study.

WHEN IS THE STUDY OVER? CAN I LEAVE THE STUDY BEFORE IT ENDS?
The study is over when you have completed the interviews and observations. However, you can leave the study at any time even if you haven't finished.

PROTECTION OF YOUR CONFIDENTIALITY
Regulations require that research data be kept for at least three years for adults and five years for students. The researcher will keep all data in a password-protected file on his personal computer for this time, with the exception of audio recordings which will be deleted after the completion of this study, in approximately one year. There will be no record matching your real name with your pseudonym.

HOW WILL THE RESULTS BE USED?
This study is being conducted as part of the dissertation of the principal investigator. The results of this study will be shared with the researcher's dissertation committee and published in his final dissertation. Furthermore, results may be published in journals and presented at academic conferences. In all publications and presentations, your name or any identifying information about you will not be published.

CONSENT FOR AUDIO RECORDING
Audio recording is part of this research study. You can choose whether to give permission to be recorded. However, if you decide that you don't wish to be recorded, you will still be able to participate in this research study.

_____I give my consent to be recorded _____
                                                                Signature

_____I **do not** consent to be recorded _____
                                                                Signature

WHO MAY VIEW MY PARTICIPATION IN THIS STUDY

___I consent to allow written and/or photographed materials viewed at an educational setting or at a conference outside of Teachers College

                              _____
                                          Signature

___I **do not** consent to allow written and/or photographed materials viewed outside of Teachers College Columbia University

_____
                                                 Signature

OPTIONAL CONSENT FOR FUTURE CONTACT

The investigator may wish to contact you in the future. Please initial the appropriate statements to indicate whether or not you give permission for future contact.

I give permission to be contacted in the future for research purposes:

Yes _____   No_____
              Initial   Initial

I give permission to be contacted in the future for information relating to this study:

Yes _____   No_____
              Initial   Initial

WHO CAN ANSWER MY QUESTIONS ABOUT THIS STUDY?
If you have any questions about taking part in this research study, you should contact the principal investigator, Daniel Ferguson at xxx-xxx-xxxx or at def2136@tc.edu. **You can also contact the faculty advisor, Dr. Marjorie Siegel, at xxx-xxx-xxxx.**

If you have questions or concerns about your rights as a research subject, you should contact the Institutional Review Board (IRB) (the human research ethics committee) at 212-678-4105 or email IRB@tc.edu. Or you can write to the IRB at Teachers College, Columbia University, 525 W. 120th Street, New York, NY 1002. The IRB is the committee that oversees human research protection for Teachers College, Columbia University.

PARTICIPANT'S RIGHTS

- I have read and discussed the informed consent with the researcher. I have had ample opportunity to ask questions about the purposes, procedures, risks and benefits regarding this research study.
- I understand that my participation is voluntary. I may refuse to participate or withdraw participation at any time without penalty to future penalty.
- The researcher may withdraw me from the research at his or her professional discretion, if the conditions of study in the classroom become inapplicable to the goals and purpose of the study.
- If, during the course of the study, significant new information that has been developed becomes available which may relate to my willingness to continue my participation, the investigator will provide this information to me.
- Any information derived from the research study that personally identifies me will not be voluntarily released or disclosed without my separate consent, except as specifically required by law.
- I should receive a copy of the Informed Consent document.

My signature means that I agree to participate in this study

Print name: _____ **Date**: _____

Signature: _____

Appendix C

Letter of Invitation to Administrator and Informed Consent

Protocol Title: Early Literacy Curriculum Materials: A Network Case Study of
One Kindergarten Classroom
Interview Consent for Administrator
Principal Investigator: Daniel E. Ferguson, Teachers College, xxx-xxx-xxxx

INTRODUCTION
You are being invited to participate in this research study on early literacy
materials and curriculum. You may qualify to take part in this research study
because of your current position and experience as an administrator in a public
elementary school. One teacher and administrator will participate in this study
and it will take approximately forty-five minutes of your time to complete.
This study is being conducted as dissertation research for completion of a
doctorate in Curriculum and Teaching at Teachers College, Columbia University.

WHY IS THIS STUDY BEING DONE?
This study is being done to determine how materials circulate in and through
classrooms and are taken up in literacy curriculum by teachers and students. As
school systems often spend funds yearly on new curriculum materials, a study
how new and old materials are combined and used in the teaching and learning
of literacy is warranted.

