Title
Recess, Playground Games, and the Aims of School: An Investigation into the Semiotic Affordances of Four Square

Author
Marple, Stacy

Publication Date
2011

Peer reviewed|Thesis/dissertation

Recess, Playground Games, and the Aims of School: An Investigation into the Semiotic Affordances of Four Square

By

Stacy Ann Marple

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

Education

in the

Graduate Division

of the

University of California, Berkeley

Committee in Charge:

Professor Glynda A. Hull, Chair
Assistant Professor Laura Sterponi
Assistant Professor Charles Hirschkind

Spring 2011

COPY RIGHT PAGE

Abstract

Recess, Playground Games, and the Aims of School: An Investigation into the Semiotic Affordances of Four Square

by

Stacy Ann Marple

Doctor of Philosophy in Education

University of California, Berkeley

Professor Glynda Hull, Chair

In recent times, recess has become threatened by the press for more academic instruction time and by fears of violent behavior. A dramatic indicator of this trend is seen in the increasing number of schools and school districts which have done away with or significantly reduced recess time (BBC news, 2007; Coughlan, 2007; Jarrett, 2002; Pressler, 2006; Sindelar, 2004). Underlying these actions is a belief that free play time is separate, and might even detract, from the work of school. This dissertation study, examines youth's communicative practices in the common playground game four square, providing evidence that important types of learning occur during recess time play. Furthermore, the findings of this study provide direction for curricular and classroom practice innovation.

Ethnographic in nature, this dissertation draws from over thirty five hours of audio/video recording gathered during lunch recess, collected during the 2007-2008 school year, at a small inner city elementary school playground, in a high needs area, of a large costal United States city. Utilizing methods common to linguistic anthropology, this study employs carefully composed transcripts as the primary data source, supported by extensive field notes and other analytic writings.

The study is situated in three broad areas of inquiry: semiotic and language development, literacy theory and practice, and the study of peer cultures. The findings indicate that playground games are a unique part of physical culture and, furthermore, provide particular semiotic affordances which contribute to youth's language learning. A model for understanding the different semiotic affordances of activities during recess is proposed. In their play youth are shown to use gesture and posture as a way of scaffolding talk and building complex utterances. Specifically, in this study, the playing of four square is shown to provide youth with an opportunity to develop a semiotic

awareness, that is, an awareness of how words, bodily expressions and objects can stand for other things and actions. As such this study has implications for a notion of literacy theory that engages with meaning making on a broad level. The study makes the argument for an embodied notion of literacy to be developed that accounts for the unique ways youth use their bodies as expressive mediums. Recess is shown to be much more than simply a time for "blowing off steam". Far from a "cognitive rest" as recess has been hypothesized to function as, important work happens when youth are engaged with each other, in creative and physically interactive ways. It is shown that the information gathered from studying youth engagement with games and each other during recess time can be used to inform classroom practices, and suggestions for curriculum are presented.

Table of Contents

Abstract	1
Acknowledgements	ii
Chapter 1: Introduction	1
Chapter2: Play, Development, Literacy, and Peer Culture: A Review of Pertinent Literature	10
Chapter 3: Methodology	23
Chapter 4: The Unique Qualities of Playground Games	39
Chapter 5: That **IS** *Cherry Bombs:* Building a Multi-Modal Argument	61
Chapter 6: The *Cupcake:* Different Semiotic Strategies of Youth at Play	71
Chapter7: Conclusion	85
References	93
Appendix A	100

Acknowledgements

This dissertation would not have been possible without the support and guidance of many people, to whom I am deeply grateful. First and foremost I want to acknowledge my dissertation chair, Glynda Hull, and my initial advisor, Herbert Simons both brilliant scholars, whose generous dispositions and kind hearts made the work of graduate school achievable. In addition to her insightful guidance, sharp vision, and unflagging support, Glynda's inclusion of me on her research teams provided me with invaluable skills and knowledge, which I will draw on for years to come. I am doubly fortunate that both of these academics understood my non-academic pursuits, and supported my participation in them. I would also like to extend special thanks to the other members of my dissertation committee. To Laura Sterponi, for her intellectual rigor and keen analytical eye and to Charles Hirschkind for his support and thoughtful commentary. I feel honored to have had the opportunity to develop under the guidance of my dissertation committee, but of course I take full responsibility for any shortcomings or inaccuracies presented herein.

I would like to thank all the students, teachers, staff, and parents at "Pacific" Elementary for their willingness to participate in, and support my research, as well as for retrieving lost balls on the playground and helping to keep the camera upright. I hope this effort will support your educational work.

I am graced with a fabulous network of friends whose support and love was critical to the completion of this dissertation. It would be impossible to thank everyone in this space, but I must acknowledge a few: Debbie and Phil who have supported me since undergrad; Kim, Sarah, David, Douglas, and Vania the pre-grad school friends who tolerated my long periods of absence while I was ensconced in the thought world; Elizabeth whose support, example, and boundless sharing of resources buoyed my sprit; Jiro, James, and Katie who kept the wheels spinning over long miles; Elinor and Sandro whose encouragement and guidance brought me to graduate school to begin with; and most importantly Mark Nelson whose advice, guidance and NY sprit provided invaluable mentorship- to all and many more a deep and heartfelt thank you.

A student athlete to the very end, I would be remiss if I did not also acknowledge my teammates, friends, and coaches from the Cal cycling, Cal triathlon, Fuego, CFO, TIBCO, Cheerwine, and Colavita teams who provided needed respite and often enlightening conversations during my research and writing.

Chapter One: Introduction

"Out, I'm out!" The young boy cried joyously, and positively skipped to the end of the four square line. It was a brilliantly sunny, crisp November day, and the first time Tesfa had played four square. For weeks I had watched him struggle to engage with his peers, and with school in general. During recess Tesfa's elderly father sat under a tree in the school playground with his English-Amharic dictionary and occasionally proffered Tesfa advice in a mix of both languages. From him, I learned that they, like many other immigrants, had fled their country after a traumatic experience. The four square game afforded Tesfa one of his first smiles at school. For the next twenty minutes of play, each time the ball landed on the line or he missed the volley, Tesfa claped, called himself "out" and skipped to the back of the line. Just what was making Tesfa so happy? As the game wore on it became apparent that his pleasure was not from simply learning the game, but learning the *language* that went with the game. His father, Brehan confirmed my observation when he walked up to me beaming and said, "He's learning, he's learning English. Thank you." Why at this moment did we all, teacher, student and parent, suddenly find a sense of satisfaction and relief? What about this particular experience indexed comprehension so clearly and dramatically? In many ways, this study aimed to provide a ground for Tesfa's experience, a rich context in which to understand the joys and mechanisms of playground games, a means to examine the links between youthful embodiment and learning that these activities render apparent. The goal then, was to discover how understandings surmised from observing students engaged in playground activities might inform notions of literacy theory and literacy as a practice. Underlying the analysis is a desire to understand the role of recess time at schools and investigate the relevancy of recess to school today.

In addition to my scholarly training in elementary and middle school literacy practices and language socialization among peers, I bring to this work my extensive personal experience, as an accomplished elite athlete and coach of numerous sports, and my professional work, as an elementary school recess and playtime coordinator, as an academic afterschool program teacher, and as a summer service learning program instructor. These personal and professional experiences have long fueled a general interest in the relationship between the intellect and the body, and why, in schooling practices, they are viewed as separate, and thereby engaged with differently. My initial observations, such as the one presented above, led me to believe that youth oriented activities on the playground support and engage more than the social and moral development which many theorists and researchers discuss.(Evaldsson, 1993c; Evaldsson & Corsaro, 1998e; M.H. Goodwin, 2006; Piaget, 1966s). Tesfa's smile, and his progress throughout the following two years, acted as a catalyst, focusing my interests on playground games, language learning broadly, and the role of the body in both of these domains.

As I hope will become apparent, analysis of the seemingly simple recess time game, four square, contains the material necessary to engage a range of ideas and analytical perspectives. As such, this study lies at the intersection of many different paradigms methodologically, theoretically and, not ironically, physically. The next few pages will introduce the literature and research questions guiding this study of elementary school students coordinated use of the semiotic tools contained in talk, gesture, and bodily posture to negotiate the complex social situations that arise in the course of playing four square. In addition, the structure of the study will be explained, as well as the rationale and significance for researchers, curriculum developers, and teachers interested in literacy, language socialization and acquisition, embodiment and play.

Research Approach

Methodologically, this qualitative study draws on ethnographic, conversation analytic and participant observational methods. To answer the initial questions on the use of playground activities as a source for data I took inspiration from the work of anthropologist Marjorie Goodwin. Goodwin's work on youth talk while playing in the neighborhood (1990k) and while on the school playground (2006) pays close attention to the use of the body as a communicative modality. Drawing on the work of Goffman (1961i) and Sacks (1984u), among others, she has developed an "ethnographically based and conversation analytic informed approach" (2006, p. 4). This approach allows naturally occurring engagement to be used as the primary source of data. While Goodwin tends to follow cohorts of youth over time, she focuses her analytical lens on the activities that youth coalesce around, not on the individual personalities. Taking cue from this, instead of focusing primarily on participant cases, this study focuses on a specific game, four square, as an activity. In this vein the organization of the data, and the presentation of the analysis, derives from the observed participant structures utilized by the students while playing. Over the course of the study, certain individuals chose to engage in playing four square more frequently than others, a few playing in almost every recorded game, and thus are seen in many of the data presented. The analytical focus, however, remains on the way the activity of four square foregrounds particular types of communicative modalities.

To gain insight into the communicative modalities engaged with during play, over 35 hours of video and audio taped data was collected during recess at an urban elementary school during the course of the 2007-2008 school year. The video was then carefully coded for interactional practices that involved the body and language in connected ways. Particularly illustrative moments were then transcribed, paying careful attention to pitch, prosody and gesture. This transcription, in conjunction with the attendant video, became the primary site of analysis.

One major difference between this study and other ethnographic work such as Goodwin's, is the positionality of the researcher. Choosing as a research site the playground at a

school where I had previously been employed, and continued to volunteer throughout the data collection period, rendered any attempts at anonymity useless. Navigating between the desire to minimize researcher impact on the interaction of the students at play, while maintaining status as a respected member of the teaching community, became a constant balancing act. In this work I drew heavily on my experiences working with Glynda Hull, as a teacher/researcher on DUSTY and KidNet, two digital-arts based afterschool programs. As a researcher and instructor on these projects I frequently navigated many roles and multiple institutions. While the occupation of the space between teacher/researcher and researcher/observer is not a focus of analysis, I will endeavor to reveal the influences this negotiation of position placed on my observations of, and engagement with, the data collection process.

Play and Recess time

When initially embarking on this research, I resisted the notion of this study being about play. In part, this is because I work to further the position that the game four square primarily as a very reveling case, in the study of how language and the body work together, in the semiotic plane or horizon. Then too, play gets a bad rap in academia, at every level. It seemed prudent to distance this study from other thought about playful physical activity, both sports and games, that helped place these types of engagements in a secondary role in educational institutions and thought. However, it quickly became apparent that the study of a game, during school recess, must engage with work on play at some level.

There have been times when school curricula in the United States have welcomed games and activity into the learning process, most notably during the progressive education movement in the early twentieth century (Dewey, 1998b) and in the Montessori school method (Montessori, 1914). Like most curricular innovations these were driven from an adult notion of relevant activity. In addition, these methods, and others that utilize play as a learning tool, require radical changes in the day to day processes of schooling. While Montessori schools are still active today, there is little use of Montessori's methods in other schools, particularly in the public schooling system. In this study, the aim is to examine an established time where activity is already taking place in urban public schools (recess) and to explore how the activities there, in particular playground games, work to further school goals. The question is asked, what sorts of simple curricular interventions do the activities of youth at recess suggest?

Playground games, like four square, are most frequently engaged in during elementary school recess times. In recent times, recess has become threatened by the press for more academic instruction time and by fears of violent behavior. A dramatic indicator of this trend is seen in the increasing number of schools and school districts which have done away with or significantly reduced recess time (BBC news, 2007; Coughlan, 2007; Jarrett,

2002; Pressler, 2006; Sindelar, 2004).[1] Underlying these actions is a belief that play time is separate, and might even detract from, the work of school. Although a vocal minority continues to speak out against this trend (Chudacoff, 2007; Pellegrini, 1995a; Pellegrini & Smith, 1993; Waite-Stupiansky & Findlay, 2001), none have explored in detail the possible links between playground games and language learning as contained in this study. In doing so, this study provides a different perspective on the value of recess time and the types of activities students choose to engage with when they have the opportunity to play.

While in general people feel they know play when they see it, say while watching young animals or children engaged with each other, the term resists simple definition. Brian Sutton-Smith, one of the most widely cited scholars of play, writes extensively of play's ambiguity (2001y) and states that there is little agreement among scholars of play. The vast and diverse bodies of literature on play, with research across the biological and social sciences, and even the humanities, affirm this fact. For this study of children's games and language, I will review literature on play's role in society and play as a mechanism for development.

Language, Literacy and the Body for the Child

Central to my interest in playground games is the unique support these games provide children, encouraging them to coordinate talk, gesture, posture, objects and the built space to achieve social interaction. While one aim of this study is to reveal the complexities involved in playing a game like four square, another is to explore the semiotic understandings the students invoke and grapple with as they play. Undergirding this play "work" is a sophisticated use of the body as a site of meaning production, reception, and presentation. There has been extensive work on how humans utilize a multitude of semiotic resources to make meaning (cf. Finnegan, 2002), and numerous studies have looked specifically at children's use of bodily resources in conjunction with other semiotic modalities (Gilmore, 1986g; M. H. Goodwin & C. Goodwin, 2000j; Piaget, 1976; Vygotsky, 1933z). Much of this work is indebted to the work of Maurice Merleau-Ponty (1962) and the social theorists he has influenced such as Michael Foucault (1995; 2008), Judith Butler (1997), and Pierre Bourdieu (1991a; 1977; 1977). All of these scholars have spent time developing a view of the body and embodiment as it relates to linguistic and historically constructed notions of the present. However, none of these theorists are thinking about the child. As will be detailed below, when playing four square students engage their body as a communicative modality in ways that are uncommon in the course of an adults daily life. While a definitive statement on the topic is out of the scope of this present work, the analysis presented below takes a step towards developing a notion of

[1] For references and a complete discussion of the motivations behind eliminating recess, as well as a listing of actions taken in specific school districts see Univ. Illinois Clearing house on Early Education: http://ceep.crc.uiuc.edu/poptopics/recess.html

embodiment that is relevant and appropriate for children, and their burgeoning understanding of language, semiotics broadly, and their own physicality.

Problem Statement

As has been discussed above, my years of interactions with elementary school aged children have resulted in an interest in the way children in this age bracket relate to the world through their bodies, and how this may differ from younger children and adults. For this project my specific inquiry is into the role children's bodies play in their acquisition of, and socialization to, language use, and how this is related to overall educational goals of school. As such I am interested in the way students in school settings – but not necessarily in the classroom – engage with the breadth of semiotic resources available to them in communication. As will be discussed in more detail in the coming chapters, numerous researchers have taken note of the types of games that occur on the playground, but none have looked particularly at how the language use in these games might inform other school practices. Four square is a particularly rich site to explore these issues because of the types of communicative practices, and as I detail in Chapter 4, the semiotic affordances of the game. Another appealing characteristic of four square is the commonness of the game. Four square has been documented in various forms around the United States (Hughes, 1995; I. A. Opie & P. Opie, 1969q; Pellegrini, 1995b) as well as in Europe (Evaldsson, 2003d; Evaldsson & Corsaro, 1998f).

Significance of the Study

Few would disagree that 9 out of 10 elementary school students cite recess as their favorite time of the school day. Yet little has been done to understand the place of recess in the overall academic goals of school, nor has much work been accomplished to make clear just what occurs during recess that makes it so enjoyable (Jarrett, 2002; Pellegrini, 1995a; Pellegrini & Smith, 1993). Furthermore, across the country recess is being reduced and eliminated, and schools are being built without playgrounds. Thus, in a very real sense, there is a need to discover what is happening during recess, and if it is, or is not, relevant to the overall mission of schooling.

In particular, this study aims to contribute to understanding the type of language socialization that occurs among peers on elementary school playgrounds during recess, and how this impacts and relates to other socialization processes involved in schooling. Additionally this study will falls in the trajectory of recent studies, noted above, that expand the analysis of language in interaction beyond talk, to encompass other contextually relevant semiotic resources- most notably -the body of the participants

The goal then, is to develop an understanding of how students utilize their body to advance communicative goals, and sustain interactions, around the game four square.

Then the work will be to project how this knowledge can be made relevant to the larger literacy and language goals of schooling. Thus, this study aims to provide a direction for further research into curricular interventions, based on what is already occurring on the school grounds, and, most specifically, how to shift the classroom ethos from one which views the squirming body of the student as a obstacle to be overcome, to one that recognizes the body as a rich tool for understanding.

This study will make significant contributions to theoretical and practical work in the field of education, as well as any analytical framework that seeks to incorporate the actions of the body into the analytic process. Recess, whether seen as contributing to the overall goals of school (Pellegrini, 1995) or not, clearly contains and interactive space that is unique and warrants study.

Content of the following chapters

Chapter 2 contains a review of the relevant literature. To situate this study in ideas of how play has been looked at as mode of development, a comparison of primarily Vygotsky's and Piaget's work on play, and its role in language and semiotic development, is presented. Shifting back to a focus on schools and schooling, a review of literacy theory and notions of multimodality are explored for notions of the body and embodiment. Finally, studies that examine youth cultures, and their role in language socialization and language acquisition are presented.

Chapter 3 presents the study methodology, and includes a detailed description of the field site. In this chapter the research questions are presented and related to the particular types of data collected and the method of collection. Transcription conventions adhered to throughout the dissertation are presented. To adequately account for the researcher's perspective, her history of engagements at the school is also detailed. In addition, some of the limitations of the study are explored.

Chapter 4, "The Unique Qualities of Playground Games", presents two theoretical discoveries from the data, which in turn are used to frame further analysis in chapters 5 and 6. To begin with the chapter argues for a unique class of playground games, and provides a structure for delineating playground games from other types of play activities observed to take place during recess. The term *semiotic affordances* is introduced, defined, and used as a tool for analyzing the youth's talk, gesture, and bodily postures while playing. Finally, four square is presented as a token playground game, and its particular semiotic affordances are delineated.

Chapter 5, "That IS *cherry bombs*", provides a detailed analysis of the semiotic affordances of four square in the context of an argument that arises during play. The chapter displays how the players co-ordinate their talk with bodily movements ,towards different ends. The data discussed displays the complex and multiple semiotic modalities players utilize

and attend to in order to become experts at the game. Through the analysis it becomes clear that youth use the language of the body to think, much in the way inner talk is used.

Chapter 6, "The *Cupcake*", compares the methods of apprenticeship, explanation, and instruction used by upper (4^{th} and 5^{th} grade) and lower (2^{nd} and 3^{rd} grade) elementary school students. The data presented show the communicative differences between upper and lower elementary students while playing the game. The focus is on the interrelation of talk to physical gesture. This chapter also explores how playing four square encourages a type of semiotic awareness and provides youth with an opportunity to practice with different social semiotic material.

In the conclusion I will address two primary questions by drawing on the prior analysis in conjunction with relevant literatures. First I will tackle what the study of foursquare reveals about children's use of semiotic resources, and how this might inform an embodied notion of communication. Then I will apply this to current thoughts around literacy as a practice, with the aim of creating a platform to inform future curricular interventions.

Chapter 2:
Play, Development, Literacy, and Peer Culture,
A Review of Pertinent Literature

In this section, I have chosen bodies of literature in which to situate a conversation around the role of embodied play in education, and in particular, literacy and language learning. There are numerous strands of study from which to potentially draw on, such as gesture studies, children's folklore, and cognitive science, but few sources that look at how children's games intersect with peer culture, literacy theory, and notions of individual and social development. As such work on play and development, literacy theory, and prior work on playground games are presented as a way of laying the groundwork for understanding this research as a means for linking these three inquiries.

Beginning with foundational texts on play and development the review lays out theories of how play is an important mechanism of development, and simultaneously, a mode of engagement, in which the processes and the resources children access to enact this development are revealed. Building on this, an argument for an embodied literacy theory is presented. The notion of meaning making is at the heart of way literacy is conceived and presented in this study. In this notion of literacy, different modes of representation from styles of dress and diction, to graphic representations, to physical gestures are all understood to contribute to the display and enactment of literacy. Lastly, empirical work that looks at the importance of peer cultures and activities on the playground are examined.

Foundational Psychological Theory

> Let us turn now to the role of play and its influence on a child's development. I think it is enormous. (Vygotsky, 1933:7)

Vygotsky and Piaget are two of the most read psychologists across the discipline areas within the field of education. In some ways their two theories are incongruous with each other; however, on play's role in development there are points of agreement as well as complimentary notions. Both theorists view play as key for understanding symbols and developing abstract thought, and thus by extension important to language acquisition. They differ, however, in their views on the role of peers in this process.

Through his long and prolific career, Piaget's theories on development shifted and expanded in many ways; however, the role of sensory motor perception in the developmental process remained important. Focusing on his study of boys playing marbles in "The Moral Judgment of the Child" ([1932] 1966), I will attempt to trace out Piaget initial thinking on how play encourages recognition of signs. This study is most

relevant because marbles is not unlike other playground games, such as 4square, in that there is a high variability in forms of the game, and in that part of the game is creating different methods, or rules, of play.

Piaget presents three parallel shifts in children's' play: from ritual to rule bound activity, from individual to collective play, and from guidance by symbols and symbolic action to guidance by and recognition of, signs. Piaget draws on the linguistic structure explicated by Saussure (1916v). He explains that the child begins playing with objects, such as marbles, in ways which quickly become ritualized and argues that this is the beginning of the use of symbols. As the child begins to coordinate their play with other children these individual, symbolic rituals fade and organized activity guided by rules (which are arbitrary collections of signs) take their place.

From this observation he concludes "…that the symbol is a necessary, but not a sufficient condition for the appearance of signs" (Piaget, 1965:34). Piaget seems to be indicating that it is through play, first solitary and then collective that signs come into being for the child. Interestingly, Piaget relates the symbol to what is happening during a child's preverbal interaction with marbles, indicating that there is a synchronicity in the movement to group play, the gaining of verbal abilities, and sign recognition.

In a later book Piaget (1976) focused on the relationship between action and "cognizance", defined both as a behavior, and also "the dawn of consciousness" (Piaget, 1976t, p. v). It is a term Piaget uses to encompass an awareness of actions and/or thought, which is communicable, a sort of intentionality awareness. Piaget put forth that "there exist degrees or various levels of cognizance, particularly with regard to its relation with the semiotic function" and furthermore: "Cognizance would constitute the passage from the action to its representation and would thus always include a reconstruction arising from the conceptualization" (ibid, p. 67). Thus Piaget sees a link between verbalization of action and comprehension of that action.

In trying to understand what role games like marbles and activity in general, reveal about a child's development, Piaget noticed a relationship between comprehension of signs, communicative facility, and collective activity. For Piaget the focus was on activities and games as sites for observation of this development. However I hypothesize, and Piaget does touch on this, that the games and activities do more than display, but actually encourage children to make the shifts in perspective necessary for usage of signs and comprehension of intentionality, and thus lead to communicative development.

As he indicates in the same essay quoted at the beginning of this section, Vygotsky (1933aa) was heavily influenced by Piaget's study of children playing marbles. Commenting on the shift from individual play to collective play that Piaget describes, Vygotsky writes:

> "[Piaget] indicates that the first line of development of external rules (what is and is not allowed) produces moral realism […] all don'ts are the same to a very young child, but the child has an entirely different attitude towards rules he makes up himself." (1933:7).

Here is where Vygotsky focuses his discussion of play in development. He sees play as a means by which children develop abstract thought, and writes that "play creates the zone of proximal development of the child." (1933aa, p. 8) Vygotsky is less focused on the ontogenetic development of the child, and more focused on how children gain cultural skills. He sees in play, particularly fantasy play, children separating word meaning from object (such that a stick becomes a horse), but not from action (the stick is converted so it can be ridden like a horse).

For Vygotsky play encourages in the child an increase in self regulation and the ability to connect the imaginary with the real. Initially he sees toddlers using play as a means of imitating the real, for example when children act out adult roles with dolls. Thus, he explains that play at this first stage is "…more memory in action than a novel imaginary situation."(1978:103). The change from this phase occurs when the child begins to have a purpose or a goal. This goal is, at least until reached, imaginary. It is a symbol which the child uses to organize her activity. As the child progresses towards games and sports, and their attendant goals, rules become prominent. The role of rules in play leads Vygotsky to explain that in play the child has an "…illusionary freedom, for his actions are in fact subordinated to the meaning of things…"(1978:103). For Vygotsky the development and recognition of a rule system, used to guide activity, indicates a degree of abstract thought, a submission of bodily impulse to idea. In this way the child gradually "separates the imaginary situation from the real one." (1978:103). He explains the separation as analogous to the division between the perceptual field, that which can be seen, and the field of meaning, or that which is thought.

As explained above, one way that Piaget understands play is as means by which the individual child learns their ability to act in the world. This learning revolves around interactions with others and with the rules of the game. For Piaget the greatest advances in play happen among peers of equal skill negotiating the game. As the child comes to learn that they need not simply heed rules, but can make them, they realize their creative ability. This creative ability allows them to understand rules, not as immutable forces, but as thought objects. Vygotsky, however, believes that development occurs when the child is pushed to the edge of what they understand, and that this happens not among peers, but in the company of those who have more skill. He is not concerned with how the child understands what rules are; instead he sees development in the way children come to adjust their behavior in relation to the rules of play.

Synthesizing elements of Vygotsky and Piaget's theories on play, Rogoff (1990) asserts that one of the most important aspects of play is the interaction among peers it affords, and insists all play is imbued with the social. For her, even solitary, fantasy play has social

elements. Rogoff's analytical focus is on intersubjectivity, a term used to describe the elements of interaction which all involved parties contribute to, but which cannot be attributed to any participant in particular. Games for her are a time where '…children may practice making their intentions known and understanding the intentions of others."(1990, p. 187) Her view is a useful hybridization of Vygotsky's and Piaget's notions of play; play is at its developmental best among peers- but this interaction is still focused on increasing competency with social tools, language among them. While Rogoff, like many theorists interested in play's role in development, refers mostly to pretend play, these elements are evident in other games, especially variable ruled playground games.

Perhaps one of the most interesting modern studies on play is the short book by historian Johan Huizinga, *Homo Ludens* (1955m). In it, he hypothesizes that the quintessential characteristic of the human is not our ability to think (sapien) but our ability to play (luden). For him, play is not simply a past time, but a basic mechanism of cultural development and reproduction. Writing at the beginning of the industrial era, he harkens back to human's pastoral past and laments the lack of play in modernizing culture of western Europe. Two themes in Huizinga's work re-occur throughout work on play. One is the lamenting for a past where a particular type of free play was more prevalent for children and in the society at large, and the second is the notion of play as having a place in development on both societal and ontogenetic levels. Huizinga's broad sweeping study contains little empirical evidence to support his vast generalizations regarding the role of play in society and culture. Nevertheless, he quite eloquently lifts play from the realm of childishness, and places it within the sphere of essential human capacities. In this way, he pushes play beyond that of a mechanism propelling child development. He claims that play is used throughout the lifespan to continually imagine the new. In reviewing Huzinga's work, Henricks summarizes this quite nicely, but adds an important critique writing:

> "…[the] descriptions of play are wonderful commentaries on the ways in which reality can be imagined in social settings through dialectical exchanges between rival actors; however there is little to remind us of the actual thudding, sweating and sometimes breathless qualities of physical play. "(Henricks, 2006, p. 23)

Hendricks highlights an element lacking from not just Huizinga, but from much thought around children's play outside the realm of sports, and that is an adequate theorizing of the role of the body itself, and the contact of bodies.

Piaget and Vygotsky provide the initial tools for examining the relationship between play and children's development of semiotic awareness Huizinga makes the case for looking at the very nature of human play as an essential quality in the development of societies. For all these theorists, however, it is as if the body can be assumed, another object of the environment being acted with, or upon. Even if, as a theoretical concept, the body can be presented as an object, it is one unlike any other, and thus requires special attention. It

would stand to reason, that the body of the child is more than just quantitatively different from the body of the adult, but qualitatively different as well. Both the ontogenetic and the sociological perspectives are important to understanding the relationship between the body, play and language; as such, I hope to strike an adequate balance in my work between attending to them all.

Towards an Embodied notion of Literacy

While a theory of literacy as an embodied practice would necessitate an examination of some of the longstanding theoretical traditions investigating the body in society, communication, and language, it is equally important to examine what work has been done regarding the body and literacy, within literacy studies itself, to date. In this section I will examine canonical and more recent works in literacy studies specifically to reveal the implicit, and occasionally explicit, ways in which theorists concerned with literacy represented the body. However, this in itself could easily constitute an entire paper on its own merits, as would a comprehensive survey of work outside of the field of literacy studies that pertains to this issue. Ergo, what follows will attempt merely an outline, providing a a context for this study and pointing a direction for further investigation.

Looking Back

The Great Divide Theory (Goody & Watt, 1963) and the Literacy Thesis (Olson, 1977; Ong, 1982) predictably come up on the Cartesian side of the mind/body debate. Thus, for them the body is a limiting factor, from which the mind must, so to speak, escape; literacy, is presented as a tool within this process. As such, they present the written word as that which frees communication from the sole province of the body. For instance, Ong, recognizes that humans use all their senses for communication, but insists "…despite the richness of gesture, elaborated sign languages are substitutes for speech and dependent on oral speech systems..."(Ong, 1967). Thus language is seen as not only more important than other tools of communication but also isolated from them, presenting a theory of language (and hence, for them, literacy) unmoored from the body. Goody and Watt (1963) augment this position in their development of the literacy thesis, and, quoting Spenglar[2], assert that through writing humans not only overcome the body, but time as well. The Great Divide theorists, propelled by the desire to enumerate roots of difference between western society and all others, vastly understate the embodied complexity of communication as a whole, and overstate the power of alphabetic text in their conceptualization of literacy. As a result they at best ignore the body, and at worst dismiss the role of the body in their conceptualization of literacy as well as language production. This has had a double effect of at once blocking a more complete notion of

[2] "On general grounds, because, as Oswald Spengler put it, "writing . . . implies a complete change in the relations of man's waking-consciousness, in that it liberates it from the tyranny of the present . . . the activity of writing and reading is infinitely more abstract than that of speaking and hearing."- *The Decline* of *the West,* trans. *C. F.* Atlinson (New York, 1934), **11,** p. 149.

the person in theories of literacy and also limiting notions of text– for not only does lived experience need to be returned to with a sense of the person, but the various mediums of representation that are its residue. This latter notion has, as modern school curricula have shown, proved the most unyielding.

While the Great Divide theorists did conduct fieldwork-based studies, their theory frames literacy as an institutionally-structured activity of individuals, characterized primarily as a mental, rather than a social skill. It is a theory of literacy that Brian Street dubbed "autonomous" (1984) in order to highlight the individualistic, mentalistic, and ultimately politically neutral elements of this conceptualization of literacy. In the late 1960's and early 1970's many schools of thought in the west shifted focus from searching for universal rules or properties regarding the role and acquisition of literacy, to examining the importance of local, culturally-specific, contextual and social influences when exploring relationships between the individual and society (Goffman, 1959h; Vygotsky, 1978ab, 1986ac), between culture, language (Dell H. Hymes, 1964n), and education (Bruner, 1968), and between language and socialization (Cook-Gumperz, 1977). James Gee(1999) termed this development 'the social turn' in a paper discussing this trend. A similar a shift quickly followed in the area of literacy studies. This is best exemplified in the work of Sylvia Scribner and Micheal Cole(1981w), Shirley Brice-Heath (1983l), and Brian Street (1984). These works have in common a shared notion of literacy as a social practice. In their use of ethnographic methods, and in the presentation of their arguments against notions of literacy as fixed, monologic, alphabetic text dominated, and/or as possessing cognitive consequences, these theorists allot to the body to differing metrics of attention. For all of them, the body remains nonetheless under-theorized with respect to the true scope of its potentialities, and is essentially tangential to their conceptions of literacy. This may in part be due to an unproblematized notion of practice. Scribner and Cole were the first to conceive of literacy as a practice, defining it as:

> … a recurrent, goal-directed sequence of activities using a particular technology and a particular systems of knowledge. [...] practice always refers to socially developed and patterned ways of using technology and knowledge to accomplish tasks. (Sylvia Scribner & Cole, 1981x, p. 236)

For them, the notion of practice is a theoretical tool, leveraged to provide a lens to view literacy and help root the concept of literacy in the acts that render it observable. With the benefit of hindsight, structuralist, as well as post-structuralist theory, it is easy to critique Scribner and Cole's notion of practice. They see practice as a transparent notion, not an overarching social structure with patterned influences. This is why I term it a disposition, to use Bourdieu's term, when explaining how practice functions in society. The under-theorized notion of practice in general is perhaps part of what obscured the underlying importance of the body in understanding exactly how a practice functions as an element of culture, an oversight which is then reflected in their analysis of the psychology of literacy.

Street also uses the term 'practice' in a similar way to that of Scribner and Cole. With Street however, we see more attention to the body and the way literacy is signaled by the body, most notably in his description of students who were continuing their study outside the village. "These youths would sit in orchards revising from text books and conversing during the summer months, establishing a group style though their dress and manner…"(B. Street, 1984, pp. 176-7). He explains that the students "used and perceived literacy" in ways that "differed considerably" from the others in the village, and asserts this was obvious to both him and the other villagers, from the embodied visual displays described above. However, he also describes a similar scene among the villagers schooled in the Maktab literacy (ibid,1984, p. 145), but does not detail the elements of carriage or the artifacts which might have facilitated these observations. Perhaps a more fleshed out notion of practice, coupled with a sense of the role of the body in marking literacy on the individual and the group, would reveal how these literacy practices might connect.

Of all the practice theorists, Heath comes closest to incorporating the role of the body in her accounts of literacy. In her compelling the portraits of the plaza in Tracton, the interiors of Roadville houses, and the schedules of the townspeople, Heath provides the reader with rich descriptions of the activities around language and print, which contribute to the different literate becomings of the children in the study. One particularly insightful observation stems from the social organization of multigenerational conversations in Tracton. She explains how the babies of Tracton are brought to the constant stream of talk among community members and describes them as "… literally feel[ing] the body signals of shifts in emotion from those who hold them; they are never excluded from verbal interactions." (Heath, 1983m, p. 74) Made clear here is the link between perceptual awareness and talk, and in the epilogue Heath returns to this observation. She theorizes that the physical inclusion of children in an adult stream of talk provides them with certain skills for contextualization; these skills are not those valued in primary grade classrooms. This is the beginning of looking at how the body provides an inflection for the acquisition of language – however, Heath goes no further in her linking between body and language or literacy. The question remains as to how these interactions might instill a particular bodily disposition, that then becomes crucial in the person's acquisition, apprehension, and representation of literacy.

New Literacy Studies and Critical Literacy theorists on the Body

Not unlike the Great Divide theorists, writers bound together by interests in literacy, society, and social power take a position on the role of the body in literacy that is similar to the social theorists whom they draw on. It can be summarized that, in general, they see literacy as something that is imposed on the body, and the elements of bodily communication, gesture, gaze, posture, and even bodily adornment are bent to align to the practice. The most in-depth look on this subject comes from Allen Luke (1992)in his application of Foucault's theory of discourse and Bourdieu's notion of habitus to the child's body in classrooms. Luke makes a similar critique to the one presented here regarding other literacy studies, stating that "...despite the proliferation of ethnographic

and interactional analysis of literacy events in schools, the body has not been viewed as a constitutive or focal object of study" (Luke, 1992, p. 124). Through a convincing series of theoretical maneuvers, Luke aims to "…retheorise what occurs in the material culture of classroom events as bodily transcription and to show how the culture constitutes the morally regulated, literate subject." (ibid).

While I would not argue against the idea that school is a conservative socializing force (Pierre Bourdieu, 1976), and that much of that socialization inheres in the form of imposed bodily postures and norms, I would and do argue that the "oppressed" body is not the only body in the classroom, or on the school grounds. In fact children use their bodies in creative ways to reappropriate the learning space while at their desks, on the playground, and even in front of the computer. Indeed it is my ardent belief that the body is a critical tool in children's acquisition of literacy, and thus provides an important entry point for investigation into theory and creation of curriculum.

Multimodality and the body

While scholars interested in modality (R. Iedema, 2003; G. R. Kress, 2003; *Jewitt & Kress*, 2003; The New London Group, n.d.)have done an excellent job validating alternate modes of meaning-making the primary focus has been on the image. This focus is driven by a secondary factor, that of screen based computer and handheld device technology. What is lacking from these theories is a means to truly recognize how all the senses are incorporated into processes of meaning-making, regardless of the tool that is being used. This is where a theory of the body may provide the under-girding structure to begin a novel discussion that links modes of meaning production to meaning-making products and comprehension. To use the digital story as an example, a theory of the body could potentially help to understand how students' sense of touch and physical coordination impact their interaction with the software, the computer and other devices used in production. It might also help explain the different engagements that students have with different uses of the computer, such as digitally making music, writing or playing videogames. Each of these uses incorporates different elements of the body as well as different potential representations of the communicator and their understanding of the physical world in which they live. These are just a few examples of how a theory of the body could expand and enrich research on modalities and literacy in general.

Despite critiquing these seminal theorists in the field of literacy studies for neglecting the role of the body, I will finally posit that the body is just one piece, albeit a central one, in the puzzle. Embodiment is about more than just the body, it is a term also frequently used to reference a certain phenomenological interpretation of being-in-the-world, one which refutes the Cartesian mind/body split, and instead theorizes the meaning made from the world is inseparable from our bodily perception and experience. This line of investigation grew out of the philosophical schools of pragmatism (Dewey, 1998b; Peirce, 1931; Schütz & Wagner, 1970) in the U.S. and phenomenology (Merleau-Ponty, 1962) in continental Europe. Notably one of the earliest students of the school of pragmatism, John Dewey, believed that this philosophical bent had real implications for schooling practices. To this

end he began a school and became a central figure in the progressive schooling movement in the United States during the early 20th century.

Much of the current work in the field of literacy studies has been to recognize the great variety of meaning-making in humans, as well as the multiple and shifting influences that act upon meaning-making. Thus we often talk about "literacies", plural, to indicate the many ways in which one can be competent in socially organized ways of meaning-making. What then are literacy practices if not a means of organizing and representing, and perhaps even understanding, our being-in-the-world? Conceived as such, a theory of literacy without explicit reference to or integration of the role of the body will be, by definition, impoverished, regardless of how encompassing the theory might be of the multifarious technologies and social forces at play. Furthermore, just as gesture is more than a simple accompaniment to talk, literacy as an embodied practice requires more than simply inserting the body into existing theories.

There is some work being done which points in promising directions such an inquiry can take, so on one such notable piece I will end. Pippa Stein, in her argument for multimodal pedagogies, writes:

> … the reflective individual is conceived of as an *embodied subjectivity*, part of, and inscribed by, the discursive and material practices of the social world. In the notion of the embodied subject, the body is neither brute nor passive but interwoven with, and constitutive of, systems of signification within the social world (Stein, 2004a, p. 4).

Stein sees a reciprocity between sign systems, signs, and the embodied subject. This is similar to the beliefs of language socialization theorists with respect to their notion of being socialized to language through language. There is, however, a critical difference: Stein is arguing for more than just talk and alphabetic text, she is arguing for all the "systems of signification" to be treated equally. She goes on to assert that:

> The body is simultaneously a multimodal sign as well as a site of multimodal resources--meaning cannot occur outside of/without the body. Bodies hold history, memory, thought, feeling, and desires. Bodies hold language and silence. Our bodies are repositories of knowledge, but these knowledges are not always knowable in and through language--they can be felt, imagined, imaged, or dreamed. (Stein, 2004a, p. 5)

Here Stein's concept of an "embodied subjectivity" points to a particular relationship with meaning-making and representation. In this understanding, a theory of the body is neither reliant on nor dismissive of biology; yet the role of the body in meaning-making is also not completely inscribed in social semiotics. In a sense, what Stein seems to indicate, and what I am striving towards, is a theorization of the body not as an isolated part of the process of meaning-making but as being somehow "braided" into all parts of the process.

While it may seem a steep challenge to analytically discuss meaning-making in this way, and even more difficult to adequately represent these processes within the modally confined media of academic papers, it is a challenge that the field of literacy studies needs to take up if it is going to keep pace with modern modes of meaning-making.

Empirical Work

> Despite its simplicity, the mix of semiotic fields found in a scene such as the hopscotch game locates a perspicuous site for developing an approach to the analysis of human action that simultaneously takes into account the details of language use, the semiotic structure provided by the historically built material world, the body as an unfolding locus for the display of meaning and action, and the temporally unfolding organization of talk-in-interaction.(C. Goodwin, 2000, p. 1517)

This section aims to highlight the few studies that look at playground games and peer culture as part of the socialization process. In particular, studies were selected which focus on language and on the body.

Socialization and Children

The view of children as active in their socialization process differs from the development oriented perspectives that have dominated, and continue to have a strong presence in, studies of children. A development perspective views the process of socialization as unidirectional; skills are imparted from an expert to a novice, and are part of a (at least somewhat) linear trajectory of cognitive development. The talk of children in this thought, is regarded primarily as a impoverished version of adult, fluent talk. An early challenge to this ideology is seen in the work of those operating in the Language Socialization paradigm (B. B. Schieffelin & Ochs, 1986). This early work contributed to the study of children in important ways by bringing to the fore the role of language in the socialization process as well as the social nature of acquiring interactive competence. Furthermore, the work promoted an understanding of children's language, and the talk between caregivers and children as a substantive and important element of culture. Again, however, the focus was unidirectional, primarily examining how caregivers brought children into the stream of talk, and then monitored their interaction in that stream (Ochs & B. Schieffelin, 1984). More recent work on language socialization (Garrett & Baquedano-López, 2002; Gilmore, 1986b; Kulick & B. B. Schieffelin, 2004) and peer cultures further pushes this idea that the voice of the child is not a diminutive echo of that of the adults- but is that of a full member of the social world, directing and being directed.

In her ground breaking work on the gender socialization that takes place on elementary playgrounds, Thorne (1993) provides one of the first efforts at ethnography of school recess time. Building on the work of Corsaro (1985), Thorne goes to great lengths to minimize her distance from the child participants, and to represent their voice as they

intend. As such her work, like that of Corsaro, shows how children socialize each other, and thus presents them as agentive in the process of socialization. It is a view that sees socialization as multidirectional- in each social interaction every participant is both being socialized by and is socializing the other participants.

Gender and Morality

Gender and morality are the two most common themes in studies of children's games and the school playground. In general there are two veins of thought, those whose work ascribes traditional concepts of gender to the activities on the play ground, and those whose work challenges traditional gender paradigms. These two views differ in their representation of boys and girls playing in terms of physical activity, confrontational interactions, competitiveness, and moral complexity. Pellegrini and Smith (1993) review work that supports traditional gender roles, but most of the studies reviewed were published in the 1970s and early 1980s, and perhaps reflect the pre-feminist movement, pre title IX social order. Thorne, whose data was collected in 1976-77 and 1980, presents one of the most nuanced views of gender in the school yard. She documents children's self selection into gendered groups and gendered activities, but is careful not to fall into the trap of generalization. Her ethnography, then, becomes as much of a exploration into the frequent "border crossings" children make, as a depiction of the interactions that reflect common cultural norms. Thorne presents these moments as a potential map for assisting children to create a less gendered playground, and thus creating, more opportunities for children. Additionally she posits that perhaps, prior studies have focused on that which is in line with dominate gender ideologies, due to power of those ideologies to permeate the researchers gaze. More recent work on gender notes that self selected separation along gender lines and performance of traditional gendered dispositions is context dependant (Kyratzis, 2004). Some studies have shown that girls with physical expertise were more apt to challenge boys and to take a dominate role in negotiating games (Evaldsson, 1993b, 2003b; M. H. Goodwin, 1990k; M. H. Goodwin & C. Goodwin, 2000b). Girls were also shown to have complex means (as opposed to prosocial, conflict avoidance routines) of negotiating issues of morality around game rules and game inclusion (A. C. Evaldsson, 1993b; A. C. Evaldsson & W. A. Corsaro, 1998f; M. H. Goodwin & C. Goodwin, 2000j; M.H. Goodwin, 2006). Goodwin (2006) documents how girls assert hierarchical social orders, create and maintain what they deem to be just ways of interacting, and compete in physical games. She focuses on girl's use of directives, and displays how girls do social work in an argumentative and aggressive style of interaction- further debunking gendered myths of girl's interactions.

The majority of the research reviewed above follows a hybrid of ethnomethodology and discourse analysis. The data focused on are talk, augmented with ethnographic field work. The nature of studying games encourages an examination of the body and bodily practices, and these are certainly included in salient moments within the works described above; however, the actions of the body are often subsumed beneath a focus on talk. The notable exceptions to this is the work of C. Goodwin and HM. Goodwin, both of whom in

different ways explore how to represent, in standard academic format, the work of the body in communication as on par with the work of talk. In a close examination of a single turn of play in hopscotch and the resultant dispute, C. Goodwin (2000) provides a number of theoretical tools for a contextually rich analysis of interaction, and particularly, play among children. He presents the notion of a semiotic field to refer to "different kinds of sign phenomena instantiated in diverse media" (ibid, p. 1490). Thus, some relevant semiotic fields to the hopscotch game and argument are: the grid on the ground, the hand of the player as she points, the pitch of the voice of dissent, etc. C. Goodwin stresses, reveling his commitment to the sequentiality of a conversation analytic methodology, that any one semiotic field can be picked up or dropped at any point in the interaction. Thus, it is the goal of the analysis to present the relevant "contextual configuration" (ibid) of the semiotic fields as the action unfolds.

The most current work in this review, and in many ways the work which the proposed study will most closely follow, is MH Goodwin's "The Hidden Life of Girls" (2006). MH Goodwin presents an ethnographic study of an elementary school girls' clique as it is formed and maintained during the school lunch break. In addition to the similar participants and field site, MH Goodwin also succeeds in integrating an embodied perspective; all of the talk she presents is augmented with descriptions of gesture and bodily posture. As such her analysis works to give equal weight to the multiplicity of semiotic resources involved in negotiating any particular activity. Reflecting this she takes as her unit of analysis "situated activity systems" (2006, p. 9). This is an attempt to create an analytical unit that is less bounded than Austin's speech act, but still has room for understanding the activity vis á vis social institutions.

While there are many similarities between MH Goodwin's study and the study proposed here, there some important differences. To begin with the focus for this study is on a particular game, not a group of participants, in part to collect data evenly across groups that develop on the playground. In addition, Goodwin uses a focus on the body side by side with talk, whereas the focus of this study is on how talk and bodily practices inform each other. Finally, like much of the work regarding playground activities, Goodwin is interested in her participants' creation of a particular moral community. While the issue of morality is always present in games among peers this will not before grounded in my study.

Conclusion

In this section, I have chosen bodies of literature in which to situate this study that seem most relevant to an educational perspective. The specific goal of this section is to situate an understanding of the embodied activities on playgrounds in work on play and semiotic development, literacy theory, and prior work on recess time games. Play is both an important mechanism of development, and simultaneously, a mode of engagement in which the processes and the resources children access to enact this development are

revealed. Play works both on the level of the individual and the level of the society as discussed by Piaget, Vygotsky, and Huizinga in the review above. This study, however, is not a developmental study per se. In both education and psychology, studies of development typically involve pre and post test measures, across time and age groups, and typically are run in a lab environment. In the study of language and communicative development, clinical studies provide important theories about how youth engage and understand semiotic material. I contest, however, they mean little if their findings are not supported by observation of children's communicative activity in the natural world. Without discounting the important work of traditional developmental studies, I assert that a close and careful examination of children's freely chosen play activities, is a critical tool for understanding the mechanisms and potential of play for learning in general and, in particular, for the acquisition and mastery of a broad spectrum of meaning making tools.

While I would never argue against the importance of mastering the tools of reading and writing alphabetic text, it is because these are the representational modes of power in modern society. Without mastery of these tools, social mobility and life options become extremely limited. However, I do not believe that alphabetic text holds the essence of representational ability hostage, nor is it the magic key to abstract thought. Along with many of the multimodality theorists reviewed above I stand in agreement that there are many modes, mediums, and means with which to make meaning. Furthermore, I assert, that for some the path to alphabetic text is through an alternate mode- graphic image, sound, creative act, or in the realm of this study, the body.

After Corsaro, Goodwin and Goodwin, Evaldsson and others reviewed above, I take the position that one of the most fruitful sites for study lay in the engagement between peers, or, as I like to think of the youth in elementary school, near peers. Near peers, as a term, highlights the developmental and social differences among elementary school aged youth, who share the same educational landscape. Youth across the grades of elementary school, who may later be considered of the same generation, and may become peers in many ways as they grow older, are not always peers in the ways they utilize different modes of communication. While this study in no way asserts that the play activities examined are in some way essential to development, it does show the importance of peer activities and peer culture in an educational context.

Chapter 3:
Methodology

The inspiration for this study was a desire to understand the sorts of linguistic and communicative competencies elementary school students display in the games they chose to play during recess, and how this type of peer engagement might further their communicative and linguistic competence. As such, another aim of this study is to understand how to place these games, and the free time of recess, in relation to the overall goals of schooling. To best illuminate how the youth themselves construct and maintain meaningful engagement, ethnographic methods of data collection were employed. The following pages will situate this study in a tradition of ethnographic work and ethnomethodology, describe the specific methods of data collection and analysis, provide a rationale for focusing on the game four square, and introduce the field site.

This ethnographic study[3] of the communicative practices of youth engaged in playing four square, draws much of its methodological inspiration from work by linguistic anthropologists. Linguistic anthropology was originally developed by Dell Hymes (1963) as way to focus on language within the scholarly realm of anthropology. Working with the idea that culture and language are interwoven, Alessandro Duranti (2006) refines the perspective of linguistic anthropology, explaining "…language as a set of practices, which play an essential role in mediating the ideational and material aspects of human existence, and hence, in bringing about particular ways of being-in-the-world."(2006, pp. 4-5). As such, the work of linguistic anthropologists provide a way of integrating the study of semiotic systems, such as language, and the practice of using them (cf. Saussaure's *langue* and *parole*). This means developing studies that aim to "..let our subjects speak, as much as possible, with their voices and their bodies, to tell the stories they normally tell in their daily life."(Duranti, 2006, p. 95) Heeding this, the study will focus on what is revealed in the talk, gesture and posture of the youth playing the game.

Two other paradigms of thought, language socialization and discourse analysis, also play a role in shaping the methodology of this study. The language socialization paradigm was initially developed to examine, holistically, communication with children as they gain cultural and linguistic abilities. Through close examination of children and their caregivers, Bambi Schieffelin and Elinor Ochs developed the theory that children are socialized *to* language *through* language. (B. B. Schieffelin & Ochs, 1986). This understanding of language learning, as being inexorable from the process of enculturation, is a critical component to complicating the notions of code competency. Language socialization studies initially theorized this socialization process as, proceeding primarily from expert

[3] While the design of this study draws heavily on the ethnographic tradition of anthropology, and specifically the methods employed by scholars working in linguistic anthropology, it is not an ethnography. Both the positionality of the researcher (as enumerated below) and the duration of the study move it outside of this category.

(caregiver) to novice (child) (Ochs & B. Schieffelin, 1984). This created the space for future researchers to examine children's language production, separate from pedagogy. In addition their work positioned children's language to be as a phenomena onto itself, and not simply a diminutive version of adult language use and production. Building upon this work researchers, most notably Corsaro (1985), began looking at peer cultures and they way that peers influence and socialize each other into practices of engagement with social semiotic material. It is this tradition, that honors the acts of children as agentive, powerful forces in the process of socialization, in which this study follows.

Much of this work utilizes the tools of discourse analysis to revel speaker stance, as well as the complex process of producing and conveying meaning, this study, following the work of M. Goodwin (1990k; 2006), uses a hybrid approach, imbedding close analysis of specific interactions within a Geertzian "thick description"(2002) of the field site, the most frequent participants of the game, and the game itself.

Research Questions

From years of interactions with elementary school aged children I have developed a hunch; children of this age have a particular way of relating to the world through their bodies that differs from younger children and adults. Far from just a simple distinction of dexterous refinement, I view this difference as impacting the child's overall perception of the world. If this is true, it would stand to reason that a child's native notion of embodiment would be different from that of adult's – and thus their use of their body as a semiotic resource would also differ. This general hypothesis, developed from years of causal and directed observation has led me to a broad interest in how children use their bodies as a tool during interaction.

For this project my general inquiry is into the role children's bodies play in their acquisition of, and socialization to, language, and how this is related to overall educational goals of school. As such I am interested in the way students in school settings – but not necessarily in the classroom – engage with the breadth of semiotic resources available to them in communication. To explore these questions I am focusing my analytic lens on the playground game of four square, as it occurs during recess time, at an elementary school. As such my questions more specifically are as follows:

1. How do play, games, and free time support language and literacy development? Where does recess fit in the overall mission of schooling? How have studies of youth's free time influenced understandings of children's language? What role does youth culture and peer socialization take on in this process?

2. What constitutes a playground game? What specific interactions do playground games afford? How are they similar to or different from other activities at recess

and to other forms of play that occur at school? What is interesting about the game 4square?

3. Specifically, what semiotic means do players use to negotiate play? When do students use talk to negotiate play? When do they use gestures? How do bodily postures inform play negotiation? What patterns of usage occur?