WHAT WILL I BE ASKED TO DO IF I AGREE TO TAKE PART IN THIS STUDY?
If you decide to participate, you will be interviewed at your convenience by the
principal investigator. During the interview you will be asked to discuss your
administrative experience around the planning and enactment of literacy
curriculum in the school**.** With your consent, this interview will be audio-
recorded. After the audio-recording is written down the audio-recording will be
deleted. If you do not wish to be audio-recorded, you will still be able to
participate. The interview will take approximately forty-five minutes. You will
be given a pseudonym or false name in order to keep your identity confidential.

WHAT POSSIBLE RISKS OR DISCOMFORTS CAN I EXPECT FROM TAKING PART IN THIS STUDY?
This is a minimal risk study, which means the harms or discomforts that you
may experience are not greater than you would ordinarily encounter in daily life
while at school. However, there are some risks to consider:

- Possibly feeling uncomfortable with audio-recording of interviews
- Possible loss of confidentiality: In order to share the findings with other literacy and/or curriculum researchers, the investigators may use data in presentations or in research articles.

The principal investigator is taking precautions to keep your information confidential and prevent anyone from discovering or guessing your identity, such as using a pseudonym instead of your name and keeping all information on a password protected computer and locked in a file drawer. The researcher will also minimize risk of loss of confidentiality by reminding participants that they can turn off the recording equipment at any moment, for any reason. However, even though these measures will be taken to best protect the confidentiality, complete confidentiality cannot be guaranteed.

Furthermore, if any participant feels uncomfortable at any time during the study, they can ask to delete specific sections of the audio recording. Furthermore, if the participant feels embarrassed to answer any question about their experience or the literacy curriculum, the participant may choose not to answer anything they do not wish to, and may also stop participating in the study without penalty.

WHAT POSSIBLE BENEFITS CAN I EXPECT FROM TAKING PART IN THIS STUDY?
There is no direct benefit to you for participating in this study. However, participation may benefit the field of literacy and early-childhood education to better understand the material affordances and constraints of curriculum enactment in early childhood classrooms.

WILL I BE PAID FOR BEING IN THIS STUDY?
You will not be paid to participate in this study.

WHEN IS THE STUDY OVER? CAN I LEAVE THE STUDY BEFORE IT ENDS?
The study is over when you have completed the interview. However, you can leave the study at any time even if you haven't finished.

PROTECTION OF YOUR CONFIDENTIALITY
Regulations require that research data be kept for at least three years for adults and five years for students. The researcher will keep all data in a password-protected file on his personal computer for this time, with the exception of audio recordings which will be deleted after the completion of this study, in approximately one year. There will be no record matching your real name with your pseudonym.

HOW WILL THE RESULTS BE USED?

This study is being conducted as part of the dissertation of the principal investigator. The results of this study will be shared with the researcher's dissertation committee and published in his final dissertation. Furthermore, results may be published in journals and presented at academic conferences. In all publications and presentations, your name or any identifying information about you will not be published.

CONSENT FOR AUDIO RECORDING

Audio recording is part of this research study. You can choose whether to give permission to be recorded. However, if you decide that you don't wish to be recorded, you will still be able to participate in this research study.

_____I give my consent to be recorded _____
<div align="center">Signature</div>

_____I **do not** consent to be recorded _____
<div align="center">Signature</div>

WHO MAY VIEW MY PARTICIPATION IN THIS STUDY

___I consent to allow written materials viewed at an educational setting or at a conference

outside of Teachers College _____
<div align="center">Signature</div>

___I **do not** consent to allow written materials viewed outside of

Teachers College Columbia University _____
<div align="center">Signature</div>

OPTIONAL CONSENT FOR FUTURE CONTACT

The investigator may wish to contact you in the future. Please initial the appropriate statements to indicate whether or not you give permission for future contact.

I give permission to be contacted in the future for research purposes:

Yes _____ No_____
        Initial   Initial

I give permission to be contacted in the future for information relating to this study:

Yes _____ No_____
        Initial   Initial

WHO CAN ANSWER MY QUESTIONS ABOUT THIS STUDY?
If you have any questions about taking part in this research study, you should contact the principal investigator, Daniel Ferguson at xxx-xxx-xxxx or at def2136@tc.edu. **You can also contact the faculty advisor, Dr. Marjorie Siegel, at xxx-xxx-xxxx.**

If you have questions or concerns about your rights as a research subject, you should contact the Institutional Review Board (IRB) (the human research ethics committee) at 212-678-4105 or email IRB@tc.edu. Or you can write to the IRB at Teachers College, Columbia University, 525 W. 120th Street, New York, NY 1002. The IRB is the committee that oversees human research protection for Teachers College, Columbia University.