4. What interaction, if any, can be observed between the use of bodily posture, gesture and talk, and how might they influence each other? Does the notion of embodiment that that emerges from the observation of children's interactions differ from that which is theorized for adults?

Finally, I hope that my analysis will provide a platform from which potential curricular interventions that capitalize on the role children's bodies play in their negotiation of, and socialization to, language use. It is my sincere aim to work towards developing a of a theory of a child specific notion of embodiment, that could influence current notions of literacy and instances of literacy curriculum in schools. While I know many children will succeed in their acquisition of language practices and literacy without ever being involved in any playground games, I firmly believe that the learning that happens during these games is critical for others.

Researcher Position

Ethnographic work requires attention not only to the participants but also to the gaze which the researcher brings to the ethnographic project. In an attempt to make as clear as possible the place within the community from which I derived my understandings, and in many ways enabled my research at Pacific, included below is the history of my engagements at the school. The development of this research project was strongly influenced by both the evolution of my role in the school's community and by the impact of external forces on the community, such as reduced school budgets and enrollment changes, due to demographic shift in the neighborhood.

In the summer of 2001 I worked with a service learning program based out of a school just down the street from Pacific. A young woman there entreated me to apply for placement at Pacific. Her encouragement, coupled with a desire to maintain contact with the neighborhood, led me to request, and then receive, placement as the Sports4Kids (now Playworks) site coordinator at Pacific Elementary. Playworks is a service provider which places individuals in schools to support healthy play activities, organizes recess times, run after school programs and coach sports teams. I worked at the school for two years (2001-2003) directly before I entered graduate school. Throughout my graduate work I remained involved in the school in capacities varying from volunteer to coach to researcher, often moving between these roles during the day or week. From 2003/04 to 2007/8, I spent an average of 3 days a week on the playground during recess time and countless full days on

the school grounds. At times negotiating the goals of a researcher with the responsibilities of a member of the teaching community were quite challenging. In fact, on almost a weekly basis, someone wistfully said to me "I wish you would come back and work here(full time as Playworks site coordinator)". Despite this lament, the school staff and teachers never wavered in their support of my research work at the school.

Table 31.: Roles at Pacific Elementary

School Year	Role and Activities
2001-2002 **2002-2003**	Site Coordinator, Sports Coach, & Afterschool Program Instructor through Sports4Kids
2003-2004	Recess time assistant, Study of teacher community
2004-2005	Pilot Study, Sports Coach
2005-2006	Buddy PE Program, Recess time Assistant
2006-2007	Recess Assistant, Volunteer PE teacher for 5th grade
2007-2008	Data Collection on four square and Buddy PE

Much changed at Pacific during the course of my engagement with the school and the surrounding community, as in many of the schools in Serita, CA, So much so, that the Director of Playworks recommended I consider other schools, in other districts for my research. I chose to do my research at Pacific because my experience working there was such a positive one, and I wanted to continue to contribute to the school. The reactions of the community members to my continuation at the school after my official capacity ended revealed the positive impact I had on the teachers and students in my past work. My initial field notes, contain musings on this reception. I wondered how much of this had to do with the disregard the teachers have had for my two successors, or that perhaps I was connected in their minds with glory days of the school, when they had more resources and test scores soared. I think, though, less the actual work that I did (for I made many mistakes) or the time that I did it, and more the care that I put into it, the fact that even in the most chaotic of moments I continued to pour my energy into the playground, accorded me the respect of the community. Thus I was welcomed back into the community, each year I returned, in whatever capacity I chose to engage in. This understanding was supported by a comment from Mrs. Lee (one of the few veteran teachers left) who explained, " you always made sure each class, regardless of holidays or sick days, got an equal number of PE classes, no one else has done that." (Field Note, Oct. 9 2007). It is that care which guided my negotiation of the roles participant and observer.

Coachitata

"Coach, I need something to call you"[4] said Erin, one of the junior coaches whose eyes lit up each time she saw me on the playground. "You can call me coach, that's fine" I

[4] This conversation is taken from field notes in 2003/4, not audio recordings.

answered. “no. *Nooo* I need something else… you,,, you *tighter* than the other coach [the sports4kids coordinator at the time]. I’m (pauses for a minute) Ima call you coachitata” “What’s that mean?” I asked. “Its just coachitata, Wanna play basketball coachitata?” “sure” I answered. Weeks later three of the other junior coaches began calling me coachitata, and again the only explanation offered is that I’m “tight”(Field notes 2005). Being at the school in an informal role, perhaps being a student myself (I explained to them that I was in the twentieth grade) created a camaraderie between myself, the students, the junior coaches (5^{th} grade students responsible for school play equipment and for helping smooth game negotiation) in particular. My negotiation of roles vis a vis the establishment, (first the school, Pacific; now the school, Berkeley) was not new to me. When I worked as Playworks site coordinator at Pacific Elementary I fulfilled the roles of PE teacher- providing, nine classes a week, game coordinator- for 4 recesses a day, after school instructor, and coach to 3 seasonal teams. The fact that I did not give grades or tests, and that in teaching I actually played with the students, decreased much of the distance that typically exists between teachers and students at this level. As many of the students were better at basketball, double dutch, and football than I was, often they were the ones who functioned as the teachers. However, I was responsible for keeping some order and meting out discipline on the playground (no small task) and thus did command some authority.

Negotiating these two roles, play mate and adult/teacher, is not dissimilar from negotiating the roles of researcher and member of the school community. Both instances required finding a way to be consistent on a constantly shifting ground. I could not stray too far into one role or the other. For instance, if I chose to be a non engaged observer, and shirk the responsibility of thwarting fights, arbitrating conflicts, answering scholastic questions, and occasionally collecting play equipment and such, the staff would lose respect for me, and perhaps challenge my very presence on the playground. If I spent too much time trying to help organize the playground, direct junior coaches, and generally step into teacher roles in the school, observation would become impossible and my relationship with the students would be effected. This became increasingly noticeable when the school could no longer afford to contract with Playworks. During this period I was the de-facto coach on the school playground, and made it emotionally challenging to disengage from events during recess, in order to attend to my research.

Slowly over the years I focused my time at recess on being a researcher. This was assisted by the school staff, as the playground aides came to support me in this role, and did their best to deter students from coming to me to settle disputes, organize games, and generally be a "coach". For my part, I always deferred to their authority on the playground and only twice in the data collection year felt compelled to discuss youth’s playground behavior with either the principal or the students teacher. This had the added effect of students falling out of “school behavior” mode in front of me and the camera, and I have many school rule infractions captured in my video and notes. However, there were days when I was the only adult on the playground, and was entirely unable to attend to the camera, and collect data on the four square game. On these days I gave the four square

ball to whomever wanted to play, and roamed the playground. This did have the benefit of allowing me to observe how other youth used their recess time, and also showed me that the students would play four square even if the camera and I were not watching. In the end, the notes I gathered on these days, about other activities during recess, helped me to situate four square in a continuum of playground activities.

A researcher returning to the school where they once taught has a unique perspective from which to observe students. This position meant that upon entry to the site, I simultaneously held an insider/outsider perspective. On one hand, as the longtime playground coordinator, I had an insider's knowledge of the language and practices of youth in Pacific's school recess. As recess, I would argue, becomes almost a culture within the greater school culture, this is an invaluable resource to support data collection and analysis. Also, the youth were familiar with me, and attached a largely positive affect to me; no one is more popular in elementary school than the person who hands out the play equipment! On the other hand, as a former member of the teaching staff, I had more than just a typical adult's responsibility towards the community, which, in addition to being a delicate balancing act, also meant that there was a power dynamic between myself and the students. Vestiges of this power dynamic remained until the end of the data collection, and were seen in the students continued, if decreased, calls to me to mitigate extended debates on which student should be "out" during the four square game.

To pretend that the relationships I formed while in the community, the very gaze with which I observed, was not impacted in ways seen and unseen by myself would be dishonest. One might argue that even the data collected by the video camera is influenced by my standing in the community, and in some ways is an articulation of my own eyes. For while over the data set the youth rarely oriented to the cameras, and even less frequently danced or performed for the camera, they knew, nevertheless, that the camera was only on the playground if I was there. It would always be associated with coach Marple- just as the yellow ball that was used for four square became known, not as the four square ball- but coach Marple's ball.

Field Site

The flatlands area of Serita has many micro neighborhoods, which have been slowly gentrifying since the late 90's, high-tech fueled economic growth, and subsequent urban sprawl. Five highways converge in the middle of the flatlands creating a 'maze' of early morning traffic report fame. These highways function effectively as the tracks of old, separating neighborhoods. In fact Pacific took it's moniker from the railroad company that operated on the site during the 1950s. Pacific Elementary School's neighborhood lies in the north western corner of the flatlands, wedged beneath Camden to the north and beside Shriftville on west (both more affluent cities), and has highways to the south and east. There are a few new stores popping up on the Shriftville side of the area, however most of the neighborhood consists of single and two family homes peppered with a few

convenience stores, and small low-income housing units. Over the last few years new faces have been put on the older Victorian homes, and more recently refurbishment of the smaller bungalows has begun. On any given weekend only a few clusters of youth will be seen playing outside, and the basket ball courts at the school are often empty.

Pacific Elementary was designed as a neighborhood school, with a capacity of about 400 and a draw area of a few square miles. Traditionally enrollment at the school has wavered around 400, with a predominately African-American population (>90%), with a small percentage reporting as Asian (5-8%), Latino, or other. 2001 saw the beginning of a shift, with population dropping to close to 300 and an influx of other minority groups. The most notable statistical change is the 8% increase in the Multiple or No response category. In talking with the teachers and staff they noted an increase in both Middle Eastern (mostly Yemen), and East African (mostly Ethiopian) immigrant children in the school, a demographic shift which is also reflected in the neighborhood stores and restaurants. The survey report has no foreign or specific nationality categories, so this may be the source of the increase in the 'other' category. English Language Learners count for 8.6 percent of the student body and 72 percent receive free or reduced price lunch.[5]

In the mid nineties Pacific suddenly appeared as a school of note in Serita. As one teacher reported "we were in the newspaper at one point. Pacific was pulling up of all flatland schools, what was going on here? Then all the problems in Serita—let's send them to Pacific"[6] Thus as the neighborhood could no longer support the enrolment at the school, and the schools success became known, the student population became a commuter and transient one. Despite this, Pacific still retained its desirability and met or exceeded its API and AYP goals into the late 90s.

Much of the schools success, according to the veteran teachers, stemmed from two main sources, the influence of a strong and committed principle, Mrs. Margaret Peyton and the advent of class size reduction. Mrs. Peyton was well respected in the surrounding community, which was evident from the success of her community outreach programs, from the Twilight family learning events to the weekly food bank distributions. These influences were reflected in the schools administration and helped the teachers and staff (most of the latter lived in the neighborhood, while most of the former commuted from more affluent areas) gel into a supportive community. Until Mrs. Peyton retired in 2002, after a ten year tenure, only one teacher had been at the school for less than five years, and most had been there over eight. Just as a combination of policy and leadership brought the school up, that same combination, plus the pressure of an eroding attendance base, seems to be currently affecting the school negatively. In the last few years Pacific has missed it's API goals, seen two principles, an influx of new teachers, and

[5] Figures for the 2007-2008 school year: Enrollment 339, African American 81.12 % , Asian 1.18 % , Filipino 0.88 % , Hispanic or Latino 5.31 % , Pacific Islander 1.18 % , White (not Hispanic) 1.47 % , Multiple or No Response 8.85 %.

[6] This quote comes from interviews conducted in the Fall 03

it's district taken over by the state. On the playground, there are fewer adults present to monitor and organize activities, and the end of recess is no longer a crisp response to the bell.

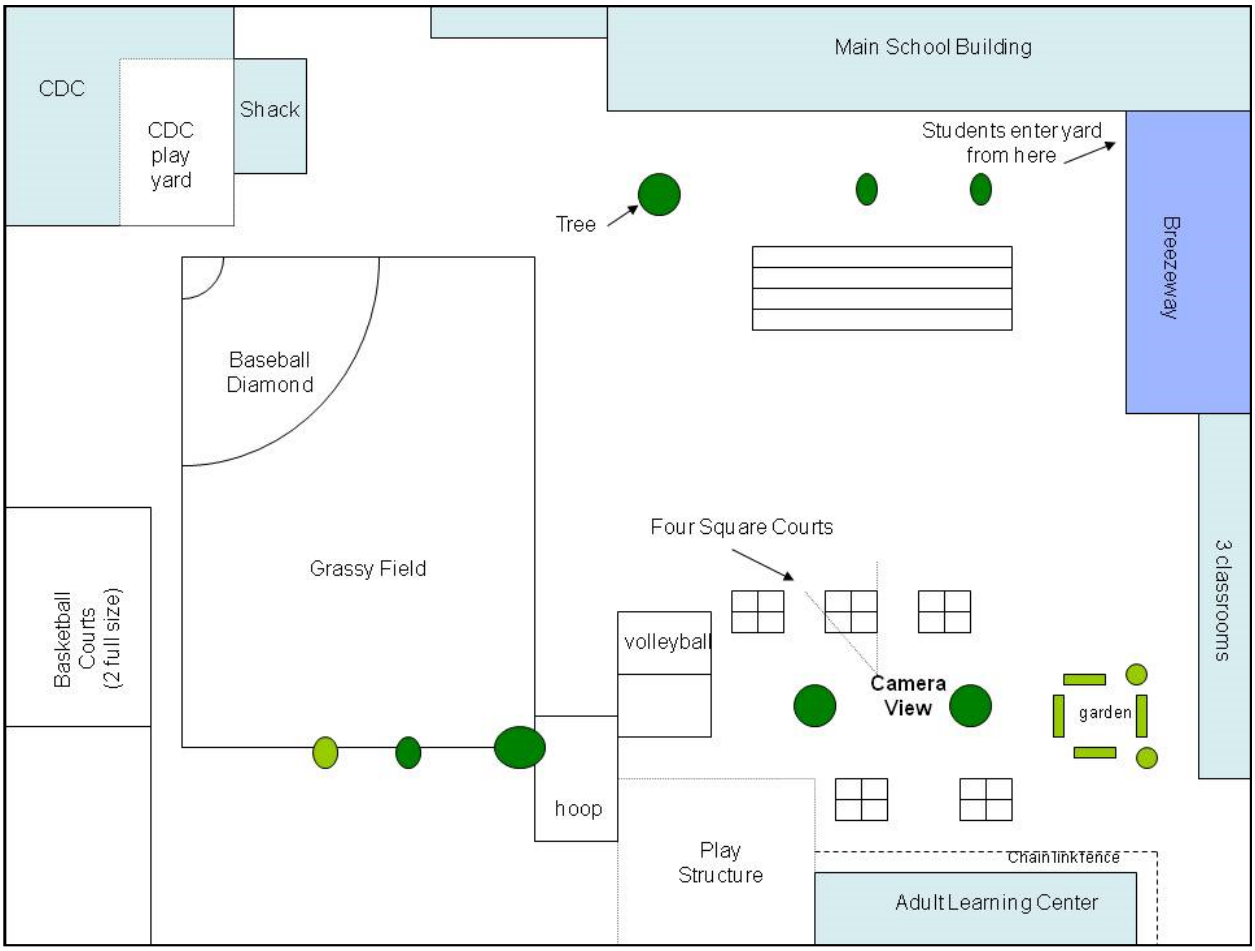
One positive change during the data collection year, was the overall tidiness of the school, a noticeable difference from previous years according to one of the few remaining veteran teachers. The new custodian appeared more like a volunteer parent, always calm with a smile and a kind word, and clad in neatly pressed clothes. He explained "just because you are cleaning things, doesn't mean you should be dirty". An older gentleman, he spoke with pride about Pacific's past (it was the site of the first public protest action by a famous community group), and it shows in his work. There has also been a change in secretarial staff, but other staff, teacher's aides, lunchroom workers, and the main playground aid, have remained the same. By enlarge they are older people (over 50) and live in the neighborhood. They always seemed happy to see me, and in many ways it is as if I was more like a staff member, than a teacher or a visiting assistant.

The principal during the data collection year, Rose Stevens, began her 3rd year at the school in 2007/08. One of the most notable shifts from Mrs. Peyton's policy was the increase in volunteers in the school. Many of the services that were once provided by employees of either a nonprofit service provider, or the district, were distributed among a variety of shifting faces, from junior league types who live in the neighboring cities to college students. Incidentally, in many ways, my own shift from paid employee to researcher and volunteer mirrored this trend, and in ways I elaborate on below, impacted my research. There had been a shift in the teaching population as well, only a handful of teachers remained from Mrs. Peyton's era. While a few new teachers seemed to be making Pacific their home, many of the teaching slots were filled anew each year.

The Built Space

A cluster of small, one-story buildings and portable classrooms line the perimeter of the playground, partially enclosing a large play yard area (Figure 3.1). Colorful murals cover the outside of a few of the buildings, which brighten up the school, but do not hide the cracks and chipped paint that have come with general wear and tear over the years.

The playground is large and relatively well appointed compared to schools in the area. There are two murals, one with a sports theme on the small equipment building, which I painted with the students while teaching at Pacific, and a larger one, with a theme of community unity and school spirit, on the three classrooms opening to the playground. There are two basketball courts with four hoops, 5 foursquare courts, a good sized play structure, a garden that over the years has alternated between vegetables, flowers, and weeds (it's between weeds and flowers currently), a few tetherball poles, 4 large shade trees and a few younger struggling ones. By far the most outstanding feature of the playground is the small baseball diamond and grassy field the senior teacher (of 30 years) at the school coordinated the establishment of, and continues to care for. On a four



square court just opposite the student entrance to the playground, nestled between two shade trees is where I filmed, played with, and observed the students during lunch recess periods.

Evolution of Research

The 2003/04 school year was my first as a graduate student, and the second for Mr. Jerome Banks as principal at Pacific. During this year, on Monday's I organized a running club during the lunch recess. At the school I noticed that there was a huge change over in teachers from the prior years, and I wondered if it was impacting teacher morale. In the spring I collaborated with a group of graduate students to study the teacher community at Pacific. We did in depth interviews and concluded that the shifts were due to more than the loss of a long term principal. The increasingly transient student base and significant reduction in supplemental services and programs also played a factor in teacher dissatisfaction.

In 2004/05 I received funding to do a pilot project for my dissertation. Mrs. Rose Stevens became principal, and again there was a good degree of staff and teacher change. Initially I had hoped to develop games which integrated student's language arts curriculum with

out of doors play. Instead, I began to roam recess with a camera, with the aim of collecting moments of that exemplified what I had witnessed when Tesfa was playing four square. Moving about with the camera I had many more instances of students goofing around or showing off for me than when I stood in one place for the recess. I realized I needed to either focus on one group of students, or one location. In the end, four square and double dutch were the two games that had participants every recess. I chose four square because the participants shifted, it seemed almost every student played four square at some point in the year, and it had a more equal gender representation. The rest of the semester I experimented with data collection techniques.

In 2005/6, most important for my research, there was no longer a Sports4Kids coordinator at the site to organize recess. On the playground at recess, students, teachers and staff all looked to me to fill this role by organizing games and handling school play equipment- which was vanishing at a rapid rate. I quickly realized that I would not be able to collect the type of data I hoped for in this environment. The director of Sports4kids suggested that I change schools, as did my advisor- but I was reluctant. I continued to organize a running club on Mondays, and volunteered when I had time. The school recess time was quite disorderly; there was little equipment and many arguments that often turned into scraps. As a result, few playground games were being played. I decided to take a new tact, and work with just the 5th grade class outside of recess. I noticed immediately that the quality of these four square games was not the same as those freely chosen during recess. In essence, they were not playing- they were either fiercely competing or loudly complaining. As a change of pace one day, their teacher and I decided to integrate the 5th graders reading buddies from the kindergarten class into the play time. It was something I had done on occasion when working at the school full time. The students loved it and Buddy PE was begun, a program I hope to formalize in the future.

Returning to the school after a year of minimal involvement in 2006/07, the school seemed to be settling down, with fewer teacher and staff changes than in the prior 2 years. While there remains a paucity of playground equipment, and no adult to organize games, I was able to set up my camera on the playground to collect video of students playing four square. No longer coachitata, only a few of the 5th grade students remember me as their PE teacher from when they were in kindergarten. More frequently they told me of their older siblings talking about me, and occasionally these alumnae of Pacific Elementary would stop by to greet me. As the year wore on, the current students and I slowly negotiated a space between play-mate and school authority.

Data Collection and Analytical Process

Formal data collection began in the Fall of 2007[7]. Every Tuesday and Thursday I arrived at Pacific elementary 15-20 minutes before the second and third grade's recess to assess the

[7] CPHS Protocol #2007-10-48

climate at the school, and secure a ball for four square. In December, I introduced a video camera, attended the school more frequently, and in March I began using a helmet camera. The helmet camera was worn either by a volunteer participant or by myself. The view then, of the helmet camera, is roughly from the perspective of the player or bystander. This is much more intimate than that of the stationary camera, which was set back far enough to capture the bulk of the play (see figure 3.1). In addition to extensive field notes taken on site and directly after observation, I also wrote a series of thematic memos, on general observations and on informal conversations with teachers and staff. However, as explained above the bulk of my analysis will be focused on the video and the text of the attendant transcription.

Table 3.2, Types of data

Type of Data	Quantity of Data
Field Notes	45 notes ~3pp each
Analytic and Thematic Memos	10
Video Tape, Stationary	30 hours
Video Tape, Helmet	10 hours

The year the data was collected (2007-2008), at Pacific there were three separate lunch breaks with recesses, one each for K-1st , 2nd -3rd and 4th -5th grades . I filmed only the 2nd - 3rd and 4th -5th grade recesses. The span of physical and linguistic competence present in grades 2-5 is great, and even within grades at this age there is variety in communicative and physical abilities. I noticed, from past observation, that the way recess is split among the grades, has a significant impact on the way that four square was played. This is most evident when students end up taking recess with another grade's recess period, as is sometimes the case. Some of the most illustrative pieces of data come from moments like these, when a student ended up in a different recess period.

Collection Techniques

The stationary camera was set such that it could capture as much of the four square court as was possible. With very few exceptions it remained in the same place, on a tripod, for the duration of the research. Recess is a cacophonous event, and in an attempt to focus the sound on the four square participants I employed a Pressure Zone Microphone (PZM) with a long cord. The mike has the benefit of being placed on a flat metal square which can be placed on the ground, and remain relatively innocuous. While a shotgun mike on a boom would have been more precise, this was not available, and would most certainly have been more of an object of note.

In March I introduced a helmet camera. Helmet cameras have long been used by athletes to for point of view perspective, usually using a gyroscope to keep the orientation of the lens neutral. The set up I was able to borrow was simple, the camera itself sat in a small back pack, and an external lens was mounted on a slightly modified bicycle helmet. This

set up did not have a gyroscope, so much of the footage captured was shaky (to say the least) band difficult to watch. However, the setup allowed for the added advantage of a microphone that was close to the players and synced to the action through video. This significantly assisted with the transcription of talk. Surprisingly to me, the introduction of the helmet camera caused little notice on the part of the students. Initially, particularly with the 2nd and 3rd graders, there was some vying for the opportunity to wear the camera, and there was one girl who became extremely animated when wearing it, acting like a director on a movie set. Fortunately the novelty quickly wore off, and at times I would wear the camera, standing at the edge of the game, until one of the regular players who wanted to wear the camera, arrived.

I had many informal conversations with the students while I watched and filmed the games, but they were rarely oriented towards four square. Often youth would use the picnicnic table behind the camera, where I put my things and sat to write, as a sort of safe space. Sometimes they would do homework there, finish their work from the last period before lunch, or hide in plain sight of a student with whom they were "getting into it". The students knew that I did not report any transgressions back to their teachers or the principle, except in the most grievous of cases, but they also knew I would not tolerate unsociable behaviors. Then too, the playground aids would often sit and talk with me between the recess periods at the table, and sometimes teachers would come out as well. These informal conversations ranged in topic from the school, the neighborhood (which they knew I lived near, if not directly in), the students, and our personal lives. In this way, the four square area became a sort of neutral zone on the playground, not unlike an office water cooler, it became a place where narratives, other than those encouraged and ratified by the institution, were shared. While this information does not directly influence my analysis of the interaction on the four square court, the space which allowed it to exist, is perhaps part of what allowed my data collection to be fruitful, and often smoothed out potential difficulties before they became hindrances.

In addition each day I wrote field notes, primarily focusing on my impressions of the game that day, and any conversations or dynamics that I knew would not be captured on the video or audio tape. Periodically I wrote thematic memos based on any trends or common themes I saw emerging either from viewing the video tape, or from my field notes. These memos formed the basis for the framework of activity I develop in chapter 4. My primary data source are the transcripts from the video tape, while my field notes are used to fill out the context in which the game took place.

Analysis Process

At the end of the data collection phase, 30 hours of video from the stationary camera, and an additional 10 hours of video from the helmet camera were catalogued. As part of the cataloguing process,. recess periods which contained games with one of the features in the list below were noted for further analysis:

- Longer interactions, either in terms of: rounds of play(>3), volleys (>4), and/or Conversation turns (>5)
- Moments where a novice player entered the game
- Introduction and development of new "calls" or ways of playing
- Events in which players taught elements of the game to other players
- Any instance where gesture or posture were employed in a expressly communicative fashion

This narrowed down the focus to approximately 16 hours of data representing 48 fifteen to twenty-five minute recess periods. These 16 hours were reviewed and coded for moments where the creative elements of playing four square revealed themselves, and segments that were particularly revealing of the students coordination of the social semiotic materials the game afforded. I then began the process of transcription.

The catalogue of the data was contained in an excel spreadsheet. The rows, or y axis so to speak, contained the time as indicated on the video tape, the columns were used to note what elements and codes were contained on each tape. While not as efficient as an analysis software program, excel does allow for sorting, is free with MS office and, allows for future porting of data to most analysis programs, should further future analysis be engaged. Each video tape contained 1-3 recesses, depending on tape length, so activity was catalogued as a function of the tape number and the time and date indicated on the video. After the time/date and tape number columns, a number of categories were contained in different column headers. On the first viewing of the tape simple information was noted as to sound and video quality and a column on which participants were in the A square was filled out. In addition each recess period was rated for potential reviewing in another column. In addition review notes and quotes were recorded in two more columns.. The lengthily table that resulted from this analysis was then treated as a document to be analyzed. Different color codes were employed to highlight interactions. This resulted in a vibrant color map of the data. From this information interactions that contained the most examples of the different phenomena listed above were singled out for transcription.

Transcription of video data from recess time is not unlike the writing of field notes in their subjective nature. It is simply not possible to translate all of the interaction, the gaze direction, vocal pitch, gesture, or in many cases, all the words, into a reasonable analytic tool. A transcript with too much information becomes incomprehensible (Ochs 1979). Additionally, a transcript is more than a representation, the very process of transcription becomes a tool of analysis, as it requires and in depth, patient and extended viewings of the data. With this in mind I began by roughly transcribing different moments of activity. This lead me to delineate on four types of interactions in the game, which later developed into the analytical framework explained below as the semiotic affordances of the game. I then completed a more comprehensive transcript of best cases of each of these interactions, and honed in on three particularly illustrative moments. Part of the choice of

these moments was they are times when the data from the helmet camera was comprehensible, thus allowing for a more fine grained analysis of gaze direction, participant focus and talk.

Below is a sample transcript with the conventions I have adopted, primarily drawing on those used by MH Goodwin (2006) and Ochs and Capps (2001) as adapted from the original CA standards (Sacks, Schegloff, & Jefferson, 1974). Goodwin also uses tools to render the pitch of talk into a graph as part of her transcription tools (M. H. Goodwin, C. Goodwin, & Yaeger-Dror, 2002a). The emphasis this places on talk in contrast to other semiotic modalities led me to choose not to utilize this particular tool. In an attempt to place the objects and the bodies on the level of talk in analysis I have added a column to the transcript, and made an attempt to show, in the two dimensional space, the links between these semiotic resources that are clear in the video.

Transcription Conventions

1. **.** The period indicate a falling, or final, intonation contour, not necessarily the end of a sentence.
2. ? The question mark indicates rising intonation, not necessarily a question.
3. , The comma indicates continuing intonation, not necessarily a clause boundary.
4. ::: Colons indicate stretching of the preceding sound, proportional to the number of colons.
5. _ A hyphen after a word or a part of a word indicates a cut-off or self interruption.
6. **word** Bold indicates some form of stress or emphasis on the bolded item.
7. WOrd Upper case indicates loudness.
8. °° The degree signs indicate the segments of talk, which are markedly quiet or soft.
9. **> <** The combination of "more than" and "less than" symbols indicates the talk between them is compressed or rushed.
10. **< >** In the reverse order, they indicate that a stretch of talk is markedly slower.
11. = An equal sign indicates no break or delay between the words thereby connected.
12. (( )) Double parentheses enclose descriptions of conduct.
13. (word) When all or part of an utterance is in parentheses, this indicates uncertainty on the transcriber's part.
14. // Indicates overlapping speech, beginning at the point of the slashes
15. ⌈ Indicates overlapping physical movement and speech

Table 3.2, Sample Transcript: (Duration :28)

Line	Name	Location	Speech	Movement, Gaze Gesture
1	DeShawn	A square		arms over head, thows ball down into B square
2	Rayna	B square		reaches up and twists as ball goes over her head
3	Daysha	by stander	are YOU on CAMera	bends forward hands on knees
5	Janeen	C square wearing camera	Yeah (.4)everybody	
6	Rayna	running into grid	( ) im in D ev( )	runs with ball to D square bounces ball to DeShawn in A square
7	Rosa	D square		runs across to a B square
8	Rayna	D square	No you not in ***ther***e.	points at Maria in B square
9			she in *there.*	points at Janeen in C square, points back at Maria in C square, begins to walk towards Janeen
10			You in ***ther***e.	pivots to face Maria, raises& lowers pointer arm points back at Janeen in C square
11	DeShawn	A square	big bang bang	raises ball over head, preparing to throw
12	Rayna		**No** don't go yet=	holds arm out to the side, palm turned up, towards DeShawn while walking towards Maria in B square
13	Janeen	C square	=don't do **cher**ry bombs	
14	Rayna		°you suppose to be in here°	walks over and takes hold of maria's wrist, brining her into the C square
15			°and you suppose to be in there°	takes hold of Janeen's hand and brings her over into the b square
16	Deshawn	A square	*Big **BAng bang***	
17	Deshawn			throws ball down into B square
18	Janeen		***I SAid no CHERRY!***	

Each transcript will include the total time duration a reference for the swiftness of interactions examined, and to highlight the enormous amount of information that is passed in the briefest of periods. Speech and physical action that are contained on the same line occur simultaneously. in situations where one precedes the other, they will be split, such as lines 16 and 17 above.

Limitations of the Study

Some of the limiting conditions of this study are part of a common critique of qualitative methodology, and thus inherent to the study design. These include, but are not limited to, researcher bias, participant performance in the camera/under observation, and the instability of the field as opposed to the lab.

To address researcher bias every attempt is made to root all analysis in the actual talk, gesture, and bodily posture of the youth at play. However it is admitted, that in transcribing video, choices are made, as not everything can be transposed into text. As much as possible any choice in transcription is made to reflect the attitude of the participants at the moment, as represented by their actions. Close reading of the attendant field notes is used to inform these choices. One acknowledged limitation of researcher perspectives discussed above, is a condition of being an educational research doing research at a site where they were once and educator. The result is having neither outsider objectivity nor full insider status, but a unique perspective none the less.

The hybrid status of researcher/ex teacher had an interesting influence on the students. Initially this limited their expressive freedom. The camera as a recording device and the researcher as a potential conduit to the authorities was of concern. As time wore on, however, the youth began to trust what they were told: the video tape could, and would not be used against them. Still, each time a non regular player joined the game, this issue was brought up again. In addition throughout the year, there are moments where the youth "perform" directly for the camera, and also moment where they turn to the researcher as an authority, to navigate arguments, rules, and the social interaction.

Perhaps the most significant limitation has to do with recess in general, and Pacific specifically. Recess is an wild and woolly time where the adult to student ratio goes from 1:30 to 0-3:120-150, depending on adult and youth attendance. Youth run through the playground paying little attention to much, outside of whatever desire has them running. This meant equipment getting knocked out of focus, turned off, and even broken on occasion. Furthermore there were many times when I found myself compelled to attended to incidents on the playground, and there by neglecting my research subject. These lapses in attention are quoted from my field notes where ever applicable.

Chapter 4:
The Unique Qualities of Playground Games

Initially this study focused primarily on the potential of playground games for informing language teaching and literacy practices. Over time, however, an unexpected picture emerged from the data regarding the qualities of activity on the playground. It became apparent that playground games, such as four square, share features of engagement that differ in crucial and significant ways from other types of activity youth engage in during recess. This discovery is important for situating further analysis of both the learning supported by playground games and how this might inform other educational practices. In the following chapter I present the two most relevant findings related to playground activity: (1) during recess, playground games occupy a unique space situated between the more structured sports play at one end of a continuum and improvisatory fantasy play at the other, and (2) within the group of playground games, the structure of the game 'four square' has particular semiotic affordances which support a type of cross-modal scaffolding.

To elucidate the uniqueness of playground games, I have developed an approach to evaluate playground activity inspired by Elinor Ochs and Lisa Capps (2001) work on narrative. Rather than create a rigid, structural definition for narrative, Ochs and Capps explain " we stipulate dimensions that will be always *relevant* to a narrative, even if not elaborately manifest"(italics original)(2001, p. 19). In a similar vein, I propose a set of dimensions relevant to play on playgrounds —however, in my model for play, I see these dimensions as additionally applying a continuum of influence on playground activity. As I explain in greater detail below, each type of play lays claim to a particular range on each dimensional plane, depending on the relative importance of that dimension to that activity. In this model, groups of games sharing features cluster together. While this clustering has numerous consequences, I am particularly interested in the semiotic affordances .that are attached to each cluster . For this study, the most present relevant dimensions to youth activity on the playground are: (1) the nature of the built space, (2) the rules or durable customs, (3) the participant structures, and (4) time. Although I can foresee the list of important dimensions growing, these four core dimensions have proved to be the most relevant for understanding similarities and differences among activities on the playground during recess.

Beginning with descriptions of observations during Pacific elementary recess, I will sketch out a continuum of activity based on the model proposed above. To illustrate the model, I will draw on not only my primary audio/video data, but also my general in-person observations of other activities on the playground. To supplement my observational data on the sports and fantasy play activities, I will also draw on relevant published data. Finally, I will describe the playground game four square, and focus on how it affords youth a particular engagement with the semiotic material of play.

Playground Games in an Activity Continuum

Elementary school - aged youth engage in many different types of activities on the playground during their recess times. While every playground (and every instance of play) has highly localized features, there are some commonalities recognizable across the local instances of play. Additionally, often the same (A. C. Evaldsson, 1993c) or very similar games (I. Opie & P. Opie, 1987r) have been observed by researchers in a variety of countries. In terms of games and play on playgrounds, there are fantasy games — particularly captivating for the younger students — as well as 'sports' and its permutations thereof, as well as a host of other outdoor activities. The boundaries of these categories are permeable; it is safe to say that there is often a fantasy element in sports engagement, and likewise many imagination-based games encompass various elements of sport as well as other more socially structured interactions (e.g. house play, doctor, etc..). However, there are features which make categorization possible, and with sport (P. A. Adler & P. Adler, 1998; Coakley, 1990; Sage, 1990)and fantasy play(van Oers, 1994; Jean Piaget, 1966s; B. Sutton-Smith, 1966; Lev Semenovich Vygotsky, 1933z), much work has been done to delineate such features. This is somewhat less true of playground games. It is these activities — such as tag games, jump rope, various ball games (wall ball, tether ball, four square, gaga ball, etc), hopscotch, marbles, and so on — whose features I will attempt to anatomize, and in doing so, position them within an activity continuum. In particular, I will articulate how these different categories of activities were engaged with on the playground at Pacific Elementary, and what sorts of opportunities for engagement with semiotic materials they encouraged.

Modern sports are highly ritualized rule-bound activities over which designated governing bodies preside. Most of the youth (boys as well as girls) at Pacific showed familiarity with the rules of the three most popular sports in the United States: basketball, football, and baseball. These sports were engaged with regularly during recess at Pacific. For a time, soccer, a less familiar sport for this student body, was played as well. Each sport was taken up and related to differently by the youth as they enacted their best approximation of the proscribed ideal. For instance, baseball was only played during the late spring, and even then only when the teacher who coached the baseball team was actually available to oversee a game. This teacher acted as the officiating body, enforcing the standard rules. Basketball, however, was played throughout the year, and even the youngest students developed a modified version which used the monkey bars as a hoop, since for most of them the standard basketball hoop was too high. Debates on the playground around such play — which I observed regularly even before my study began — rarely involved what the rules of engagement were per se, but instead only whether the infraction of a given rule had in fact occurred. Rules might be modified, however wholesale rule inventions did not occur. In fact, every effort was made to recreate as authentic a rendition of play as possible, even in the case of the youth playing with the monkey bars as a hoop.

In contrast, fantasy play has often been cited as a means by which children discover, imitate and manipulate what could be perceived as the rules of engagement with the

wider social world (Jean Piaget, 1966s; Lev Semenovich Vygotsky, 1933aa, 1978b). At Pacific, there was a group of children in the 4th / 5th grade recess that engaged in fantasy play near the four square court almost daily. Although initially I did not investigate their play closely, in order to discover what sorts of narratives they were engaging with on a consistent basis, I often overheard them and occasionally became a feature myself in their play. Through these interactions I observed them engaging with family roles, imitating TV and movie characters via reenacting scenes, and playing variations on tag and capture games. Their play was unbound by genre, specific rules, location or participants; they used whatever equipment available suited their fancy, and roved throughout the upper half of the playground. While there was a core group of two boys and four girls who engaged in this activity, the band of players expanded and shrunk in an ad-hoc manner.[8]

As described above, sports and fantasy play contrast in fundamental ways — in participation structure, in engagement with physical space and objects, and in rule navigation. In many ways, sports and fantasy play can be seen as inhabiting opposite ends of the spectrum of interaction in these categories. Sports aim for consistency across time and space in terms of the locus of engagement, the interaction between (and quantity of) participants engaged, and certainly in the enactment of the rules — so much so in fact, each sport tends to develop a unique culture, such that sport becomes a site of commonality among people who do not otherwise share significant cultural points of contact.

Quite the opposite of this global commonality, fantasy play tends to be intensely local in terms of the space, participants and rules of engagement. Even within a local consistency, such as the almost daily engagement in fantasy play by the group described below, there is a fluidity, an endless renegotiation of the terms of engagement which is, perhaps, partially constitutive of the play itself. As opposed to fantasy play, the consistency of sport allows for a type of competence inclusion: a skilled player can often "pick up" (i.e. join without prior arrangement) a sport game anywhere it is played,— whereas fantasy play's local organization often acts as an element of exclusivity, such that only those familiar with the unique moment of engagement can join, or only those with prior connection to established players can be initiated. Again, these are not rigid definitions, but dimensions helpful to discerning observed characteristics of engagement on the playground. Conversely, within sport there can be a selective element of engagement that is, locally defined, and often unique, while in fantasy play there are some consistent structural elements that allow it to be recognized as such across cultures and instances of play. However, I argue that the degree to which the dimensions, enumerated above, influence activity strongly impacts the type of semiotic work participants engage in to initiate, maintain, and sustain play. And somewhere between the more structured play of sport and the more freewheeling one of fantasy play, there are playground games.

[8] . It is worthwhile mentioning at this point that most study of fantasy play has so far been on younger children than the group I am using as an example from Pacific's 4th/5th grade recess, so much of the external references to practices around fantasy play draw from observations of a younger age bracket.

Playground games are neither wholly ritual bound, nor are they entirely locally created. They can be loosely defined by the type of interactional space a playground engenders, but are often transferred from this institutional space, to back yard patios, urban streets, and sidewalks. And while anyone competent in, for example, jump rope could ostensibly join any jump rope game, without knowing the local instantiation of rhymes and other structures guiding a particular instance of jump rope, their participation will not last long. These ambiguities accepted, what can be generalized about playground games? And about the types of engagement with social semiotic material they encourage? Building on my long history of experiences working with youth as well as the specific data collected for this paper, I will attempt to highlight some of the unique elements of playground games, using play at Pacific to illustrate. [9]

The Built Space

School playgrounds are generally lightly organized using markings on the ground surface or structures, such as fields, goals, or slide and climbing apparatus. The places created on the playground may or may not be used for the purpose initially intended by the designer. For instance, the use of monkey bars as a beginner's basketball hoop and de facto court area was not likely anticipated in the initial design plans at Pacific. Even in the cases of four square and hopscotch courts, tether ball poles and the like, the activities utilizing these spaces are highly variable, often having little more in common with one another than simply the referent of the space in which they are played. Thus, one primary characteristic of playground games is the way in which the players engage with the space constrictions. If fantasy play is bounded solely by the rules of physics with regards to kinetic engagement with the built space (e.g., a bench becomes an imagined spaceship, even if it cannot be moved), and sports adhere to certain immutable rules (points are only scored when actually passing the goal line or making the basket, etc.), playground games tend to neither disregard the entirety of intentions designed into the built space nor be beholden to them.

In the case of four square at Pacific, this meant that the players respected the notion that only four players were to be engaged at one time within the game — one for each square — and that a line would be formed to fill in the spots of players who got "out". At the same time however, different groups of players espoused divergent notions of how, for example, the lines on the pavement should guide their playing. At one point, the lower recess group played in such a way that the players were only to step into their squares in order to "pass" — that is, launch the ball at another player. Standing outside of their

[9] The specific data for this study focuses on a single playground game, four square, for this section in particular I draw on years of experience coaching youth sports and working on the playground at recess. In addition, the year the data was collected there was a fantasy play group that was near the four square court, which I often observed. This group consisted of a 5 core members (2 boys and 3 girls), however, the play often expanded including others and occasional only contained three players. I will be drawing on observations of this group and other experience to help illustrate the categories delineated in these pages.

squares during play, they waited for the ball to be launched in their direction, and only if successfully caught would they then run into their square to launch the ball back. Having witnessed this variant of four square for some time, I did not think of it as unusual, until one of the school aides commented otherwise.

> Today, Mrs. C. stopped at the edge of the four square game during the lower recess. She asked me, "WHAT are they DOing?" I smiled back at her and shrugged my shoulders. She took a few steps closer and exclaimed that she had never seen anyone play four square in the way they were playing (she, who has been a recess aide for over 30 years!). But since there was no fighting, and everyone seemed to be having fun, she did not intervene, like she sometimes does when games are not being played "properly". ~ FN March 3

Although Mrs. C. felt moved to comment on the apparently unorthodox manner of play, significantly, this mode of playing was still recognizable as four square, despite its unusual engagement with its built environment (painted squares) and the attendant putatively normative form of the game.

This type of creative "riffing" on how to engage with a game (or play area)'s built space is a crucial characteristic of playground games. In playground games youth assert their capacity for agency in an empowering manner, creatively engaging with the constrictions of a built space: They tie jump ropes to chain link fences, pop tetherballs in the air to each other, re-imagine the use four square court lines, and so forth. In such contexts, the intended uses of the built space are accepted only as an initial organizing principle, around which the game play itself is then creatively interpreted and negotiated by its participants. In what could be called a type of 'designful' play (Marple & Stornaiuolo, n.d.), they re-imagine the use of the physical elements in relation to the conceptual elements of the game. This process of interpretation requires coordination on the part of the players, but also the ability to hold in the mind different ideas about the rules and the participants. The space comes to represent both what it is (a place four square is played) and what they want (a guide for ball direction). But perhaps equally important, this type of re-interpretation of the built space is a way of claiming part of both a space (schooling) and place (the school and grounds) where typically youth have otherwise little control or choice over their activities. In playing with the design intention (of the printed four square lines, e.g.), the students act to subordinate it and its instructions, instead of being acted upon by it: Rather than conforming to the immutable physical representation of the four square court and the standardized rules of play connoted therein, they reform the space through the activity of both interactive consensus-building and imagination. Thus, by neither kowtowing to design purpose nor disregarding it entirely, playground games become a space for youth to both acknowledge social structures larger than themselves (accepting the traditional core elements of the games), and at the same time claim some personal power, control, and agency in relation to and upon those structures.

The Rules of Play

There are certain rules of conduct at school which cut across all types of activity. Adults and others imbued with authority do their best to implement a spectrum of rules, with the aim of organizing the interactions between students, ensuring safety (i.e. no fighting, no foul language, no bullying or verbal abuse, etc.) and to create a certain official school culture (i.e. no gum chewing, prohibitions on certain styles of dress, etc.). While each school has variations and unique elements of their rules, one aspect is constant — they are never uniformly enforced, and youth will forever push their boundaries. This is nowhere more evident (except perhaps in the bathrooms) than on the playground, where the expansion of space and the increased ratio of students to adults makes total enforcement nearly impossible. However, these rules do have a universal influence on the youth's engagement on the playground one way or the other, as they alternately flaunt them or invoke them to their advantage. In addition to the school's dictums, each type of play has its own indigenous rules and customs which the youth engage with in different ways. In the broadest strokes, on our continuum sports are strongly rule-bound — so much so that there are national and international governing bodies with different types of enforcement entities, from referees to rule books to tribunals. Indeed, professional athletes often have regulations to comply with off the field or court as well. For instance, many professional players have dress codes and conduct codes with which they must comply ("Opinions on the NBA's Dress Code Are Far From Uniform - washingtonpost.com," 2005). Youth playing sports during recess generally display awareness of these rules, developed presumably either via observation of or from participation in sports teams. Often, at Pacific, youth directly invoked formal sport rules. As stated, the debates that foment in the case of sports play at recess are not generally germane to "what is the rule" but rather whether the known and established rule was in fact violated. The youth at Pacific were so sincere in their attempts to simulate "real basketball" that some groups I observed would even try to simulate a shot clock by counting out the time. By comparison, far from any governing body or rule book, the structure of fantasy play appears to develop primarily in situ and can involve anything from just a single participant with a stick, to (as was the case at Pacific) a group of friends playing with and re-imagining various social media. So, while fantasy play may not have rules per se, there are negotiated customs and modes of interaction that become established among participants such that it is, of course, not a totally unordered engagement.

The playground games I observed — and in particular four square — fall somewhere between the rigid rule structure of sports and the more freewheeling form of fantasy play in a myriad of ways. As numerous researchers have shown, the rhymes, rules and game forms observed on the modern playground have roots going as far back as there are written recordings of children's free time activities (Grugeon, 2000a; Huizinga, 1955b; I. A. Opie & P. Opie, 1969; I. Opie & P. Opie, 1987b; B. Sutton-Smith, 1990; Brian Sutton-Smith, 1995, 1995) . However, unlike sports which have trended towards uniformity or fantasy play insisting on inventiveness, my data show that playground games have established

themselves as neither rigid nor freewheeling. Certain core customs are widespread — chanted rhymes pace jumping rope, thrown objects act as markers for hopscotch, the predictable rotation of turns at play in four square — but there are local manifestations, and these are subject to wide interpretation. While some rhymes during jump rope — as with certain rules of play in four square — have displayed a trans-generational folkloric durability, transforming little for centuries, other elements of the playground game are intensely indigenous to the local schoolyard culture.

In the case of four square, with each turn of play, the player in the A square has the opportunity to choose which rules will be in use for the round. The custom is to call out the rules before beginning service of the ball. These rules are a concoction of old local (established rules used for a long time in the specific playground and often in other localities), new local (rules that youth in a particular cohort develop that may or may not become established), created on the spot (rules that a group of participants create at the moment, which may only exist for that game).In my own and others' observations (Grugeon, 2000b; I. A. Opie & P. Opie, 1969q) these categories of rules or customs guiding play are present in varying fashion in most playground games. I argue that the mix of established and negotiated ad-hoc rules of play is a quintessential characteristic of playground games. A variable rule structure of this nature allows participants to experiment with exclusivity and inclusivity, structure and creation, and, in Piagetian terms, accommodation and assimilation. Additionally, as Piaget observed in his study of boys playing marbles (1966b), games with variable rule structures allow youth to develop a sense of agency regarding social structures. Most importantly for the larger argument presented here, this constant flux within the method of play means that playground games require a unique type of coordination — between established norms of play and creative desire — on the part of the participants, and this is possibly truer of four square than any other playground game I have observed.

Outside the constrictions of the built space — four squares outlined on the ground — four square's signature quality is players' ability to recast the rules of play with each turn. So, while all playground games encourage a localized mutation of play traditions to a degree, as a structural element of the game itself, four square assumes this quality as irreducibly intrinsic to its own fundamental logic. Chapters five and six will offer a turn by turn analysis of the importance of this built-in element of change; however the analysis first requires an explanation of how this characteristic of mutability is discretely resolved into unique participant structures.

Participant Structures and Participant Frameworks

The notions of both *participant structure* (Philips, 2001) and related *participant framework* (Duranti, 1997; Duranti, Goodwin, C., & M. H. Goodwin, 2006; M. H. Goodwin, 1990k) utilized herein build upon Goffman's (1979) and Hymes' (1963) extensive work, complicating and probing long-standing notions of listener and speaker as dichotomous entities with discontinuous roles in communication (Duranti, 1997). Distilled down,

participant structure refers to how certain microsocial situations organize interaction, and, as Phillips showed, how this organization has real consequences for the way participants speak, hear, and evaluate their communicative acts. The participant structure model allows for an examination of some of the larger social institutions and institutionalized roles (such as teacher and student) that can influence communicative practices. In addition, this model also brings to the fore that not just talk, but also time and timing, as well as bodily posture, are implicated and assessed in validating participation. In Susan Urmston Philips' (1983) study of elementary school students on the Warm Springs Reservation, they often experienced communication "misfires" (to borrow from Austin, (1962), based not on talk alone but on the bodily postures and gaze practices with which they were engaged. Goodwin adopted the term participant framework (1990) to focus on how a sequential analysis of talk in interaction, and later embodied activity (Goodwin and Goodwin 2006), simultaneously reveal and create, sustain and monitor participant structures. This latter model, which draws on the principles of conversation analysis, highlights how meaning is built collaboratively by participants, in multiple modalities (not simply talk) over time. In chapters 5 and 6, in order to fully realize the richness of participant interaction within the playground game foursquare, I will proceed in the vein of Goodwin and Goodwin, and work to revel how, specifically, the participants invoke and inhabit the built space, the customs and rules, and the participant structure of foursquare. For now, however, with the aim of displaying what is unique about playground games, it is useful to see how four square and other playground games differ from sports and fantasy play in their observed participant structures.

Much as Philips described the different groupings and tasks in the classroom as different participant structures, so can the three different forms of play examined here be understood as instantiating different participant structures in the context of the playground. Philips differentiated participant structures in the classroom based on three elements: (1) expected patterns of performance (both verbal and postural), (2) types of interactive roles available (answer a question, quietly listen, present to group, etc.), and (3) influence of the institutional structures (as embodied by the teacher and her directives or evaluations) in the interaction. On the playground some of the elements Philips outlines obtain: there is variety in the structure of performance expectation — although more multimodal in nature than in the classroom — and there are particular interactive roles available. The institutional element is, however, somewhat more complicated. It is present in the influence of the school on the expectations of performing recess (an overarching influence on play performance), and also in the particular durable cultural elements of each type of play. For example, the school expects that certain rules of bodily contact are adhered to, no causing of physical harm. Outdoor play, on the other hand, entreats participants to tumble, to chase, to poke and prod and even tackle. Performing recess means finding a way between these (along with other) opposing influences. As such, the playground, is very much a liminal space — it is not quite school, nor is it *not* school. It is a semi-structured free time, and the youth reflect this in their performance of recess, right down to their engagement with the built space as explained earlier. In this sense, the way the types of play engage with time and timing are also an important

dimensional difference. An examination of these dimensions, performance expectation, participant roles, time, and the relative invocation of different institutionalized elements highlights how sports, fantasy play, and playground games create different participant structures in which youth play.

In the case of sports, youth have many clearly defined participant roles to draw on (player, coach, referee, fan/observer etc.) as well as specific orchestrated moments of engagement (game, half-time, time out, etc.). When on the playground, sports tend to resolve into versions of the official game that approximate the "ideal" in so much as the participants at that moment have the knowledge of and a willingness to aspire to that ideal. As has been discussed, while the physical realization of basketball can be anything from a mob roving about around a ball scoring through a makeshift 'basket' of monkey bars to a full court game with a complement of five players on each side, the structure of participation still resolves itself into players and non-playing observers (who may however take the role of referee). While a close study of sports as they are engaged with on playgrounds would certainly discover refined and creative ways in which youth frame their participation around these roles, for the activity to be recognized as the sport, a degree of adherence to the ideal must be held to. Ergo, to perform in this participant structure, you need prior knowledge of and ability in the sport — and at Pacific, in the case of basketball, this created a huge barrier to participation for less skilled youth. This was also a problem common across playground recess times in the city where this study was based, one which all Playworks coordinators established policies and practices to help alleviate. When I was the playground coordinator, I established a 'free play' day at the basketball courts and monitored play personally, thus scaffolding the engagement of less skilled players. [10]Thus in sports-play on the playground, participants are expected to have a good degree of prior knowledge of the sport as well as the ability to perform that knowledge through play or commentary. The roles youth inhabit are somewhat circumscribed by the nature of the sport (even numbers of players per team, in soccer only goalies are to use their hands, etc.), so institutional elements of sport play a strong role in structuring participation.