<u>**PARTICIPANT'S RIGHTS**</u>

- I have read and discussed the informed consent with the researcher. I have had ample opportunity to ask questions about the purposes, procedures, risks and benefits regarding this research study.
- I understand that my participation is voluntary. I may refuse to participate or withdraw participation at any time without penalty to future penalty.
- The researcher may withdraw me from the research at his or her professional discretion, if the conditions of study in the classroom become inapplicable to the goals and purpose of the study.

- If, during the course of the study, significant new information that has been developed becomes available which may relate to my willingness to continue my participation, the investigator will provide this information to me.
- Any information derived from the research study that personally identifies me will not be voluntarily released or disclosed without my separate consent, except as specifically required by law.
- I should receive a copy of the Informed Consent document.

<u>My signature means that I agree to participate in this study</u>

<u>Print name</u>: _____   **Date**: _____

Signature: _____

Appendix D

Letter of Invitation to Parents and Informed Consent

Protocol Title: Early Literacy Curriculum Materials: A Network Case Study of
One Kindergarten Classroom
Consent for Parent/Guardian of Student
Principal Investigator: Daniel E. Ferguson, Teachers College, xxx-xxx-xxxx

INTRODUCTION

I am requesting your permission for your child's participation in research
studying student engagement with early literacy materials and curriculum. Your
child qualifies to take part in this research study because of their ongoing
participation in the school literacy curriculum during their Kindergarten year.
Your child's teacher and administrator will also participate in this study. The
time to complete the study for a student is approximately 15 minutes.
This study is being conducted as dissertation research for completion of a
doctorate in Curriculum and Teaching at Teachers College, Columbia University.

WHY IS THIS STUDY BEING DONE?

This study is being done to determine how materials circulate in and through
classrooms and are taken up in literacy curriculum by teachers and students. As
school systems often spend funds yearly on new curriculum materials, a study
how new and old materials are combined and used in the teaching and learning
of literacy is warranted.

WHAT WILL MY CHILD BE ASKED TO DO IF I AGREE TO TAKE PART IN THIS STUDY?

If you consent to your child's participation, your child may be asked questions
during school about their work as it pertains to literacy curriculum. Student
work may include classroom materials they are using as part of a curriculum
activity, drawings, writing samples, or stories told to an adult. Questions about
their work will be no different that questions asked by teachers or aides during
typical instruction, such as "Can you tell me about your drawing?" "Can you tell
me about what you're reading/writing?" Information on your child's response
will be documented through written notes. Photographs may also be taken of
student work and shared with the teacher in later conversations. In all
documentation, your child will be given a pseudonym or false name in order to
keep their identity confidential. Any photographs taken of student work will
have names or any identifying information covered, blurred, or deleted before
being stored as data. No photographs will ever be taken of students' faces (at

most, a student's hand holding or pointing to a material may appear in a photograph, however the primary objective is to document materials, not students).

WHAT POSSIBLE RISKS OR DISCOMFORTS CAN MY CHILD EXPECT FROM TAKING PART IN THIS STUDY?

This is a minimal risk study, which means the harms or discomforts that your child may experience are not greater than you would ordinarily encounter in daily life while at school. The goal of the study is not to disrupt the curriculum while studying it. However, there are some risks to consider:

- Possibly feeling uncomfortable or uninterested in talking about their work or having a photograph taken of their work.
- Possible loss of confidentiality: In order to share the findings with other literacy and/or curriculum researchers, the investigator may use data in presentations or in research articles.

The principal investigator is taking precautions to keep your child's information confidential and prevent anyone from discovering or guessing their identity, such as using a pseudonym instead of their name and keeping all information on a password protected computer and locked in a file drawer. However, even though these measures will be taken to best protect the confidentiality, complete confidentiality of the school and its members cannot be guaranteed.

Furthermore, if any participant feels uncomfortable, embarrassed, or uninterested in answering any question about their work, the student may choose not to participate without any penalty.