An overarching participant structure of fantasy play is less easy to pin down. Unlike sports, the participant roles are largely locally defined and tend to revolve around pre-existing friendship groups and/or narrative utility (the group's need for another role or object). The bid to enter a fantasy game, then, rests less on prior knowledge or ability than on an individual's relationship to those who are playing. One blustery day in February at Pacific, I noticed that a girl, Zetta, gained initial entry into the fantasy playgroup because she had the sole single-person-sized jump rope on the playground at the time. The girls in the group wanted to use it to tie one of the boy's hands. Eventually

[10] It is notable that in general the time component of basketball was not adhered to in either an adoptive (adaptive?) or idealized way — while time-outs were called (mostly for the tying of shoes or removal of jackets), and even an attempts to honor the notion of the shot clock were observed, in general the youth simply played until (and often past) the bell rung. In the case of time, the more present, imminent return to the institution of school outside of recess overtook the importance of time within the rule of sport.

the rope was taken away from them, but in the following days I noticed Zetta continued playing with the group. Whereas in sports, occasionally students will be included in a sport team because they have a ball or piece of equipment, without the knowledge and skill necessary to play, they will soon be rotated out of the game. In fantasy play performance expectations are also very locally defined and narratively-driven. At times a girl can "perform" a socially normative boy role (such as a father or the police) and at other times this is unacceptable. Gender norm, then, is one example the type of institutional notions youth engage with in fantasy play. As mentioned before, in the group I observed during the 4th / 5th grade recess at Pacific, the youth appeared to adopt bits from popular culture in addition to familial and other professional (doctor, police officer, and teacher) roles. However, unlike the participants of sports, the youth participating in fantasy play seem less concerned with achieving an ideal, and more engaged with their own creative adaptations and hybridizations of roles, both real and fictional, that they observe in the world. Another complex dimension to fantasy play is the engagement with time. I occasionally observed the students in the group making distinct gestures and sounds at each other after the bell had rung, as they lined up with their respective classes. As this group was not a focus of my study, I do not know how storylines may have continued outside of recess, or from one instance of play to the next. Suffice to say, the appropriative nature of fantasy play allows it to bend around time and participant constraints. One can imagine youth, by themselves, continuing with their play in reverie during class.[11] Fantasy play, then stands quite opposite sports with respect to participant structures — be they measured by how a bid for joining play is made, the types of participant roles that are available, the relationship to institutionalized parts of play culture, or with their engagement to time and timing.

In terms of participant structure, playground games are more challenging to piece apart. Some, such as four square, gaga ball, and tetherball, align more closely with sport, with respect to having a well-known form of play that guides the activity and structures the interactional dynamic and participant roles. Others, such as jump rope games and types of wall ball and dodge ball, are more varied in practice, and participation structures frequently depend more on friendship groups and creative appropriation of social material (roles in society, characters from popular media), similarly to fantasy play. Thus, unlike with the dimension of built space and engagement with the rules of play, with respect to participant structure specifically, playground games as a whole are not as easily situated within a simple middle space between sports and fantasy play. Even so, grouped as a class of games they share far more common features with each other, than they do with sport or fantasy play. Acknowledging this, I will first present some general similarities among the participant structures of playground games to set the stage for an in depth description of four square and the unique constraints and affordances for participants in this game.

[11] Youth might imagine sports and playground game play while sitting in class as well, but as such they shift genres, as fantasy sport and fantasy playground space.

One defining element of playground games generally is their unique relationship to time. The games generally have an "end" to them — there is no discrete time period, nor generally any "score" that officiates an act of domination or finality. E.g., one participant may jump for longer, or have a longer turn in the tetherball court, and this may ultimately be acknowledged by the group if they evaluate the day's game in a holistic way. This sort of "win", however, is much less definitive than that of say basketball or soccer, and often emerges as a cause for debate. As with sports, playground games may continue to be discussed in class, but the actual play itself cannot permeate the boundaries of class time in the manner that fantasy play might.

For the most part, playground games have very regular performance expectations and potential participant roles from instance to instance. Like sports, some basic understanding of the game is required to participate: For instance, it is important to know to not bring a ball into jump rope or hopscotch, and to recognize the process of turn-taking. However, unlike sports, significant game-specific knowledge and refined skills are not a prerequisite for participation, which means that advanced knowledge and skills cannot be used as a bid to leverage status in the play group to the same degree they can in a sports-centered play group. Gaining entry into a playground game is often simply a matter of getting in the line and waiting for the turn to change. In particular, in the case of four square, this makes for an undefined, indeterminate corps of players. At Pacific, there were a few regular participants in the game from day to day, but in general participation was varied and cut across gender, classroom, and peer groups. While this is not true of all playground games in their totality, or even all conceivable instances of four square, the nature of playground games generally allows for an itinerant participation. As with fantasy play, there is typically a strong degree of appropriation and localization of well-known playground games, and therefore without some knowledge of how to perform in the local context, participation will be abbreviated. Thus, there is certainly also tension evident in playground games in terms of performance expectations. Some expectations are explicit, durable, and grounded in game structure, while others are implicit or locally constructed.

Individual playground games do tend to be consistent across instances in terms of how many participants can engage in a given turn of play, and the way that play moves through turns. This results in participant role structures which maintain this consistency. While the roles in the games are relatively fixed, during play a player may in fact hold many roles. For example, in jump rope one may move through waiting, turning or jumping, and at any moment you could join in on the rhyme or be a judge (M. H. Goodwin, 2006; 1990). In four square, players move through the squares and can be in the 'A' square (sometimes referred to as 'king' (Hughes, 1995) and therefore in charge of calling the game rules), in the B, C, or D squares playing, waiting or judging. So, like sports, there are structured roles for participants, but also a motile flexibility attested by the role-changing participants engage in throughout the game.

As such, playground games all engage with some sort of durable, institutional features in terms of the shape of the game, and many of the varieties of rules and rhymes have long-standing folkloric roots. Yet, in every instance of which I am aware, there is some local variation, some degree of creative adaptation -an adaptation which nonetheless takes place within bounds that allow the practice to still remain identifiable as a certain game, and thus within a recognizable participant structure, timing scheme, rules or customs, and engagement with the built space. Marbles are not shot in the hopscotch court, and jump rope games almost certainly contain some sort of vocal accompaniment, even if it is a simple counting. In this way, playground games demand a different type of work on part of the participants than fantasy play or sports. Sports ask for allegiance to a form, fantasy play demands spontaneous creativity and inventiveness, and playground games ask participants to hybridize the two. Participants must keep in their mind the notion of what constitutes four square and how collaborative jump rope games are done, but to optimize their performance participants must also be prepared to engage with a shifting ground of representational possibilities. With respect to the 'hybrid' nature of this play structure, it becomes necessary on the part of participants to grasp — intellectually and posturally — both the constitutive form of the play activity and the contingent ways available to mold that form. As will be discussed in further detail below, this is particularly true of four square, in which a regular reorganization of play is part of the structure.

The Activity Continuum

Thus far I have worked to develop an analytical framework to articulate and situate playground games as a class of activities. In general, as I have explained, the activities on playgrounds at recess can be understood as having degrees of variability along elemental dimensions of participation, engagement with the built space, and incorporation of rules or customs. Graphically, this could be understood as illustrated in Figure 4.1.

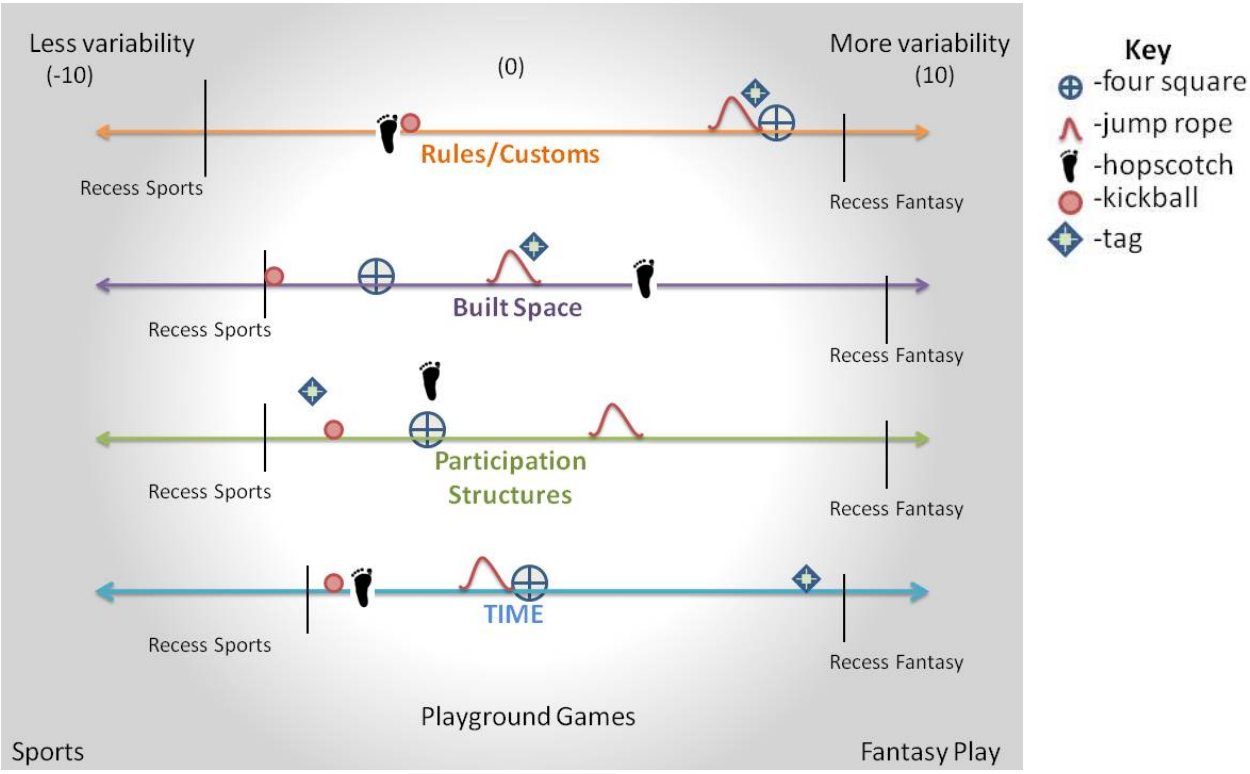


fig. 4.1: Variability of Playground game along four dimensions

As suggested by figure 4.1, the influence of the playground and recess time somewhat alter both sports and fantasy play, as these activities edge in closely towards the area of the continuum that playground games inhabit. Playground games as a class share certain similarities with fantasy play characterized by high variability and player creativity, as well as with sports grounded by a more rigid activity structure. However, much as Ochs and Capps (2001) observed with respect to narrative, the different dimensions relevant to play can manifest to a greater or lesser degree depending on the play activity. Thus in the class of playground games there are games for which the built space is not particularly relevant, such as jump rope (play can happen most anywhere, and is neither dependent on nor hindered by playground objects), games wherein the role of built space is static and relevant, but the way of engaging with it varies (such as four square), games where the built space is variable and relevant such as hopscotch (dependent on painted or chalked lines, but which has many variations with respect to the execution of those lines), and finally games wherein the built space is manipulated to best approximate some ideal,

like kickball (which has an ideal playing space – a baseball diamond – but is often played bounded by all sorts of structures).

Another way of thinking about this is to consider that for playground games, only one dimension may be foregrounded at any one time, and it may be either the surrounding space, or the rules, or the objects engaged with which exerts the most predominant influence at any given moment on how the game is played. What then defines playground games is not so much the extent to which one particular dimension influences the play, but the fact that there exists a fluid variability of engagement with these dimensions during the course of interactivity. From the perspective of communication and learning, it is this defining variability that I believe makes playground games unique.

Recess activity of this sort expresses an important difference from the types of interaction that otherwise occur elsewhere in school: Current classroom activities follow strict scripts regarding what counts as adequate communicative performance, and even in more progressive and innovative learning environments, an adult typically controls which communicative modality is appropriate for a particular activity. This is markedly different from the types of interactions that occur during playground games whose semiotic dynamics and narrative boundaries are both improvised upon and constricted by youth play culture, participant imaginations, and the given potentials of objects and bodies. Importantly (if often invisible to the uninitiated), the interactions — even fantasy play interactions — of youth at recess are not entirely freewheeling or without order. This is in fact particularly true of playground games whose structures tend to exert themselves as customs, which are then amended significantly by the participants.

In the following pages, I will explore the ways in which youth creatively exploit the variability of four square, and how this variability along with other elements of the game provide a productive space for interactions important for youth socialization and language development. In order to reveal the nature of communication in playground games, I will introduce the notion of semiotic affordances. By placing the communicative work accomplished by youth playing four square into a broader context of perception and representation, I hope to reveal some of the connections between these games and the notions of both becoming literate and developing the use of representational systems in satisfying and empowering ways.

Semiotic Affordances

What does the "variability quality" of playground games mean for youth language learning potential, and how is it different from what is available in other activities? Leveraging youth engagement with four square at Pacific as an exemplary instance of a playground game, this section works to introduce the unique *semiotic affordances* of playground games, focusing on the way they support players' use of their body as a communicative tool. To begin with, I will discuss the theoretical underpinnings of the term

and how the notion can be used to illuminate the communicative work involved in playground games. In order to contextualize specific semiotic affordances which emerged while I observed youth playing four square at Pacific, I will explain the structure and basic rules of the game. Part of the work of chapter 5 will also be to discuss the specific semiotic affordances, detailing through a close discursive analysis the type of communicative work the game promotes, and the creative and inventive ways players engage with the semiotic affordances of the game.

A semiotic analysis, particularly one that draws on phenomenological and pragmatist semiotic traditions, reveals that playground activities share certain qualities with traditional notions of literacy activities. That is, the type of semiotic work that occurs in these games is similar to the work required for developing sophisticated and personally enriching literacy skills or habits of mind. As Sylvia Scribner (1984) discusses, literacy has more than a pragmatic function; as a social skill literacy can confer power in the community, and for the individual, literacy practices can carry deep emotional and personal importance as well. At the same time, semiotics represents the act of understanding how meaning is made from representational material as a complex process involving more than just language. For our purposes then, I argue that while engaged in playing four square and other games like it, youth learn to read and manipulate a complex set of semiotic materials and in doing so develop a type of semiotic awareness. This awareness of the way that images, the body, words and other meaning-making material can *represent* other images and events, as well as the attendant skill of manipulating this semiotic material, are the building blocks of literacy.

Semiotics is the study of signs, which in essence means semiotic theory works to relate how things (e.g. language, dress, movement) stand for other things (ie. objects, cultures, affect). Semiotics as a field can be (albeit somewhat crudely) glossed into two general veins of thought: One which focuses on language or draws heavily from linguistics in understanding signs, and another which works to develop a more general theory of how different objects, sounds and actions obtain representational capacity, drawing on notions of phenomenology and pragmatist philosophy. In terms of theoretical lineage, the linguistically-derived approach grew out of structuralism, particularly the work of Ferdinand de Saussure (1916b). Saussure theorized a binary system in which the sign is resolved into the signifier (e.g., the phonetic utterance “tree”) and the signified (the corresponding concept of what a tree really is). This work generally focuses on the structure and syntactic elements of language. For M.F.K. Halliday (1978), however, the structuralist focus on systems did not adequately account for all the social dimensions of meaning-making. Halliday developed the influential concept of systemic-functional linguistics (1985) in which he linked the system and syntax of language to the “context of situation”(1978), a concept he adapted from the work of anthropologist Brian Malinowski. Often cited by linguists and educational researchers interested in social semiotics (Van Leeuwen, 2005), Hallidayan systemic functional-linguistics has also been influential in education research engaged with multimodality and learning (Hull & Nelson, 2005; R. A. M. Iedema, 2003; Jewitt, 2003; G. R. Kress, 2003p; G. Kress & Leeuwen, 2001; Stein,

2004b; The New London Group, n.d.). The work on multimodality and learning is in turn innovative in its attention to the ways image and sound work in meaning-making, and in its suggestion of ways to incorporate a multimodal sensitivity into the learning environment and assessment process. However, this work often seems to lose sight of the phenomenological experience of the learner, in its analysis of the modality and potential epistemic implications. It is perhaps the aforementioned linguistic influence that accounts for this neglect, which still prioritizes language even in a multimodal environment, and often treats other modalities in the same way as language thus, slighting these other modalities. Finally, little of the work on multimodality, or social semiotics in the educational environment, takes the body into account(see chapter 2 for discussion). To extend and build upon current work in education by including recognition of the body as a potent meaning-making medium for youth, this paper follows more closely along the second vein of thought based on the work of Charles Saunders Peirce and Charles William Morris.

While differences abounded between Peirce and Morris (Dewey, 1946), they agreed that the role of the interpreter is more important than that of the object under interpretation – that interpretation is a function of perception, and perception relies to greater or lesser degree on environment. For Morris this led to an interpretation of semiotics allayed along behaviorist lines, but for Peirce, and others such as Maurice Merleau-Ponty (1962), the primacy of perception opened the space for embodied experience (as opposed to philosophical thought projects not based on observations of real experiences) as a basis for epistemological advancement[12].

Peirce expresses the importance of perception in his notion of "firstness", also understood more broadly and at different times in his work as *iconicity*. In a letter to William James in 1903, Peirce breaks down the notion of firstness, writing:

> If one imagines that feeling retains its positive character but absolutely loses all relation, […], it no longer is exactly what we call feeling. This is a mere sense of quality. It is the source element that makes red to be such as it is, whatever anything else may be. I do not see how that can be described except as being such as it is, positively, of itself … (reproduced in: (Jensen, 2004, p. 274)

Peirce wrote this letter primarily to differentiate his work from that of Hegel; however it also illuminates the nature of firstness as being crucially rooted in the bodily sensations of the person. This is what Peirce means by asking us to understand the "quality" of feeling separate from any relations that feeling will surely contain. He is trying to explain the non-reflective sensorial moment of understanding, which for him is encapsulated in the notion

[12] J.L. Austin's How to do things with Words (1962) is also another important work in philosophy and language which argued for rooting discussions of language in actual uses of language.

of firstness. For Peirce all semiotic meaning begins in firstness, however fleeting a beginning that may be in the process of semiosis.[13]

Writing almost 100 years after Peirce, psychologist J.J. Gibson also saw himself as working against positivist influence in the social sciences on the one hand and a determinist vein of thought in psychology on the other. Using a study of visual perception as basis, Gibson introduced the notion of *affordance* to explain an organism's understanding of the possible engagements with objects in the environment (1986; 1977). In an explanation that echoes elements of Peirce's notion of firstness, Gibson writes:

> …the affordances of things for an observer are specified in stimulus information. They seem to be perceived directly because they are perceived directly.(J. Gibson, 1977, p. 79)

For example he writes about how the grip-ability of a handle, as opposed to a smooth surface, such as a table top, is understood directly in relation to the capacity of the hand. Thus grip-ability , is both a property of the environment (the specific shape in the case of the handle) as it relates to, or is perceived by, the sense properties of the hand. Gibson was working to explain a level of engagement that is neither based entirely on "feeling" nor is mediated by cultural tools. While the concept of affordance has been widely applied and often modified in diverse domains from robotics to marketing, one element has remained – the primacy of the object: "Whether or not the affordance is perceived or attended to will change as the need of the observer changes, but being invariant, it is always there to be perceived." (J. Gibson, 1977, p. 78). Thus the handles affordance of griping remains even when it is used for other purposes, perhaps to attach a rope.

The common feature between Peirce's semiotics, as expressed in the notion of firstness, and Gibson's notion of affordance, is the central role they place on embodied perception. For Peirce this resolves into a space for understanding representation, and for Gibson a way of explaining interaction with the environment. I leverage the notion of *semiotic affordance* in my analysis of playground games in order to best understand the basic communicative structures youth engage with when playing the game without giving preference or dominance to either the structure of the game, the agency of the player, or the particular culture attached. It is only through this somewhat synthetic notion of semiotic affordance that I believe the communicative and at once quintessential elements of this type of youth-driven, semi-rule bound physical play can be most productively understood. As I analyze the transcripts of youth engaged in the game of four square in the coming pages, the meanings and applications of this term will be further fleshed out: how it can illuminate the complexities of playground games, and how exactly the playing of these games functions to support increased literacy across domains.

[13] Semiosis is a term Peirce introduced to indicate the dynamic nature of how signs obtain.

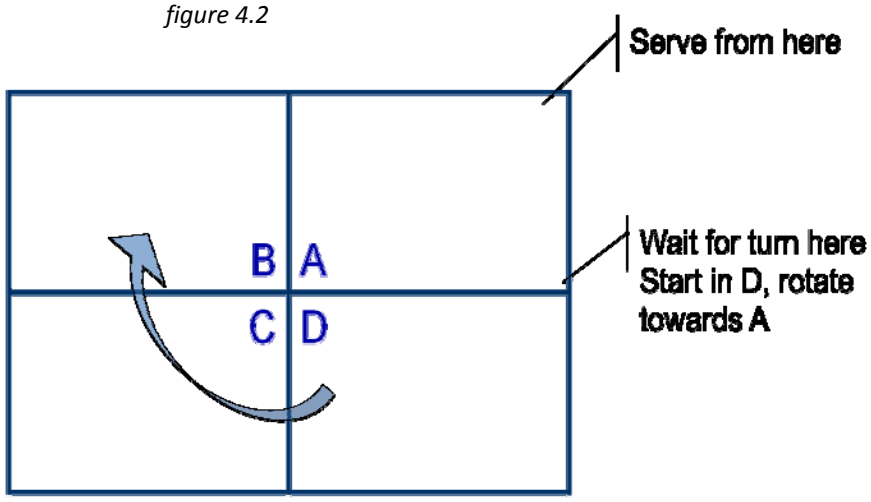
Indeed, there are many semiotic affordances in the game four square, some of which can be observed across other playground games. One example is the affordance for modification of methods of play, organized around a particular system of playing. For the observer, four square also affords the creation and illumination of a youth driven culture, and all the symbolic and communicative elements within it. Many of these elements could also be observed with different sorts of data. Four square, however, affords a unique perspective on how the body and language can be used together to create utterances. It is this semiotic affordance which I will focus on.

The data collected of youth playing four square resolves fairly neatly into four categories of utterance which engage the body and language explicitly. To introduce them I will refer to the transcript in table 4.1. In future chapters I will elucidate how these different semiotic affordances operate in the development of arguments (Chapter 6) and support rule explanation and the initiation of novice players into the game (Chapter 5). First, however, a brief review of how the game was played at Pacific, and some of the rules or "calls" the youth employed is warranted.

The Basics of Four Square

Four square is one of the first ball games that elementary school children experience on the playground. In the basic playing mode, the ball lands once in the players square and then they pass it (or simply hit it) to another player's square. The ball must stay in bounds (not land on or outside a line), and in generally stay in continuous motion – although more novice players tend to hold on to or catch the ball before continuing the volley. That being said, the rules just described are for what the students at Pacific elementary called a "clean game", which is rarely how the players choose to play. One of the quintessential design elements of four square is the game server's (in the 'A' square) ability to modify the game. The players referred to each turn of play's modifications as the server's "calls".

figure 4.2



Basic Rules for Four square

a. Each turn at play is begins with a serve from player in A square
b. Ball is only to bounce one time in each square except on service
c. One cannot catch and hold the ball
d. When someone gets "out" they go to the end of the line. Everyone moves up a letter to fill in the vacated square and a new player comes into the D square
e. If the ball hits the line, the person who hit it there is out
f. If the ball lands outside any squares, the person who hit it there is out
g. If the ball lands in a players' square, and they do not return it, that person is out.
h. **All rules of play are subject to change as specified by the A square player's calls.**

Types of calls

Most calls fall into one of four general categories, delineated by involvement with (1) the boundary line and the ball, (2) the body and the ball, (3) the body and the boundary line, or (4) how the ball moves through the volley. In terms of the mechanics of the game, the different types of rules impact the ways a player can get out. At Pacific there were sixteen different calls in regular use (see Appendix A for a complete list of calls)

In general four square does not have a "winner" or a "loser" per se (although youth will often be self-congratulatory if they spend many rounds in the A square, or conversely show anger or dejection if they consistently get out without progressing beyond the D square).

The Semiotic Affordances of Four Square: The role of the Body

As discussed, the data collected on four square display four semiotic affordances that relate to the body and language, roughly termed: Simple independent utterances, parallelism, mutually indexically-related utterances, and co-constitutive (not indexically related) utterances. To further elucidate these categories I will refer to the transcript of a single round of play, included below.

The transcript is of a game that occurred in the lower grade recess on May 6th. DeShawn is the most regular player, having played almost every recess since the beginning of the school year. Rayna and Maria began joining the four square game frequently in the spring semester. Janeen is new to the school as of April, and has played a few times. She is wearing the helmet camera, and the transcript begins with a bystander inquiring about the camera. Janeen is watching Rayna, who just missed the ball, retrieve it from the other side of the playground. When she returns with the ball, the requisite reshuffling of the order of players in the squares begins. The transcript ends with the ball service, which begins the next round of play.

(1) Simple Independent utterances: At times language and the body are both being engaged, yet the semiotic meanings are not particularly related to each other, or the game in an obvious way. The most common example of this is what I refer to as the 'wait dance'. Often in play, a ball will go far afield, and a good percentage of that time the youth fetching the ball will be waylaid by any number of situations. It is not uncommon for one youth, either a boy or a girl, to begin some sort of a dance. It can be as simple as a hop back and forth from one foot to the other, or a more involved set of steps, repeated again and again. More frequently than not, this is a contagious activity –one youth begins the wait dance, and then another or two will also do their own wait dances. This physical activity can be accompanied by a discussion of the game, or perhaps something that occurred in the lunch room or in class. This recurrent aspect of the game (a round of play often marked by the ball being volleyed beyond the field of play) and the reality of the playground (a relatively large space with many potential people to engage) constitute the game's affordance for this kind of communicative moment.

(2) Parallelism (Table 4.1, line 15): This is a type of cross-semiotic translation, in which the body and the language of the youth are representing the same thing. This term is borrowed from rhetoric, where it refers to the serial use of synonymous phrasings for emphasis. In the case above, I refer to line 15 in which Rayna states "don't go" and simultaneously "holds arm out to the side, palm up" in the gesture of "stop". The language and the body are conveying the same meaning.

(3) Mutually indexically related (Table 4.1, lines 7-13): Situationally the language and the body point to or refer to each other, and together complete the utterance. A lot of deictic language is used while playing four square, language whose meaning is dependent on other contextual information. However, unlike other habitual or ritualistic instances in which deictic language abounds, the meaning grid is not fixed during play. In order for the deictic language to obtain, youth use their body to ground the meaning. This can be through actual pointing, as seen in lines 8 and 10, where Rayna fixes the word "there" to two distinct places within a moment. Thus,.

(4) Co-constitutive, not indexically related (Table 4.1, line 16): This is perhaps the most complex relationship between the body and language present in the data. It occurs most frequently when rules are being explained, and will be illustrated in depth in chapter 6. In this instance, the body gesture or posture encodes part of the information, and the language another part – each part may make sense on their own, but the functional and effective meaning requires the coordination of both modes. A weak example of this is that it is incumbent upon DeShawn to realize Rayna's message of stop is directed towards him, despite Rayna looking at Maria at the same time.

Table 4.1, examples of the semiotic affordances

Line	Example of	Time	Name	Location	Speech	Movement, Gaze Gesture
1		:04	DeShawn	A square		arms over head, thows ball down into B square
2			Rayna	B squre		reaches up and twists as ball goes over her head
3			Daysha	by-stander		bends forward hands on knees=
4			Daysha	by-stander	=are YOU on CAmera	Looks towards Janeen
5			Janeen (w/helmet camera on)	C square wearing camera	Yeah ( )everybody	
6		:	Rayna	running into grid	[muffled] im in D ev[muffled]	runs with ball to D square bounces ball to DeShawn in A square
7	Mutually	0:14	Maria	D square		runs across to a B square
8	indexically	:17	Rayna	D square	No you not in *there*	points at Maria in B square
9	related				she in	points at Janeen in C square,
10					*there*	points back at Maria in C square, begins to walk
11						towards Janeen
12					You	pivots to face Maria, raises& lowers pointer arm
13					in *there*	points back at Janeen in C square
14		:22	DeShawn	A square	big bang bang	raises ball over head, preparing to throw
15	*Parallelism*		Rayna		No don't go yet=	holds arm out to the side, palm up
16						palm faces DeShawn while walking towards Maria in B square
17	*Independent*		Janeen	C square	=no cherry bombs	
18			Rayna		°you suppose to be in here°	walks over and takes hold of maria's wrist, brining her into the C square
19					°and you suppose to be in there°	takes hold of Janeen's hand and brings her over into the b square
20			Deshawn	A square	*Big BAng bang*	
21						throws ball down into B square
22	*Independent*				*I SA:id no CHERRY!*	

Conclusion

This chapter presented playground games first as a class of games sharing certain properties, which exist on a continuum of activity between sports and fantasy play, and second presented four square as exemplar of playground games. A brief examination of four square showed show some of the ways the qualities of playground games provide the players with unique opportunities to engage in meaning making. The term *semiotic affordance* was introduced to describe these opportunities. Focusing on the talk, gesture, and bodily posture, four specific semiotic affordances were delineated. In future chapters the specific instantiations of the semiotic affordances of four square will be presented.

Playground games, and recess, provide a space during the school day in which youth can engage in meaningful communicative activities in ways which they choose. At recess youth can provide non verbal responses and explanations, repeat an argument stance as many times as they please, or as their group will tolerate. They can be novices or experts and can move rapidly between these states as the games morph and the players change. Perhaps most importantly they can be participants in the creation of a culture. Playground games, and specifically four square, extend these properties in important ways. They are, much like recess itself, semi-structured activities with rules meant to be modified. This creates an opportunity for a type of engagement with semiotic material and meaning making not provided in classrooms. Coupled with the highly motivational and physically engaged elements of play, playground games become a rich site of learning.

Chapter 5:
That **IS** *Cherry Bombs*: Building a Multi-modal Argument

Incidents in the play that spark a debate, (e.g. who is out, what a call is, where the ball landed) provide some of the most fruitful sites for analysis of children's culture and communication strategies (A. C. Evaldsson, 1993b; C. Goodwin, 2000b; M. H. Goodwin, C. Goodwin, & Yaeger-Dror, 2002b). Arguments inspire youth to marshal all the communicative resources at their disposal. Even more so than explanation sequences, arguments in the play space garner the universal investment of all play participants, because most commonly they involve who will be "out". For the students in line, an "out" in the game is a chance to play, and for the players it means either loss of play time, or potentially moving closer to the coveted A square. Thus few dyadic arguments occur in four square. These multi party debates push the youth to attend to many semiotic fields, simultaneously, and to efficiently combine them as they make their case.

In this chapter a debate about whether a volley constituted a *cherry bomb* is closely examined to (1) further refine the semiotic affordances of four square as introduced above, (2) reveal the type of complex multimodal argument structure youth employ while playing four square, and (3) display how one youth scaffolds her language production through the use of her bodily postures. This will be accomplished through a close turn by turn analysis.

Overview of the Recess Period

On this pleasant day in April the four girls, Kasia, Kimaya, Angela, and Phaedra got out of the lunch room early, and were among a very few (<15) students out on the playground. All four girls are expert four square players, with knowledge of many of the different calls, and skilled at arguing their point when debates arise. Angela is one of the most regular four square players, rarely missing a day of play. As a player she relies more on strategy and verbal skills to progress in the game (memo: styles of play), and often holds the A square for extended periods of time. Kimaya played frequently during two months of the study, and afterwards was more erratic, sometimes only playing for one round, or not playing for a week or more. She was an avid and skilled double dutch player, and was often was called on to play that game. Similarly, Phaedra played regularly in the beginning of the study, but when her friend Jayrissa stopped playing, she too became a less frequent player on the four square court. She began playing with the fantasy play group (see Chapter 4) midway through the year, and only joined the four square game while waiting for the others in the fantasy play group to be released from the lunch room. These three girls often came out to recess early, presumably dismissed for good behavior, and engaged in three player game of four square while waiting for the rest of the students. Kasia was new to the school, having arrived more than a month into the spring semester. While she definitely knew how to play four square, she was not as familiar with the specific customs at Pacific. This day, April 16, Kasia was the very first student on the

playground, and asked to wear the helmet camera. Thus, this particular game was filmed from her point of view, as well as from the static camera's perspective. This allowed for a fine grained analysis of where her attention (and often the attention of other players) was directed, as evidenced by the direction of her gaze, and her close proximity to the other players.

The interaction represented in the transcript below shows one of Kasia's first four square games at Pacific. As the game progressed the girls became frustrated with Kasia's style of playing, and of her management of the game from the A square. Eventually all three leave, clearly frustrated, to join a double dutch game. Table 6.1 is a transcription of the beginning of the 3rd round of play in the game. Kasia has been in the A square since the game started having claimed that spot by securing the ball for play. Kimaya is in B, Angela in C, and Phaedra in D. One of the more interesting facets of this interaction is the debate does not begin with an "out" cry, polarity statement, or other exclamation as is often the case in playground games (M. H. Goodwin, 2006).

Table 5.1 Complete Transcript: That is Cherry Bombs. (duration: 24 seconds)

Line	Name	Semiotic Affordance	Speech	Movement, Gaze Gesture
1	Phaedra	Single Primary		passing the ball to Kimaya
2	Kimaya			passing the ball to Phaedra
3	Angela	Single primary	Can you call babies	
4	Kasia	" "	Nope	
5	Kimaya	" "		Lunges arms over head to throw ball to Phaedra
6	Phaedra	" "		Fumbles, ball hits her chin, bends down to pick it up
7	Angela	" "	But you said **everything** excep cherry bombs.	(directed at rule negotiation)
8	Kasia	" "	°That wasn't cherry bombs°	
9	Phaedra	" "	°Yes it Wa::?s°	turns to face Kasia
10	Kasia	Co-constitutive, non-index.	No it wasn't.	raises arms over head and makes a throwing gesture
11		Single primary	it din go Up?=	
12	Kimaya	Parallelism	=It hit your chin=	brushes her hand under her chin
13	Kasia	Single primary	=For real	
14	Phaedra	Co-constitutive, index.	She went	Raises arms over head with ball, Slams ball down
15				ball bounces over Kimaya's head=
16	Angela, Kasia, Kimaya	Single Primary	(2.8)	((the three girls gaze follows the ball from Phaedra's hands until it bounces over Kimaya's head))
17	Angela	Single primary	=Na//ah NO she din	
18	Kasia	" "	//Na-ah **NO** she did na go **that** HI::Gh	
19	Kimaya	" "	**NO** I did na go **that** HI::Gh	Runs off to go and get the ball
20	Kasia	Single primary	NO she didn't,	shakes head back and forth
21		Parallelism	She did not go that high	
22	Phaedra	Co-constitutive, indexical	It went like(.3)	Raises arms up and down facing Kasia
23			THAT	
24	Phaedra	Single primary		Raises arms up and down, back facing group, walking to her corner
25	Angela	Parallelism	It hit your CHI?::n.	touches chin
26	Phaedra			Phaedra turns to look at Angela
27	Kasia	Co-constitutive, indexical	You out anyway	Waves arm toward Phaedra while turning to look at Kimaya
28	Kasia	Single primary	You still in D, don't matter	Looks at Kimaya ((off camera)) with ball
29	Phaedra	Co-constitutive, indexical	When you go like Th**a::t.**	Waves arms up then quickly down while leaning fwd towards Angela
30	Phaedra	Single primary	°That.is.cherry bombs°	

The Semiotic Affordances Employed in an Argument

In Chapter 4 I introduced the four primary ways in which youth engage the body and talk while playing four square. This section will display how youth recruit these communicative techniques towards particular argumentative ends, as well as flesh out their definitions.

Single Primary Communicative Modality

Table 5.2 (lines 1-6) constitute the beginning of this round of play. Here we see the two most simple elements of communication that four square encourages. Each player is utilizing a single primary modality for interaction. Kimaya and Phaedra are passing the ball back and forth exclusively, as they perform the call *war*, in which the A player designates two other players to pass the ball to each other until one of them is "out". These two girls are silent, attending to their opponents body, the four square court lines, and the ball. Simultaneously, Angela asks Kasia to clarify her calls for the round, inquiring if *babies* is allowed (line 3). They are actually quite still during this interaction facing each other as the ball volleys between them (figure 5.1). In fact, Kasia only mildly tracks the ball with her head, unlike other moments in the game, where the helmet camera reveals significant postural orientation towards the ball.

Table 5.2 examples of Single primary

Line	Name	Speech	Movement, Gaze Gesture
1	Phaedra		passing the ball to Kimaya
2	Kimaya		passing the ball to Phaedra
3	Angela	Can you call babies	
4	Kasia	Nope	

Figure 5.1

While each dyad communicates in a single primary modality, it is apparent from the next lines, that they attended to the interactions of the other dyad. As further explored in Chapter 6,this level of attention is more characteristic of expert players, novice players will often miss cross semiotic information when involved in a focused interaction.

When Angela challenges Kasia with: “But you said **everything** excep cherry bombs” (line 7) there is no way to know exactly how she intends to influence the interaction. There are, consistent with her patterns of interaction and the context of the moment, two obvious possibilities. She might may simply wish to continue the conversation with Kasia about the rules, and begin a debate as to whether the move of *babies* (a favorite of hers) is allowed. She could have been influenced by the play in front of her, and purposefully or thorough the suggestive nature of Kimaya’s volley, intend to begin the debate on whether Kimaya’s pass constitutes a *cherry bomb.* Regardless, Phaedra sees, or more appropriately hears, Angela's challenge as an opportunity to keep her own fumble from being considered an "out". While in this section the primary communication acts are in a single primary mode, talk for Kasia and Angela, bodily for Kimaya and Phaedra, it is apparent that all the girls are, on a secondary level, paying attention to the other modalities. This becomes even more clear, as the argument continues.

Parallelism

Parallelism is most commonly understood as a grammatical structure (sometimes referred to as parallel structure) in which two or more clauses or ideas are linked together and presented as of equal importance. According to the Encyclopedia Britannica:

> In its simplest form parallelism consists of single words that have a slight variation in meaning: “ordain and establish” or “overtake and surpass.” Sometimes three or more units are parallel; for example, “Reading maketh a full man, conference a ready man, and writing an exact man” (Francis Bacon, “Of Studies”). (“parallelism (figure of speech) -- Britannica Online Encyclopedia,” n.d.)

Parallelism used in this way has the effect of adding emphasis to the over-all point. This is the case in the Bacon quote above, were the essential thesis is that academic studies enrich a man, and the three clauses serve to emphasize this point. In the data collected for this study, four square players often use their body and talk in a not dissimilar structure. Table 6.3 displays three instances of parallelism from the transcript of That is *Cherry Bombs*.

Table 5.3: Examples of Parallelism

Line	Name	Speech	Movement, Gaze Gesture
12	Kimaya	=It hit your chin=	brushes her hand under her chin
20	Kasia	NO she didn't,	shakes head back and forth

21		**She** did NOT go that high	
25	Angela	It hit your CHI?::n.	touches under chin

Kasia's shaking of her head back and forth while saying “no” and “not”, is a familiar and common example of parallelism between talk and the body, in which the engagement of both modalities serves to strengthen the message. In lines 12 and 25, the stance Kimaya and Angela are taking is that because the ball did not go over Phaedra's head, Kimaya's volley was not a cherry bomb. They assert, "it hit your chin". This talk provides a complete message, and does not need further grounding to be understood. However, as this is a definitive point in the argument, it garners more attention. In touching (figure 5.2) and brushing (figure 5.3) under their chins the girls motions serve not just to add emphasis, but also to refer back to the moment Phaedra fumbled with the ball (figure 5.4). Thus in these two moments of parallelism is used as part of building (line 12) and then finalizing (line 25) of the case against Kimaya’s volley (and Phaedra’s subsequent fumble) constituting the non sanctioned move of *cherry bomb*.

Figure 5.2, Kimaya's Chin gesture

Figure 5.3, Angela's Chin gesture

Figure 5.4, Kimaya’s pass and Phaedra’s fumble

Co-constitutive, Indexically Related and Non-Indexically Related

In these two cases the player's talk, gesture, and posture work in concert to complete the utterance. As such, neither the body nor the talk alone convey enough information. For the utterance to obtain, both modalities must be attended to simultaneously. From an analytical perspective, the difference between these two types of semiotic affordance is simple to understand. In play, however, these two types of utterance manifest quite differently.

In utterances that are indexically related, the deictic talk and actions refer back to each other. The most straight forward example of this is the use of a personal pronoun and a hand or finger to point directly at the person to whom the pronoun is referring. This type of utterance occurs throughout the data collected for this study (e.g. table 5.4: line 27, table 6.1: lines 12 & 14, table 6.5: lines 58 & 59). Utterances in which the modalities are co-constitutive, but the body and talk are not indexically related (e.g. table 5.4, line 10) are less frequently seen, and at times do not obtain (cf. Chapter 6, tables 6.7 & 6.8). However they play an important role in terms of expediency and communication of affect, as will be shown.

Table 5.4: Co-constitutive utterances

Line	Name		Speech	Movement, Gaze Gesture
10	Kasia	Co-co no	*Figure 5.4, Kimaya's pass and Phaedra's fumble*	over head and makes a sture
14 15	Phaedra	Co-constitutive, indexical	She went	Raises arms over head with ball, Slams ball down ball bounces over Kimaya's head=
22 23	Phaedra	Co-constitutive, indexical	It went like(.3) THAT	Raises arms up and down facing Kasia
27	Kasia	Co-constitutive, indexical	You out anyway	Waves arm toward Phaedra while turning to look at Kimaya
29	Phaedra	Co-constitutive, indexical	When you go like Tha**::t.**	Waves arms up then quickly down while leaning fwd towards Angela

In all but line 23 above the girls speech begins the utterance and the movement completes it. That is not to say these elements occur discreetly, they do in fact overlap, however one mode opens, and the other closes, as is often the case. Phaedra's statement of "THAT" in line 23, which serves to emphasize the veracity of motion she performed as a reproduction of the move being contested, could be seen as a closing to line 22, however the pause between "like" and "that" is significant enough to potentially consider this a new turn. As a communication strategy, however, the lines work together and thus constitute a single instance of a co-constitutive, indexically related utterance. The way

talk and the body share the work of introducing and concluding utterances is one element common to both types of co-constitutive utterance.

Another important element is the way the talk and body reciprocally ground the deictic elements in the utterances. In line 27, Kasia's "you" is grounded in her waving of her arm at Phaedra. That action informs all involved that the "out" is directed to Phaedra. In addition the style of the gesture, she waves a hand and looks the other way, asserts a type of finality. By directing her gaze away from Phaedra, she discourages any further discussion on the subject of the "out". In lines 14 and 22, Phaedra fixes the object of the deictic verb "went" with first, a physical re-enactment, and second with an iconic gesture (the over head throwing motion). This type of active contextualization on the part of the player affords two things: (1) it allows the player to use their body as a tool for meaning-making on the same level as talk (2) it allows for expedited communication, because talk and bodily movements can overlap in ways which communication in a single primary mode cannot. Utterances like Kasia's in line 10, which contain talk and bodily movement which are co-constitutive, and not indexically related are even more efficient, as there is no overlap in content (cf. Chapter 6, Devon: table 6.2, lines 31&32; Malik: table 6.4, Lines 44 & 45).

In an argument these complex utterances do more than provide technical information. They also work to assert affective stance(M. H. Goodwin, 2006; M. H. Goodwin & C. Goodwin, 2000b). This is particularly noticeable in this interaction; while all the girls engage in the argument, it is the primary protagonists, Kasia the final judge because of her spot in the A square and Phaedra who is trying to move up a square, who utilize these particular affordances.

Building a Multi-Modal Argument

The transcript of That is *Cherry Bombs* depicts a multi-party multi-modal argument. As the argument progresses it becomes three against one. Kasia, Kimaya and Angela argued against the move under question being classified as a *cherry bomb* and Phaedra, alone, argued for it. In addition, as shown above, Kasia and Phaedra display, through their communicative practices, a deeper engagement with the process of the argument than the other two girls. Pushed to utilize every resource she has to sway the other three girls, Phaedra's utterances reveal a complex interrelationship between her talk and her movement. While in the context of a particular turn, her language is often seen as introducing an utterance, when all of her turns are examined as a single utterance, another relationship between how her talk and bodily movement interact can be seen.

Phaedra Presents her Case

The two columns below separate the talk of Phaedra's argument and the bodily gestures and postures she displays.

Table 5.5, Phaedra's Case

Talk Element	**Postural Element**
Line 9: °Yes it Wa::?s°	
Line 14: she went	Line 14: Raises arms over head, Slams ball down ball bounces over Kimaya's head
Line 22: It went like(.3) Line 23: THAT	Line 22: Raises arms up and down facing Kasia
	Line 24: Raises arms up and down, back facing group, walking to her corner
Line 28: When you go like Th**a::t**	Line 28: Waves arms up then quickly down while leaning fwd towards Angela
Line 29: °that is cherry bombs°	

Looking at the element of talk alone, it is apparent that Phaedra's talk becomes more complex as she progresses. Lines 9, 14, 22 & 23 are simple statements lacking the type of descriptive language teachers are perennially entreating elementary students to utilize. Lines 28 and 29 show the most sustained moments of talk by Phaedra. Line 29 is the first time she actually uses the term *cherry bomb*. Prior to this, all of her talk relies on, (1) the context of the game and, (2) the ground provided by her bodily motions. So what occurs to produce this shift in her talk?

One possible explination might be that the discussion is coming to a close. The student in A, Kasia, is looking towards retrieving the ball (ln 28) to begin the next round of play. This is certainly an important contextual element, and easily a motivator for Phaedra to present a strong case for Kimaya's move to be considered a cherry bomb. While timing is likely a motivating element, another dynamic to examine is Phaedra's moments prior to making her final statement. Looked at together, they can be seen as important elements of argument development.

Between line 23 and line 28 Phaedra raises her arms over her head and makes a throwing gesture numerous times, as shown in figure 6. 5 below. Kasia also uses this gesture, which is the iconic movement representing *cherry bombs*, earlier in the argument. However, Phaedra is not using this move to make a point, or explain the call to anyone. She in fact turns her body away from the other girls as she repeats the motion three times. She then turns back to the group, faces Angela and performs a more complete mimicking of the movement that would produce a *cherry bomb* (line 28). It is as if she used the iconic motion as a way of thinking through what exactly she was trying to communicate, and then took one last turn in which she was as expressive as possible, to try and win her case.

Figure 5.5 Phaedra making iconic cherry bomb gesture

Conclusion

To the casual observer the communications during four square might seem rather simple. True to this, the majority of the interactions presented in the transcripts in this report engage a single primary modality, the simplest of semiotic affordances of the game. However, as I have shown above, this assessment belies the complex work necessary to engage in the full range of play. In particular the youth must attend to all the variety of semiotic fields and meaning-making potential available at any given time. Even in this chapter the focus was narrowed to look at simply the turn by turn revelation of talk and body and their interaction. The role of the ball, of the social and moral dynamics, even the relative veracity of the argument as compared to the evidence on the camera have been neglected. This speaks to how rich an interaction is occurring.

The *cherry bomb* is a polarizing call. In the data almost every upper grade recess period has some sort of debate about *cherry bomb.* This particular *cherry bomb* example stands out through the work of Phaedra in constructing her argument. Her persistence yielded a window into one way the youth use their bodies when they are in a space that permits it; they use them to think. But perhaps more importantly what Phaedra's repeated performance of the iconic *cherry bomb* motion shows is that youth are not moving in an aimless way. Her motion suggests that in making the shape repeatedly, while turning away from the other girls, she was figuring out how to say "that.is.cherrybombs." For me, this calls into question what a student squirming in their desk is trying to accomplish. Perhaps, they are performing the movement icon of a squiggly line of unclear text, that they hope to work into clarity.

Chapter 6:
The *Cupcake*: Different Semiotic Strategies of Youth at Play

Even before I began formal observations of recess play, I noticed significant differences in the way the upper and lower elementary school students engaged with the same games and play structures. I realized that the malleability of playground games encouraged players to modify the way they employed the rules to fit their abilities and desires. Through close observation and careful analysis of videotaped play, it became apparent that some of the most significant differences between upper and lower elementary school students' play were their communicative strategies, particularly their reliance on the body as a primary modality. To make clear how dramatic these differences are this chapter will present a fine grained analysis of two recess periods, and the different styles of communication evident within them. These two recess periods lend them self to clear presentation because they contain interconnected interactions.

As mentioned above, lunch and the accompanying recess, time at Pacific was split by grade level. The year the data were collected, there were three lunch periods, one each for Kindergarten & 1st grade, 2nd and 3rd grade and 4th and 5th grade. From time to time, however, a few students, or even a whole class, would end up in one of the other grade's recess periods. Sometimes the student, or students, would choose to engage in their regular recess time activities, joining in with the younger or older students with whom they shared recess that day. Four square, with its rotating participant structure, encourages inclusion rather than exclusion (although it can be made exclusionary, and at times was) and often the recess interlopers ended up there. Games which contain inter-recess interlopers, such as the one examined here, tend to contain more explanation and debate sequences. As such, they provide an excellent opportunity for observation of both the types of semiotic resources the game encourages youth to use as well as how these resources support learning activities.

The first account is of a second grade student, Malik[14], playing four square with a group of fourth and fifth grade students who regularly enjoyed the game. During this time, they introduced Malik to a number of new ways to play. At times, this seemed deeply frustrating to him, but it apparently made quite an impression. The second account explores how Malik takes up the new ways he learned to play and, to greater and lesser success, teaches them to his peers in the second and third grades. As these two youth

[14] Malik played four square every recess from the time I began taping until the completion of the school year. As an individual player, he displayed some of the greatest gains in social and athletic skill over the course of the year. He progressed from being a student who would leave the game in a crying huff after his first out, to being a leader teaching rules to others and managing the game. Malik was in a special needs class, in part, I was given to understand, because of his uncontrollable emotional outbursts (My IRB did not give me access to Malik's IEP). It was not clear to me how much of his behavior shift on the playground translated into the classroom. What is clear was that his desire to play overcame his emotion. This is particularly noticeable in his interaction with the upper elementary school students examined here elementary school students, where he returns to his prior coping mechanism- but only for a moment, and only one time. .

cultures come together and intermingle through Malik's experience, the differences in their communicative strategies, and in particular the relative reliance on the body as a semiotic mode, become apparent.

Overview of the two recess periods

Every day at recess brings new and different adventures and challenges for both the youth, the school staff, and the intrepid researcher. To contextualize the data a brief description follows, depicting the general state of the playground on each day, drawn from my field notes and memos.

March 19, an Interloper in Upper Recess

On a cool day in March, Malik was placed in a fourth grade class for the day, which meant he would have lunch and recess with the upper elementary students. He was the very first student out on the playground at recess, arriving many minutes before any other students and headed straight for the four square court. Shortly after another student, Devon, found his way onto the playground before lunch was officially over. The two boys played four square for a few minutes before the rest of the fourth and fifth grade came out. As the rest of the youth came out onto the playground, a few regular players (Aliyah, Daniel, and Phaedra) joined the game and played for the entire period. There were also some occasional players (Kerri, Janet, Devon, Anton, and Missy) who joined and left the game a few times over the course of recess. The play itself was typical, interspersing the most popular calls (*Million dollar dish*, *cupcake*, *rainbow*, *spikes*) with regular play. It is not uncommon for the regular players to find themselves having to spend some time explaining play to a newer participant, and by all accounts, they did not treat Malik any different from a fourth or fifth grader. Indeed, it seemed that they were, overall, unfamiliar with him and did not realize that he was a younger student. As is typical, the youth felt no need to query Malik on how he ended up at four square that day, which class he was in, or even ask his name; the only thing that mattered was how he played the game.

My field note and memo from this day focus more on structural issues at the school site, due to factors external to the game which monopolized my attention. It was only in reviewing the video tapes for the week that I realized the complex types of negotiation that Malik's presence fostered. While Malik was not treated any differently than any other fourth or fifth grade student, when he challenged the call of "out", he had a particular pliancy and tenacity. Typically, much of the debate around being out is not about definition, but rather about perception. Most of the debates are about if the action warranted the out, not what action the call prescribed, as was the case on this day. This element of play is investigated more closely in the next chapter's discussion of a debate around "the cherry bomb". Furthermore, which perception becomes ratified often depends on the player's status in the particular group playing, as much as anything else. In these situations, challenges lobed by those of higher status will take more turns, and are

more likely to be ratified. In the case of Malik, he was an unknown, and his low status would normally have him quickly dismissed. However, he was quite determined to understand the play- and thus he was able to garner more explanation turns than usual.

The extended explanation turns (particularly in example two below) coupled with Malik's tenacity in teaching these new calls to his peers in the lower recess during the next day, makes this bit of play and excellent source for understanding some of the types of communication four square affords. In addition, it makes for an efficient comparison of upper and lower students play, which highlights the unique malleability of four square – a quintessential element to the learning potential of playground games.

March 21, Malik teaches the New Calls

Malik played four square every day, and March 20th was no different. He and a few of his classmates ate lunch in their room (instead of the cafeteria) on this day, and they were let out onto the playground early. All four boys played four square uninterrupted for some time, until the rest of the lower grade students were walked out of the cafeteria and onto the long line of benches flanking the playground, and abutting the school building's south wall. There they sat, as a punishment, until the bell ending recess rang. The boys stared at them for a while, and then continued a relatively subdued game. Malik did not attempt to introduce any new calls on this day. The next day, March 21st , proceeded as usual, with Malik the first to the four square court, claiming the coveted A square, from which he could control the game. All the staff who would typically be on the playground during recess, the school security guard, and the two lunch aides Ms C and Mr. G, attended on March 21st, making for a calm recess time. In addition to Malik, other regular four square players were Marcus and Rosa. Alyssa and DeAndre played occasionally, but this is the first time Ken joined the game during lunch recess. While it was clear that the boys knew each other quite well, there was definitely a bit of resistance to the girls joining the game, and despite the fact that Malik had played numerous times with both girls, he did not call them by name, as he did the boys.