WHAT POSSIBLE BENEFITS CAN MY CHILD EXPECT FROM TAKING PART IN THIS STUDY?
There is no direct benefit to your child for participating in this study. However, participation may benefit the field of literacy and early-childhood education to better understand the material affordances and constraints of curriculum enactment in early childhood classrooms.

WILL MY CHILD BE PAID FOR BEING IN THIS STUDY?
Your child will not be paid to participate in this study.

WHEN IS THE STUDY OVER? CAN MY CHILD LEAVE THE STUDY BEFORE IT ENDS?
The study is over for the child once they have been asked about their work 2-3 times over the course of 4 months. However, you or your child may choose to leave the study at any time even if they haven't finished.

PROTECTION OF YOUR CONFIDENTIALITY

Regulations require that research data of students be kept for at least five years. The investigator will keep all written materials locked in a desk drawer in a locked office. Any written information and photographs of materials will be stored on a computer that is password protected. There will be no record matching your child's real name with their pseudonym.

HOW WILL THE RESULTS BE USED?

This study is being conducted as part of the dissertation of the principal investigator. The results of this study will be shared with the researcher's dissertation committee and published in his final dissertation. Furthermore, results may be published in journals and presented at academic conferences. In all publications and presentations, the name or any identifying information about your child will not be published.

WHO MAY VIEW MY PARTICIPATION IN THIS STUDY

___I consent to allow written and/or photographed materials viewed at an educational setting or at a conference outside of Teachers College

_____
Signature

___I **do not** consent to allow written and/or photographed materials viewed outside of Teachers College Columbia University

_____
Signature

OPTIONAL CONSENT FOR FUTURE CONTACT

The investigator may wish to contact you in the future. Please initial the appropriate statements to indicate whether or not you give permission for future contact.

I give permission to be contacted in the future for research purposes:

Yes _____ No_____
            Initial   Initial

I give permission to be contacted in the future for information relating to this study:

Yes _____   No_____
              Initial   Initial

WHO CAN ANSWER MY QUESTIONS ABOUT THIS STUDY?
If you have any questions about taking part in this research study, you should contact the principal investigator, Daniel Ferguson at xxx-xxx-xxxx or at def2136@tc.edu. **You can also contact the faculty advisor, Dr. Marjorie Siegel, at xxx-xxx-xxxx.**

If you have questions or concerns about your rights as a research subject, you should contact the Institutional Review Board (IRB) (the human research ethics committee) at 212-678-4105 or email IRB@tc.edu. Or you can write to the IRB at Teachers College, Columbia University, 525 W. 120th Street, New York, NY 1002. The IRB is the committee that oversees human research protection for Teachers College, Columbia University.

PARTICIPANT'S RIGHTS

- I have read and discussed the informed consent with the researcher. I have had ample opportunity to ask questions about the purposes, procedures, risks and benefits regarding this research study.
- I understand that my child's participation is voluntary. I may refuse participation or withdraw participation at any time without penalty to future penalty. My child may also choose not to participate at any time.
- The researcher may withdraw my child from the research at his or her professional discretion, if the conditions of study in the classroom become inapplicable to the goals and purpose of the study.
- If, during the course of the study, significant new information that has been developed becomes available which may relate to my willingness for my child to continue participation, the investigator will provide this information to me.
- Any information derived from the research study that personally identifies my child will not be voluntarily released or disclosed without my separate consent, except as specifically required by law.

- I should receive a copy of the Informed Consent document.

My signature means that I agree for my child to participate in this study

Print name of child: _____

Print name or parent: _____ **Date**: _____

Parent Signature: _____

Appendix E

Semi-structured Interview Questions

Dear Principal Gibson,

      As part of my dissertation research on school materials and literacy curriculum, I'd like to have a 30-minute conversation with you around the following questions:

1. How has literacy curriculum changed during your time as principal of Parkside Elementary? As far as you're aware, what has the literacy curricula of the school looked like in the past?

2. From an administrator's perspective what does the process of adopting new curriculum look like? How are curriculum materials (specifically for ELA) chosen and purchased? What happens to previous materials when new ones are adopted (are there any requirements for what's done with them)?

3. Looking forward, what are your hopes and visions for progressive education at Parkside Elementary? How do you describe "progressive education" at Parkside Elementary to visitors or prospective parents? What challenges to you foresee as you lead the school through these curricular changes?

I thank you for your time and insight.

Sincerely,

Daniel Ferguson
Teachers College, Columbia University