> Alyssa's entrance to the game was unusual, this is the first time I have ever seen any of the students raise their hand and ask permission from the players to join. Then too, Malik was quite resistant to teaching her, or tolerating her lack of knowledge about the new calls" (memo, joining the game)

Perhaps one of the more interesting moments in this day's game was Malik's use of the new calls to try to exclude Alyssa. A common practice among the older children (and perhaps this was what Malik felt when joining the upper elementary game) is to use calls they know undesirable participants do not know, or are unskilled at, to exclude them from the game. In the lower grades, exclusion usually involves "making teams" and trying to use their strength in throwing the ball repeatedly to one person to get them out.

When the game started Malik almost immediately, he began to introduce, and eventually explain, three of the new calls he had learned while in the upper grade recess. For the analysis the focus will be on one particular call, *cupcake*, and the different semiotic affordances the upper and lower grades rely on to initiate novices players into new calls.

A Comparison of Apprenticeship

The following transcripts depict the instances the call *cupcake* was used during the two recess periods under examination. Interestingly, in both cases it was used three times. I will begin by unpacking the Upper recess, then the lower and then comparing the two. In total Malik learned four calls, and the other three, *bus stop, spikes and spiders* are interspersed with in the analysis, however for the sake of clarity, *cupcake* is focused on. Any name for a game call will be in italics (see appendix A for a description of calls)

Cupcake is one of four calls in use at pacific that involve the A square player running to the center of the square and holing the ball down, while the other three players race to the ball, to perform the required action before the others. The last player to perform the move is "out", and must to get in line or go back to the D square, if no other players are waiting. Each call is differentiated by the action required, and the name of the call is related to the action. As explained above, *cupcake* requires the player to touch the bottom of the ball avoiding the "icing". *Spider* and *rainbow* both require the player to touch the ball, and as one player explained when I asked her, "I guess the arms look like spider legs or rainbow shaped, but I did not think about it before" (Angela, Field note October 10). For the fourth call, *spikes*, the players are not to touch the ball, just hover over it, ostensibly because the ball has spikes coming out from it, which would cut the hand.

Teaching Malik *Cupcake*

Just before the interaction that transpired in the transcript presented in example 1 below, Devon had run to the center and called rainbow. When Malik did not respond, he just moved on to regular play. As more students joined the game, Malik found himself in the A square, in the position to make the calls for the game. His first move was to run to the center of the square as he had observed before. The other students imitate his move, assuming the call to be near the ball would come soon. When Malik made no call, Aliyah, in a quite calm manner, explains that moving is not enough, some language must go along with the movement. When she uses the call *cupcake* as an example, Malik immediately takes this up. The majority of the calls in four square rely on mutually indexical relationship between language and the body that four square affords, thus in line 1 Malik's action does not obtain because he is presenting only the physical movement. While he certainly heard Devon's words in the prior move, he either did not relate the two, or simply attended primarily to the physical movement.

In lines 3-8 Aliyah explains, “you gotta call it”, ie use the proper language to accompany the movement. While at first glance this may seem like an independent verbal utterance, in line 8 Aliyah imparts important information through her arm gestures. As will be seen throughout the analysis of the call *cupcake* a key element to this call is touching the bottom of the ball, to avoid the (metaphoric) icing on the top getting on your fingers. Beyond a simple gesture, Aliyah’s upward facing palms and scooping arms are the iconic image of the motion for *cupcake*, and reoccurs in different moments throughout the recess.

In the next line, Malik runs to the center calling “CUP CAKE”. Distracted by the boy who is walking through the squares to another game, Malik misses Aliyah’s further explanation of the call. In language that points back to her iconic gesture (line14), she tells Devon that for *cupcake* you don’t touch the top. Aliyah’s language and physical motion work together in a mutually indexical relationship to complete the message that the action for *cupcake* is to touch the bottom of the ball. Aliyah is using the semiotic affordances of four square to complete her utterance efficiently and completely. Example 1, Devon shows that Aliyah’s explanation sufficed.

Example 1: Learning to make a call (55 seconds)

#	Name	Location	Speech	Movement, Gaze Gesture
1	Malik	A square		runs to center and holds ball in the middle
2	Devon,			runs to center crouches at ball
3	Aliyah	C square	You gotta call it	run to center, stands near ball
4	Researcher	at Camera	Yeah, you gotta call it, you can't just do it	
5 6 7 8	Aliyah	C square	you gotta say like umm whatcha wanna do. Like If you wanna do cup cake You gotta say CUP CAKE	walks towards center leans forward bends down to center and scoops arms palms facing up
9	Malik	A square	CUP CAKE	runs to center with ball, holds it on the ground
10	Aliyah	C square		runs and touches bottom of ball
11	Devon	B square		runs and touches top of ball
12 13	Malik	A square	You're out	points to a boy walking through the D square turns to walk back to his corner
14	Aliyah	C square	(…) you're not supposed to touch the top of it	points at Devon glances at the camera
15	Devon		I DIDN"T ***KNOW*** that.	throws arms to side palms up

Figure 6.1

The next time *cupcake* happens, it is Aliyah who is in the A square making the call. In the five minutes since the last round of *cupcake,* four new players have joined the game, two of which, Kerri and Phaedra, are in play. Devon, who was playing the last time *cupcake* was called, is in the line, with Daniel behind him. When Aliyah makes the call, Malik wins the race to the center, but is befuddled when he is called out.

Malik's assertions that "I TOUCHED it BE::fore her" (line 23) and "I touch the TOP" (line 2) display that he did not know the rule. To explain it to him Phaedra, in line 26, replicates similar speech and gestures to that of Aliyah's explanation to Devon (lines 11, 18 & 19). Phaedra's language and body act in parallel, and indeed her physical gesture is the more subtle of the two. Malik does still not understand why he is out, and staunchly stands in his square, protesting the "out". Devon, who was first in line, then takes over the explanation using deictic language and a very clear and pronounced gesture of scooping. His language and gesture work together to complete the message, however they are not indexically related; neither the motion nor the language point to each other. Malik is already turning towards the line, when Phaedra and Kerri chime in, Phaedra with a clear description of the appropriate action and a performance of the iconic gesture (line 34, 35), and Kerri linking the action to the call (line 36).

Example 2 (30 seconds duration)

#	Name	Location	Speech	Movement, Gaze Gesture
16	Aliyah	A square	cupcakes	Runs to center puts ball down
17	Malik Phaedra Kerri	C square B square D square		all run to center, Malik first hands on top of ball, Phaedra second hands on bottom of ball, Kerri third does not touch ball
18	Kerri	D square	**HA**. You're OUT	Skips back in her square
19	Malik	Center		points at Kerri
20	Aliyah	A square	°you're out°	pointing at Malik
21	Phaedra	B square	No, YOU out	point at Malik
22	Malik	Center	I TOuched it.	point at Kerri
23			I TOUCHED it BE::fore her	point at Kerri again
24	Kerri			moves to C square
25	Phaedra &Aliyah	B square A square	No	
26	Phaedra	B square	no but you didn't touch the bottom	Scooping motion with arms, palms up
27	Aliyah	A square	//touch the BO::tom	
28	Malik		No I din. I touch the TOP	moves towards center with hands in pocket
29				looks at Phaedra walking to her corner
30	Devon	center		leaps in front of Malik 's line of sight
31	Devon	center	Because YOU don SUPPOSE to DO THAT	Leaning forward making a scooping motion with his arms-
32			DUDE	then runs off
33	Malik			Turns towards the line
34	Phaedra	B square		smaller scooping motion with arms
35			°you touch the bottom°=	brining hands together in front of her, palms up
36	Kerri	C square	=°You don't grab a cupcake from the TOP°	((out of frame))

Towards the end of the recess period, approximately eleven minutes after example 2, *cupcake* is called again. Daniel, who is as regular a player in the upper recess as Malik is in the lower, is in A now, and two new players, Anton and Missy, who are frequent (if not regular) four square participants, have joined the game. The other three calls that require a player to run to the center of the squares have been used numerous times in the prior eleven minutes of play. Malik is next in line to play when Daniel calls *cupcake*.

Example 3

#	Name	Location	Speech	Movement, Gaze Gesture
37	Daniel	A square	Cupcake	
38	Missy	B square		all run to center, crouch down to
	Phaedra	C square		touch the ball.
39	Anton	D square		Anton touches the top of the ball
40	Malik	In line		Bends down to the level of the players looking at the ball
41	Daniel	A square	(°you touch°)	
42	Malik		HE'S::: ouT	Leaps and runs into D square

What is interesting about this moment is Malik bending down, seemingly to get a better look at the participants' hands on the ball. Daniel's comment is almost unintelligible, and all eyes are focused on the hands on the ball. Anton turns back to the line and simultaneously Malik calls him "out". It would seem that Malik has finally understood the subtly of cupcake, however recess ends before the call is used again.

Malik Teaching *Cupcake*

> The transformation in Malik's playing four square has been quite phenomenal. I have not seen him stomp out of a game crying in many weeks. Quite the opposite, on Thursday [Feb 8] he actually stepped out of the game, even though he was not out, to keep play moving" (memo, Malik)

Over the course of a few months, Malik transformed from a confused and frustrated child in the game, to a competent player. In some ways, this day marked a zenith in his playing and competency as a communicator. He introduced four new calls to the other players, and joyously persisted in explaining them, regardless of their relative uptake. Furthermore, throughout the game, he is managing the players, reminding them which square, they should be in, and when they should be waiting in line. While the stage was set for Malik to take on the role of master player, on this day his confidence and skill, both as a player and a social actor, is buoyed by his experience in the upper recess two days earlier.

Play began in the style typical for the lower grade players at Pacific the year of the study; they employed a modified version of the *cherry bomb,* although they do not use this or any term to designate the mode of play, in which the players pass the ball from square to square as hard as they can. The first instance of *cupcake* (example 4 below), occurs as soon as Malik achieves the A square spot, 2:47 into the game. To explain the motion for this call, Malik relies almost entirely on physical gesture. Four square is a very fast moving game, and 9 seconds is actually quite a long time for a single call like *cupcake* to be realized. Notably it took the other three boys a total of 4.5 seconds to read Malik's body (line 43), minimal language, and gesture and respond to them. Interestingly, the other players do not question this new way of playing. In fact, they agree that the last person to read Malik's physical expressions, Ken, "out". In his instruction, Malik does not carry over

the metaphor of the ball as cupcake, allowing the boys (and himself) to touch the "icing" on top.

Example 4 (9 seconds duration)

#	Name	Location	Speech	Movement, Gaze Gesture
43	Malik	A square	CUP CAKE	runs to center holds ball down
44 45	Malik	at center	°c'mon°	looks up at marcus makes a waving over gesture
46	Marcus	C square		runs to center, (2 sec after Malik), puts hand on top ofball
47	DeAndre	B square		runs to center, (1.5 sec after Marcus), puts hand on top ofball
48	Ken	D square		runs to center, (1 sec after DeAndre), slides into ball
49	James	In line		leans forward, elbows a kimbo, hands on hips
50	Malik	A square	Aww Ken out, (.2) Ken out.	heads back towards serving spot in a square

About 2:21minutes later, after introducing *bus stop* (with limited success), and a version of *spikes* that takes the spike metaphor to the extreme, the game returns to the usual play of modified *cherry bomb.* While the boys are off retrieving the ball from the other end of the playground, Alyssa and Rosa walk up to the four square court and get in line. Malik says, "Ken you out, she in D" and waves Alyssa into the game. The next call is *spike,* which Alyssa watches without moving. Malik and Marcus tell Alyssa she is out, but she just stands in the square. Malik then calls *cupcake.* All the boys run to the center to touch the ball, including Ken, who has cut Rosa in line, and is standing at the edge of the four square court. Alyssa continues to stand in her square staring at the boys. Malik attends to Ken's infraction (line 56), where as Marcus attends to Alyssa, and seems to be saying she should be "out" (line58), not Ken. This galvanizes Alyssa, who protests that she did not know what to do. Malik, perhaps buoyed by the earlier success of *cupcake* uses his words to explain, "Cupcake is that you gotta touch it" (line 61). This is the first verbal definitional effort of a new call. Then, rather than force Alyssa to be "out" for lack of knowledge, he gives her a second chance, calling *cupcake* again. Alyssa runs to the ball (line 63) and it is DeAndre who ends up "out", being last to the ball. Malik directs the players to rotate through the squares, and then tries out *bus stop* again.

Example 5 (14 seconds)

#	Name	Location	Speech	Movement, Gaze Gesture
51	Malik		CUP CAKE	runs to center holds ball down
52	Marcus	C square		runs to center and puts hands on ball=
53	Ken	In line		=runs to center and puts hands on ball=
54 55	DeAndre	B square		=runs to center, lunges back and forth near ball and then touches it
56	Malik	in center	No Ken you gotta get in line	

57	Ken			turns around and goes back to the line
58	Marcus	in center	NO she not touch it	Points to Alyssa
59 60	Alyssa	D square	I don't know what I didn't know I was supposed to	points to self and
61	Malik	A square	Cupcake is that you gotta you touch it	moves back to the edge of his square
62	Malik	A square	CUPCAKE	runs to center with ball
63	Alyssa	D square		runs to center and touches ball
64	Marcus			runs to center and touches ball
65	De Andre	B square	((laughing))	runs to center and touches ball with one hand
66	Ken	In line		runs to center and touches ball
67	Malik	A square	YOU OUT DeAndre OUT	
68	Marcus	C square	Ahhhhhhah you're out boy!	sings arm over head in the direction of DeAndre

Bus stop and *cupcake* alternate for a while, with *bus stop* taking a lot of time in each instance to explain. *Cupcake*, played without the metaphorical "icing" and attendant provision to touch the bottom of the ball is called two more times before recess ends. Both instances are quick, and the player who touched the ball last, quickly acknowledged the "out", and returned to the line.

Comparison

The upper and lower grade cultures around four square have numerous differences. For instance the upper grade students tend to spend more time explaining how to play, however they are not very patient when they feel they are not being understood. They also rely in various vocalizations to try to manipulate the game. Players who are not in the A square will often repeat various calls they would like to have used. Lower grade students tend to take a longer time to resolve any conflicts over who is "out" or what rule is in play. In addition, while both upper and lower grade students will often do dance steps while in the square, waiting for a new round of play, this is much more frequent in the lower grade students. Here I will examine the variation in how the students engage their body and coordinate it with language, in particular, when explaining a call. The complexity with which youth playing four square learn to employ talk and bodily posture is made clear when the transcripts of play are broken down into the relative use of different semiotic affordances. These differences are highlighted by Malik's experience as novice in the upper grade recess and then expert two days later in the lower grade recess. One similarity to this event in both the upper and lower games is the pattern of apprenticeship. In each case the first time the call is used it is not fully grasped by all the players, although for different reasons (lines 5-8, & 43-50). The second instance of *cupcake*, a more complete explanation of how the move works is required by the players involved. Then no further instances of cupcake require explanation as to who will be

"out". By looking closely at the first and second uses of cupcake in each game, I will explore both the semiotic affordances the youth engage.
As discussed in chapters 4 and 5, four semiotic affordances have been isolated in connection with the utterances involved in four square. To recap these categories are (1) Simple Independent , (2) Parallelism: in which the body and language communicate the same information, (3) Mutually indexically related: in which the body and language point to each other in some way, (4) co-constitutive, not indexically related: in which the body and language each carry important information, but do not point to each other. To facilitate a comparison the upper and lower grades, the transcripts below have been labeled with the number above that corresponds to the utterance.

Introduction of the call

Table 6.1: Malik's first experience with Cupcake

#	Name	Type of utterance	Speech	Movement, Gaze Gesture
3	Aliyah	1	You gotta call it	run to center, stands near ball
4	Researcher	1	Yeah, you gotta call it, you can't just do it	
5	Aliyah	3	you gotta say like umm	
6			whatcha wanna do.	walks towards center leans forward
7		1	Like If you wanna do cup cake	
8		4	You gotta say CUP CAKE	bends down to center and scoops arms palms facing up
14	Aliyah	3	(…out) you're not supposed to touch the top of it	points at Devon glances at the camera
15	Devon	1	I DIDN"T ***KNOW*** that.	throws arms to side palms up

In lines 3 & 4, Aliyah and the researcher explain in simple terms to Malik that the A player needs to say what is expected of the other players, to "call it". Aliyah sensed that this explanation might not be enough, so she gives an example, grounding the "watcha wanna do" with a movement towards the center of the squares. This is a way of informing Malik that any move that has the player running to the center with the ball requires a statement. The "do" is the walking, and in this way, the two utterances point to each other and work together to complete the message. She goes on to provide the example of *cupcake,* (line 8) and displays it by bending down and scooping her hands in the iconic *cupcake* posture (figure 1). Line 8 represents a very complex utterance, where the physical position of Aliyah's hands and the term *cupcake* work together to complete the utterance, however they do not point to each other. Unlike the previous utterance, in which walking (a thing that is done) and "do" are easy to associate, there is nothing inherent in either the term *cupcake* or Aliyah's movement to lead the observer to associate the two. This is seen immediately in Devon's actions in the next event (he touches the top of the ball on *cupcake*) as well as in Malik's "out" in example 2, and in his

explanation of the call to his peers two days later, in example 3. The boys miss the subtly of the scooped hands, the full metaphor of the cupcake, and the imaginary icing.

Malik's lack of uptake of the physical cues Aliyah provides, is interesting in light of his way of "teaching" the cupcake to his peers. In the initial presentation, he uses only simple body postures and gestures, and relies on the other players' ability to imitate him, and then derive the appropriate meaning from this imitation. In fact all of the utterances during this event in the single primary modality. The most complex is the parallelism observed (figure 2) below, when Malik says "come on" and waves his hand towards Marcus (line 45).

Both of these examples of initiating players into using *cupcake* rely on physical gesture and posture to communicate important information. However the lower grade example is almost completely bodily driven, in terms of both the explanation, and the up take. All the utterances in lines 51-57, are simple independent utterances. In addition, it is not just the "expert" who makes meanings using their body, but the novices as well, who read the actions and then respond with their own bodies (figures 3 & 4).

The differences between how youth in upper and lower recess employ the semiotic affordances of four square becomes even more apparent in the next set of examples, where a further explanation of *cupcake* becomes warranted.

figure 6. 2 "come on"

figure 6.3 "response"

figure 6.4 "ken's out"

The explanation: *Cupcake* a Second Time

In each of the games a few minutes after the first use of *cupcake* the call comes up again, however the situation and players involved negotiate a more complete and descriptive definition of what the call *cupcake* requires, and in the upper recess, even a justification.

Table 5.7: Explanatory utterances, Upper recess, from Example 2

#	Name	Type of utterance	Speech	Movement, Gaze Gesture
26	Phaedra	2	no but you didn't touch the bottom	Scooping motion with arms, palms up
27	Aliyah	1	//touch the BO::tom	
31	Devon	4	Because YOU don SUPPOSE to DO THAT	Leaning forward making a scooping motion with his arms-
32			DUDE	then runs off leaving the game
34	Phaedra	2		smaller scooping motion with arms
35			°you touch the bottom°=	brining hands together in front of her, palms up
36	Kerri	1	=You don't grab a cupcake from the TOP	((out of frame))

Table 5.8:Explanatory utterances, Lower Recess, from Example 5

#	Name	Type of utterance	Speech	Movement, Gaze Gesture
58	Marcus	3	NO she not touch it	Points to Alyssa
59	Alyssa	2	I don't know what	points to self
60			I didn't know I was supposed to	stands still In the square
61	Malik	1	Cupcake is that you gotta. you touch it	moves back to the edge of his square

In terms of message content, the most significant difference between the Upper and Lower recess explanations of *cupcake* is the transference of the metaphor. The rule of touching the bottom of the ball was stated four times, and the iconic *cupcake* posture was presented four times as well and then finally Kerri spells out the connection between the movement and the name stating: "you don't grab a cupcake from the TOP". Yet Malik does not include this piece when presenting the rule to the students in the lower grade. Although it is impossible to know exactly why, weather it was a conscious decision or whether he simply forgot, it is notable. Later in the game, when he introduces *spikes* he actually strengthens the metaphor of the ball as spiked, dropping it on the ground and stepping away from it, so he did recall some of the finer points to the calls he learned.

Perhaps the most important difference in terms of the communicative modalities engaged is the varied use of the body as a resource for communication. The upper grade students

use their bodies primarily to strengthen the verbal cues (2, parallelism). They connect the word bottom to up faced palms in a scooping motion with their arms, exaggerating the actual motion in play: which calls for the, hand on the bottom of or under the ball. This is critical information, and in general, when explaining calls the upper grade students more frequently drop the verbal cues or use them secondarily to add to their gestures and postures. More explicitly descriptive language, such as Kerri's explanation in line 36 typically appears after numerous turns have occurred in attempting to explain a rule, or to argue an "out". The lower grade students tend to either use simple utterances that rely on a single primary mode of communication, such as Malik's statement in line 61 "…you gotta touch it" or in the players non-verbal presentation and uptake of *cupcake* in lines 51-56. Typical coordination between language and the body occurs when the youth use the body to ground, or fix the meaning, of ambiguous deictic language. In these cases, such as Marcus's fixing of "she" in line 58 by pointing to Alyssa.

Mutually indexical utterances like Marcus's in lines 58 & 68 or Aliyah's and Phaedra's in lines 20 and 21, constitute the most common semiotic affordance utilized in the game, occurring hundreds of times in a short recess period. However, when play is held up by the need for explanation or, as will be discussed in the next chapter, an argument develops, the youth communication patters shift. As seen above they tend to either focus on a single modality, which they use to present more complex and sustained utterances, or the utterance becomes parsed out such that some of the information is contained in the body postures and gestures and other is contained in their talk.

Conclusion

In some ways, the differences in the communicative strategies between upper and lower grade students while playing four square can be understood as a mode of learning. The more competent the youth become at the game, the more sophisticated their coordination of meaning making across modalities. Thus, the Upper grade students who have mastered a particular call can simultaneously explain and display its properties. Furthermore, perhaps out of a desire for efficiency (recess games are nothing if not fast paced) the youth will use their bodies to impart some of the relevant information, and their talk other. These strategies take more than simple performative ability, but also require the youth to become swift readers of all the information being presented.

The youth driven culture of recess allows for very different ways of communicating the same information in the same game. This might not sound so radical, until you think about classrooms, the physical constrictions of classroom practices and the nature of student assessment tools.

Chapter 7:
Conclusion

Summary of Study

This dissertation set out with the goal of making apparent the important learning that happens during recess, between peers and "near peers", while engaged in the playground game four square and then connecting this learning to literacy theory and language learning practices in schools. To begin, playground games, including but not limited to four square, hopscotch, jump rope games, tetherball, hand ball, were defined as a particular class of activities that shared properties with both fantasy play and sports activities, yet remained distinct. By drawing on observational data of recess time activity, it was shown that playground games can be understood as distinct from sports and fantasy play based on how the games engage with four dimensions of influence: rules and customs, the built space, participant structures, and time. It was shown (see figure 4.1 above) that along these dimensions of influence a higher degree of variability is found in playground games than in sport, and a lower degree of variability than in fantasy play. It was put forth that this particular type of moderate variability resulted in the games promoting a communicative space not found in other places on the playground or in the classroom. One element of the communicative space was defined through the notion of *semiotic affordances.*

Drawing on the work of Charles Sanders Peirce and James Jerome Gibson, the notion of semiotic affordances was developed. This term links Pierce's notion of entry into representational meaning (firstness), to Gibson's notion of the way objects and (in a more modern understanding) structures are perceived to be engaged with. Thus the semiotic affordances provide a means to connect the semiotic and material perception. Essentially, this works to categorize the most irreducible meaning making materials afforded by playground games. Focusing on the game four square and the elements of language and the body, four semiotic affordances (Simple independent utterances, Parallelism, Mutually indexical, and Co-constitutive, non indexical) are delineated and defined. These semiotic affordances are then drawn upon to elucidate the interactions during play contained in the data set.

The final two data chapters present fine grained analysis of two particular rule modifications used in the game four square: *cherry bomb* and *cupcake*. The *cherry bomb* examines an argument about a particular volley in the game. The question the girls debate is whether or not the volley counts as a *cherry bomb,* which when decided, will indicate who should be "out" for that round of play. This chapter further refines the definition of the different semiotic affordances, and displays how they are used by the youth. In addition, youth are shown to use physical gesture and posture on the level of talk, and to seamlessly move between and weave together the two modes of expression. Finally,

Phaedra's prefacing her final line of talk in the argument, with iconic gestures performed while facing away from the group, is presented as an example of using the body to think, or perhaps as a pre talk compositional element.

In the *cupcake* the focus is on how youth of the younger student's engage the semiotic affordances of four square differently than the older students. To highlight this difference, one recess period from each grade group (upper:4^{th} & 5^{th} grades, lower: 3^{rd} & 4^{th}) are compared. To facilitate this comparison, the experience of a single younger grade student, Malik, entering the upper recess period and then returning to his regular lower recess was chosen. Mohammad was an experienced four square player, indeed one of the best in the lower recess play group. However, the game was played differently enough by the upper grade group, that Mohammad essentially became a novice. This provided many moments of explanation, teaching, and communicative frustration during a short period. Mohammad then took the new ways of playing and taught them, or versions of them, to the lower grade play group. This allowed for a comparison across grade groups in regards to communicative strategies, engagement with different semiotic affordances, and playing preferences. One way of understanding these differences is in a developmental sense; that as the youth gain competency at the game and as communicators, their coordination of talk, gesture, and bodily posture became swifter, and increasingly complex. In addition, the actual rules engage more elements of the game simultaneously. In more advanced play, youth need to coordinate naming conventions, with bodily actions, manipulation of the ball and engagement with the build space.

As presented through the literature review in Chapter 2, this study has implications for notions of development, literacy theory and practice, and the understanding of peer cultures in the learning process. The unique view point that this study presents results largely in its focus on how youth engage their bodies as a communicative tool. There are real implications from this work that bear on notions of embodiment and how educators can understand both recess time activities on the playground as well as movement in the classroom, which are explored at the end of this chapter. To begin, I will draw on the findings presented in the three data chapters to elucidate the study's bearing on the different areas of inquiry it intersects.

The Unique Contributions of Playground Games to Development

Perhaps the most important finding of this study related to learning, is in the theory presented positing playground games as existing on a continuum of activity. In a simplistic sense, playground games could be understood as part of a linear trajectory, from the individual and then collective fantasy play of children, through playground games, to the sports and organized games of older youth and adults. While appealing in its simplicity, assuming a neat trajectory of development undermines the dynamic relationships between and among types of play, and obscures the hybrid nature of play on playgrounds. While each type of play has signature characteristics, the residue of these characteristics (or the precursors of them) are found in the other types of play. Furthermore, this is not a

progression like moving from breast to bottle to sippy cup to coffee cup, in which at some point there is no return to the beginning. Adults will often engage in all types of play when provided the opportunity, either through structured activity or engagement with a child. Yet there are critical ways in which these different activities build upon each other. This is particularly noticeable in the representational and communicative practices they entice participants to use. Thus, in the realm of semiotic development, playground games can be seen as having a potentially important role for some youth.

This study showed how the game four square has unique communicative affordances, many of which can be seen as typical to playground games as a group of activities. Each of type of play (fantasy play, sports, playground games) has different defining characteristics, which influence the types of communicative affordances they provide players. The close examination of four square, as an exemplar playground game, displayed the ways in which the game allows and encourages youth to use their body as a communicative tool, on par with talk. While many practices engage the body in meaning making, it is often subliminal or subordinated to another modality. When, for instance, is a deictic phrasing and iconic gesture utterance an acceptable way to make a point, let alone win in a debate? Yet, as Chapters 5 and 6 show, these types utterances are the fabric of stance creation in four square. Furthermore, there is evidence that some youth, for example Phaedra during the debate on *cherry bomb*, use their body as a way to scaffold their talk. The complex interaction between talk, gesture, the built space, rules and customs is unique to playground games, and may play an important role in youth's development of understanding how meaning is made through symbolic objects. As Piaget remarked in his study of marbles (1962), these types of games are also a way youth come to understand culture as not a given, but an act of human creation. While Piaget found this important for moral development, this study showed that these acts are reliant on developing communicative competencies; The very type of competencies which schools endeavor to impart to youth.

Finally, as Chapter 5 indicates, significant differences were found in the way upper and lower elementary school youth engaged the semiotic affordances of four square. While not an express focus of this study, the examples in Chapter 5 indicate that upper elementary youth have more turn sequences in their debates and explanations, and that lower elementary youth rely more heavily on physical gestures and bodily postures to convey information. This is also reflected in the styles of modification to play that each group engages; upper elementary youth utilize the physical and linguistic creative capacities of four square to modify play, whereas the lower elementary youth (as remarked upon by Mrs. C., see chapter 4) leveraged the physicality of the game and the structure provided by the built space to realize the creative capacities of four square.

Argument for Accounting for the Body in Literacy Theory and Practice

The vast majority of studies around language learning and literacy focus on textually oriented activities. Even in a whole language approach towards literacy, the focus is still

on talk and words. Yet we know that as children acquire the tools for communication, their initial orientation is not towards written text. Furthermore, fully literate, textually competent adults, often continue to utilize non written resources, both as complete representational acts and as tools, or ways into, textual representation. People draw, sculpt, design, mime, and act out their ideas before rendering them into the communicative mode of power: alphabetic text. For many children, it is well into their school years before alphabetic text is a comfortable mode of expression. These children are not served well by school systems which rely heavily on narrow standardized measures of assessment, which are inherently linked to alphabetic text. Through close examination of the communicative practices of youth engaged in four square, this study has shown that complex representational work and meaning making is being done by the body of youth at play. There are two primary implications for literacy theory: (1) a call to account for the body as a representational resource on the level of alphabetic text, and (2) a need to incorporate the role of the body as a tool for developing semiotic awareness, beyond the years dominated by fantasy play (preK-1st grade).

In examining four square, this study revealed the body to be used as a representational resource, one that needs to be "written" and "read". On a simple level this is displayed by the part of the utterance which the body performs, outside of talk. In the example from chapter 4, Devon explained the essential element of the move *cupcake* to Malik through a complex utterance that would be unintelligible without the "reading" of his hand gesture and his stance at the center of the squares. Again, in Chapter 4, Malik initially "writes out" the move *cupcake* for his peers without any significant talk, relying on posture and gesture- which the boys readily "read". These examples are notable not simply due to their reliance on other communicative resources than talk, but also because of the type of communicative act in which they take place: one of learning. In both these situations one player (in the first account Devon, and in the second Malik) is teaching a new way of playing to the other participants. Thus the body is not being used simply as an indexical element to be grounded by other contextual information, in these instances the body is the primary semiotic referent to the interaction, in the way that these words are to this page of writing. Thus it becomes apparent that the body can be understood as similarly important as a meaning making resource to talk and alphabetic text. Furthermore, the data from this study also contributes to the argument against alphabetic text as necessary for abstract representational thought work. A common argument for the primacy of alphabetic text over other representational forms is the idea that alphabetic text *exclusively* allows for abstract thought work. Yet Phaedra's iconic gestures present one instance of a compelling argument for the notion that the body very well may be used as a tool for reflective, abstract thought work.

Much of the communicative work in four square revolves around understanding how the ball can, metaphorically, stand for many things. It can be a cupcake with icing, have spikes coming out of it, be slammed like a cherry bomb, and so forth. Initially, as youth gain skill at the game, they show an understanding of how the trajectory of the ball (over the head, on the line, out of bounds, etc) impacts their status ("in", advancing, or "out") in the

game. A further hallmark of youth's progress from novice to expert, is their ability to manipulate these metaphors, to process them quickly, and react appropriately. To a casual observer, these interactions can appear fluid and obvious. However, the introduction of a non local player or a novice player displays the deep complexity underlying these action-result and metaphorical dynamics, as was apparent in both the interactions presented in Chapters 4 and 5. In achieving competency in games such as four square, youth further their notions of how things stand for other things, i.e. a native notion of semiotics. Thus, at the very least, playground games provide an opportunity for youth to strengthen and broaden their semiotic awareness, and they may, in fact, actually provide essential access to this awareness for some youth.

For literacy theory, this study is a step towards mapping a way to conceptualize young student's engagement with literacy practices, which could account for the way they use their body as a resource. For education, this could lead to the development of curricular interventions that address the needs of physically oriented and motivated youth. If literacy is, as I suggest, a deeply embodied practice, and we accept that the body, as a primary site of perception, is different for children than it is for adults, it stands to reason that a nuanced notion of how literacy is practiced by children would vary at critical developmental stages- and perhaps quite significantly from an notion relevant for adults or matured people.

The Importance of looking at Peer Culture as a Site of Learning

This study implicitly argues for the importance of studying the learning that takes place among peers (or near peers as defined above in chapter 2), in natural (not clinical) settings, during freely chosen activities. As youth lives become increasingly filled with structured activities, the free play among peers, like that present in recess, become less frequent. Furthermore, as youth free time interactions increasingly involve some sort of technology (be it a handheld device, a computer or a game console) the types of opportunities for physical expression on the level of that is seen in playground games are also reduced. It is not technology per se that is a problem, but the way in which some games and certainly much video watching, controls and limits the range of creative capacity and the modalities of engagement. There are two pieces here. First, if we posit that un-mediated co-presence is an important part of developing social and communicative capacities, then recess becomes an exceptionally important part of youth's lives. It may be one of the only times that youth have the chance to congregate with their peers, in a space that has a safety structure, where they are relatively free to choose how and with whom to spend their time. Second, this work presents a call to technology enabled game creators, to think about ways to incorporate the principles of playground games, particularly the interactive rule creation, into their game environments.

There is also a methodological argument imbedded within this study that relates to understanding peer culture. This study overwhelmingly relies on close quarter videotaping

and subsequent transcription as data. Although not discussed at length, (in part because of the nature of the textual format of the dissertation) the use of the helmet camera allowed for a refinement of transcript that was essential for pinpointing gaze, capturing talk, and constructing the turns of talk. In choosing these methods, as opposed to survey and interview data, the problems that come from reported data are avoided. Recess happens at school, and in schools the power dynamic between adults and youth is pronounced. The influence of the idea of a "correct" answer becomes impossible to avoid. That is not to say there is no place for interview and survey data in the study of youth culture, however, I assert that if the desire is to understand how peers influence each other and create their own culture, intervention must be minimized to the degree possible.

Since the groundbreaking work on language socialization by Ochs and Schieffelin (1984;1986), studies investigating the reciprocal nature of linguistic and cultural transmission have blossomed. Over time this work has expanded to examine how peers influence each other, complicate how novice and experts exchange information, and examine how lower status learners instruct higher status. However there is still a paucity of work that looks at peer interactions in schools as contributive towards the learning process.

Implications for Schools, Teaching, and Classroom Practice

Playground games, and recess, provide a space during the school day in which youth can engage in meaningful communicative activities in ways which they choose. At recess youth can provide non verbal responses and explanations, repeat an argument stance as many times as they please, or as their group will tolerate. They can be novices or experts and can move rapidly between these states as the games morph and the players change. Perhaps most importantly they can be participants in the creation of a culture. Playground games, and specifically four square, extend these properties in important ways. They are, much like recess itself, semi-structured activities with rules meant to be modified. This creates an opportunity for a type of engagement with semiotic material and meaning making not provided in classrooms. Coupled with the highly motivational and physically engaged elements of play, playground games become a rich site of learning. As such this study asserts that not only should recess be continued at schools, but also it should be supported such that youth can engage in games like four square. This means providing a space and time that is kept safe through adequate, but not overbearing, adult supervision and that is supplied with sufficient equipment. The adult supervision needs to be supported by explicitly communicated and practiced school behavior norms. These types of norms are typically taught in P.E. classes, which have been all but eliminated from public and private elementary schools. While not an express element of this study, there is a strong indication that perhaps some of the increase in bullying on school playgrounds, may in part be due to a lack of knowledge as to how to handle the freewheeling, physically interactive space of recess.

The data clearly show youth, when given the opportunity, will use their body as a communicative tool on par with talk. There is no academic curriculum that I know of in the 1-12 grade years which capitalizes on this fact. Since classrooms themselves are not set up for expressive physical movement, one important step to empowering teachers to provide their students with opportunities such as those that four square provide, is to instruct them on outdoor behavior management techniques. In my experience, teachers are hesitant to take youth outside, because they feel the youth get immediately out of their control, and because the environment is less stable. This also means, successful out of door academically orientated activities will require curriculum that addresses these concerns and provides means to mitigate them.

The overwhelming classroom bodily norm is stillness. In general, fidgeting, standing, walking and any other active movement on the part of elementary school students result in some form of punishment. This study, the youth's use of iconic gestures to support their communication, brings into question what this movement is about. Perhaps some of youth's squirming is not simply excess energy or a desire for attention. Perhaps it is a manifestation of a desire to access the body as a tool for understanding. For what is incomprehensible word, if not a bunch of squiggly lines, and what would be a motion more iconic of squiggling lines than a squirming body?

Directions for Future Research/Final Reflection

This study could be extended, and the principles laid out in it further developed, through continued study of recess time and playground activities. It would be interesting to see how a similar study of other games, or the study of four square in multiple locations, confirmed, refuted or simply enhanced the principles of interaction discovered here.

For certain, youth use their bodies in creative ways to re-appropriate the learning space while at their desks, on the playground, and even in front of the computer. Indeed it is my ardent belief that the body is a critical tool in children's acquisition of literacy, and thus provides an important entry point for investigation into theory and creation of curriculum. Thus, as alluded to above, one natural extension of this study would be to create curriculum that capitalizes on students' desire to use their body on par with other communicative modalities. Curriculum of this sort could take many forms and engage actual playground games, or, extrapolating from the principles outlined in Chapter 4, new games that encourage thoughtful engagement with semiotic material from multiple modalities could be created. This study is primarily an observation of the learning around the communication that is already occurring in playground games. However, the principles here have great potential to inform science and math curriculum as well. In many ways the experimental nature of science lends itself to physical activities, and games often involve different forms of counting and basic arithmetic.

In a less pragmatic sense, but perhaps equally important, this work is one step towards developing a of a child specific notion of embodiment, one that could influence current notions how the body relates to communication, thought and culture.

References

Adler, P. A., & Adler, P. (1998). *Peer Power: Preadolescent Culture and Identity*. Rutgers University Press.

Austin, J. L. (1962). *How to do things with words*. Harvard University Press.

BBC news. (2007, May 6). No playground for "super school." *BBC*. Retrieved from http://news.bbc.co.uk/2/hi/uk_news/england/cambridgeshire/6629655.stm

Bourdieu, P., & Thompson, J. B. (1991a). *Language and symbolic power*. Polity Press Cambridge, Mass.

Bourdieu, Pierre. (1976). The school as a conservative force: scholastic and cultural inequalities. In R. Dale & G. Esland (Eds.), *Schooling and Capitalism: A sociological reader*. Routledge.

Bourdieu, Pierre. (1977). *Outline of a Theory of Practice*. Cambridge UniversityPress.

Bourdieu, Pierre, & Passeron, J. C. (1977). *Reproduction in Education, Society and Culture*. Sage Publications.

Bruner, J. S. (1968). *Toward a Theory of Instruction*. New York: W. W. Norton & Co., Inc.

Butler, J. (1997). *Excitable speech: a politics of the performative*. Psychology Press.

Carey,J., & Kress, G..(2003). *Multimodal Literacy.* P.Lang

Chudacoff, H. P. (2007). *Children at Play: An American History*. NYU Press.

Coakley, J. J. (1990). *Sport in society*. Times Mirror/Mosby College Pub.

Cook-Gumperz, J. (1977). Situated instructions: Language socialization of school age children. *Child discourse*, 103-121.

Corsaro, W. A. (1985). *Friendship and peer culture in the early years*. Ablex Publishing Corporation.

Coughlan, S. (2007, September 25). Generation of "play deprivation." *BBC*. Retrieved from http://news.bbc.co.uk/2/hi/uk_news/education/7007378.stm

Dewey, J. (1946). Peirce's Theory of Linguistic Signs, Thought, and Meaning. *The Journal of Philosophy*, *43*(4), 85-95.

Dewey, J. (1998b). *Experience and Education*. Kappa Delta Pi.

Duranti, A. (1997). *Linguistic anthropology*. Cambridge University Press.

Duranti, A. (2006). *A companion to linguistic anthropology*. Wiley-Blackwell.

Duranti, A., Goodwin, C., & Goodwin, M. H. (Eds.). (2006). Chapter 10: Participation. *A companion to linguistic anthropology*. Wiley-Blackwell.

Evaldsson, A. C. (1993). *Play, disputes and social order: everyday life in two Swedish after-school centers*. Institute of Tema Research, Linköping Universitet.

Evaldsson, A. C. (2003). Throwing like a girl? Situating gender-differences in physicality across game contexts. *Childhood*, *10*(4), 475-497.

Evaldsson, A. C., & Corsaro, W. A. (1998). Play and Games in the Peer Cultures of Preschool and Preadolescent Children: An Interpretative Approach. *Childhood*, *5*(4), 377.

Finnegan, R. (2002). *Communicating: The Multiple Modes of Human Interconnection*. Routledge.

Foucault, M. (1995). *Discipline & punish*. Knopf Doubleday Publishing Group.

Foucault, M. (2008). *The History of Sexuality: The Will to Knowledge*. Penguin Group.

Garrett, P. B., & Baquedano-López, P. (2002). L ANGUAGE S OCIALIZATION: Reproduction and Continuity, Transformation and Change. *Annual Review of Anthropology*, *31*, 339-361.

Gee, J. (1999). The New Literacy Studies and the" Social Turn." Opinion papers retrieved from Http:eric.ed.gov.

Geertz, C. (2002). Thick description: Toward an interpretive theory of culture. *Culture: Critical Concepts in Sociology*, 173.

Gibson, J. J. (1986). *The ecological approach to visual perception*. Lawrence Erlbaum.

Gibson, J. (1977). The Theory of Affordances. *Perceiving, Acting, and Knowing: Toward an Ecological Psychology*. New Jersey: Lawrence Erlbaum.

Gilmore, P. (1986). Sub-rosa literacy: Peers, play and ownership in literacy acquisition. *The acquisition of literacy: Ethnographic perspectives. Norwood, NJ: Ablex*.

Goffman, E. (1959). *The Presentation of Self in Everyday Life*. Anchor Books.

Goffman, E. (1961). *Encounters: two studies in the sociology of interaction*. Bobbs-Merrill.

Goffman, E. (1979). Footing. *Semiotica*, *25*(1-2), 1-30. doi:10.1515/semi.1979.25.1-2.1

Goodwin, C. (2000). Action and embodiment within situated human interaction. *Journal of Pragmatics*, *32*(10), 1489-1522.

Goodwin, M. H. (2006). *The Hidden Life of Girls: Games of Stance, Status, and Exclusion*. Blackwell Publishing.

Goodwin, M. H., & Goodwin, C. (2000). Emotion within situated activity. *Communication: An arena of development*, 33-53.

Goodwin, M. H., Goodwin, C., & Yaeger-Dror, M. (2002). Multi-modality in girls' game disputes. *Journal of Pragmatics*, *34*(10-11), 1621-1649.

Goodwin, M. H. (1990). *He-Said-She-Said: Talk As Social Organization Among Black Children*. Indiana University Press.

Goody, J., & Watt, I. (1963). The Consequences of Literacy. *Comparative Studies in Society and History*, *5*(3), 304-345.

Grugeon, E. (2000). Girls'playground language and lore. In E.Bearne, & V. Watson (Eds.), *Where Texts and Children Meet*. Routledge

Halliday, M. A. K. (1978). *Language As Social Semiotic: The Social Interpretation of Language and Meaning*. London: Edward Arnold.

Heath, S. B. (1983). *Ways with Words: Language, Life, and Work in Communities and Classrooms*. Cambridge UniversityPress.

Henricks, T. S. (2006). *Play Reconsidered: Sociological Perspectives on Human Expression*. University of Illinois Press.

Hughes, L. A. (1995). Children's Games and Gaming. In Brian Sutton-Smith (Ed.), *Children's folklore*. Taylor & Francis.

Huizinga, J. (1955). *Homo Ludens: A Study of the Play-Element in Culture*. Beacon Press.

Hull, G. A., & Nelson, M. E. (2005). Locating the Semiotic Power of Multimodality. *Written Communication*, *22*(2), 224-261.

Hymes, D. H. (1963). Objectives and concepts of linguistic anthropology. In D. G. Mandelbaum, G. W. Lasker, & E. M. Albert (Eds.), *The teaching of anthropology* (p. 275).

Hymes, Dell H. (1964). *Language in Culture and Society: A Reader in Linguistics and Anthropology*. Harper & Row.

Iedema, R. (2003). Multimodality, resemiotization: Extending the analysis of discourse as multi-semiotic practice. *Visual communication*, *2*(1), 29.

Iedema, R. A. M. (2003). Multimodality, resemiotization: extending the analysis of discourse as multi-semiotic practice. *Visual Communication*, *2*(1), 29-57.

Jarrett, O. S. (2002). Recess in Elementary School: What Does the Research Say. *Research Quarterly for Exercise and Sport*, *71*(3), 240-248.

Jensen, K. E. (2004). Peirce as Educator: On Some Hegelisms. *Transactions of the Charles S. Peirce Society*, *40*(2), 271-288.

Jewitt, C. (2003). Re-thinking Assessment: multimodality, literacy and computer-mediated learning. *Assessment in Education: Principles, Policy and Practice*, *10*(1), 83-102.

Kress, G. R. (2003). *Literacy in the New Media Age*. Routledge.

Kress, G., & Leeuwen, T. van. (2001). *Multimodal Discourse: The Modes and Media of Contemporary Communication*. Arnold.

Kulick, D., & Schieffelin, B. B. (2004). Language socialization. *A companion to linguistic anthropology*, 349–368.

Kyratzis, A. (2004). Talk and Interaction Among Children and the Co-Construction of Peer Groups and Peer Culture. *Annual Review of Anthropology*, *33*(1), 625-649.

Luke, A. (1992). The Body Literate: Discourse and Inscription in Early Literacy Training. *Linguistics and Education*, *4*(1), 107-29.

M. H. Goodwin, & C. Goodwin. (2000). Emotion within situated activity. *Communication: An arena of development*, 33-53.

M.H. Goodwin. (2006). *The Hidden Life of Girls: Games of Stance, Status, and Exclusion*. Blackwell Publishing.

Marple, S., & Stornaiuolo, A. (n.d.). *Designful Play: Qualities of Youth Engagement with and International Social Networking Site*.

Merleau-Ponty, M. (1962). *Phenomenology of Perception: An Introduction*. Routledge.

Montessori, M. (1914). *Dr. Montessori's own handbook*. Frederick A. Stokescompany.

Ochs, E., & Capps, L. (2001). *Living narrative: Creating lives in everyday storytelling*. Harvard Univ Pr.

Ochs, E., & Schieffelin, B. (1984). *Language Acquisition and Socialization: Three Developmental Stories and Their Implications. Culture Theory: Essays on Mind, Self;*

and Emotion (RA Schweder and RA LeVine, eds.). Cambridge: Cambridge University Press.

van Oers, B. (1994). Semiotic activity of young children in play: the construction and use of schematic representations. *European Early Childhood Education Research Journal*, *2*(1), 19–33.

Olson, D. R. (1977). From Utterance to Text: The Bias of Language in Speech and Writing.

Ong, W. J. (1967). *The Presence of the Word: Some Prolegomena for Cultural and Religious History*. Yale University Press.

Ong, W. J. (1982). *Orality and Literacy: The Technologizing of the Word*. Routledge.

Opie, I. A., & Opie, P. (1969). *Children's games in street and playground: chasing, catching, seeking, hunting, racing, duelling, exerting, daring, guessing, acting, pretending*. Oxford: Clarendon Press.

Opie, I., & Opie, P. (1987). *The lore and language of schoolchildren*. Oxford University Press.

Opinions on the NBA's Dress Code Are Far From Uniform - washingtonpost.com. (2005, October 23). . Retrieved November 27, 2010, from http://www.washingtonpost.com/wp-dyn/content/article/2005/10/22/AR2005102201386.html

parallelism (figure of speech) -- Britannica Online Encyclopedia. (n.d.). . Retrieved December 2, 2010, from http://www.britannica.com/EBchecked/topic/442888/parallelism

Peirce, C. S. (1931). *Collected Papers of Charles Sanders Peirce* (Vol. 1). Cambridge, MA: Harvard University Press.

Pellegrini, A. D. (1995). *School Recess and Playground Behavior: Educational and Developmental Roles* .SUNY Press.

Pellegrini, A. D., & Smith, P. K. (1993). School recess: Implications for education and development. *Review of Educational Research*, *63*(1), 51-67.

Philips, S. U. (2001). Participant structures and communicative competence: Warm Springs children in community and classroom. (A. Duranti, Ed.)*Linguistic anthropology: A reader*, 302–317.

Philips, Susan Urmston. (1983). *The Invisible Culture: Communication in Classroom and Community on the Warm*. Longman.

Piaget, J. (1966). *The Moral Judgment of the Child*. Free Press.

Piaget, J. (1976). *The Grasp of Consciousness: Action and Concept in the Young Child*. Harvard University Press.

Pressler, M. W. (2006, June 1). Schools, Pressed to Achieve, Put the Squeeze on Recess. *The Washington Post*, A01.

Rogoff, B. (1990). *Apprenticeship in Thinking: Cognitive Development in Social Context*. Oxford University Press.

Sacks, H. (1984). Notes on Methodology. In J. M. Atkinson & J. Heritage (Eds.), *Structures of social action: studies in conversation analysis* (pp. 21-27). Cambridge University Press.

Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language*, *50*(4), 696–735.

Sage, G. (1990). *Power and Ideology in American Sport* Human Kinetics Books.

Saussure, F. D. (1916). *Course in General Linguistics*. Open Court Publishing.

Schieffelin, B. B., & Ochs, E. (1986). Language Socialization. *Annual Review of Anthropology*, *15*(1), 163-191.

Schütz, A., & Wagner, H. R. (1970). *On phenomenology and social relations: selected writings*. University of Chicago Press.

Scribner, S. (1984). Literacy in three metaphors. *American Journal of Education*, *93*(1), 6–21.

Scribner, Sylvia, & Cole, M. (1981). *The Psychology of Literacy*. Harvard University Press Cambridge.

Sindelar, R. (2004). CEEP. Popular Topics. Recess: Is It Needed in the 21st Century?, U of I. Retrieved July 21, 2008, from http://ceep.crc.uiuc.edu/poptopics/recess.html

Stein, P. (2004). Representation, Rights, and Resources: Multimodal Pedagogies in the Language and Literacy Classroom. In B. Norton & K. Toohey (Eds.), *Critical Pedagogies and Language Learning* (p. 376). Cambridge UniversityPress.

Street, B. (1984). *Literacy in Theory and Practice*. Cambridge UniversityPress.

Sutton-Smith, B. (1966). Piaget on play: A critique. *Psychological Review*, *73*(1), 104–110.

Sutton-Smith, B. (1990). School Playground As Festival. *Children's Enviroments Quarterly*, *7*(2), 3-7.

Sutton-Smith, Brian. (1995). *Children's folklore*. Taylor & Francis.

Sutton-Smith, Brian. (2001y. *The ambiguity of play*. Harvard University Press.

The New London Group. (n.d.). A Pedagogy of Multiliteracies: Designing Social Futures. *Harvard Educational Review*, *V.66*(1).

Thorne, B. (1993). *Gender Play: Girls and Boys in School*. Rutgers University Press.

Van Leeuwen, T. (2005). *Introducing social semiotics*. Psychology Press.

Vygotsky, L. S. (1933). Play and its role in the Mental Development of the Child. Retrieved July 15, 2008, from http://www.marxists.org/archive/vygotsky/works/1933/play.htm

Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Harvard University Press.

Vygotsky, L. S. (1986). *Thought and Language*. MIT Press.

Waite-Stupiansky, S., & Findlay, M. (2001). The Fourth R: Recess and Its Link to Learning. *Educational Forum*, *66*(1), 16-25.

Appendix A: How to Play Four Square

The Basics of Four Square

Four square is one of the first true ball games that elementary school children engage in on the playground. Unlike marbles or tether ball, which only require coordination with the ball/marble, four square requires physical coordination both with other bodies and with the ball. While youth from 1st through 5th/6th grade play four square, I noticed at Pacifica that play varied quite a bit in the different age groups. The basics of four square (see figure A.1 below) take relatively little physical or language skill to master; the players simply keep the ball moving around the court of 4 squares. In the basic playing mode, the ball lands once in the players square and then they pass it or simply hit it to another player's square. The ball must stay in bounds and not land on a line, and in general stay in motion- although more novice players tend to hold on to or catch the ball before continuing the volley. That being said, the rules just described are for a what the students at Pacific elementary called a "clean game", which is rarely how the players choose to play. Interview and observational data as well as firsthand experience, all indicate the fun part of four square is the ability to modify the game when you are the game server. The players referred to each turn of play's modifications as the server's "calls". The game server, before beginning each round of play makes their calls which set the rules of play for the round, and often until the server gets out.

In general four square does not have a "winner" or a "loser" although youth will often be self congratulatory if they spend many rounds in the A square, or show anger or dejection if they consistently get out without progressing beyond the D square.

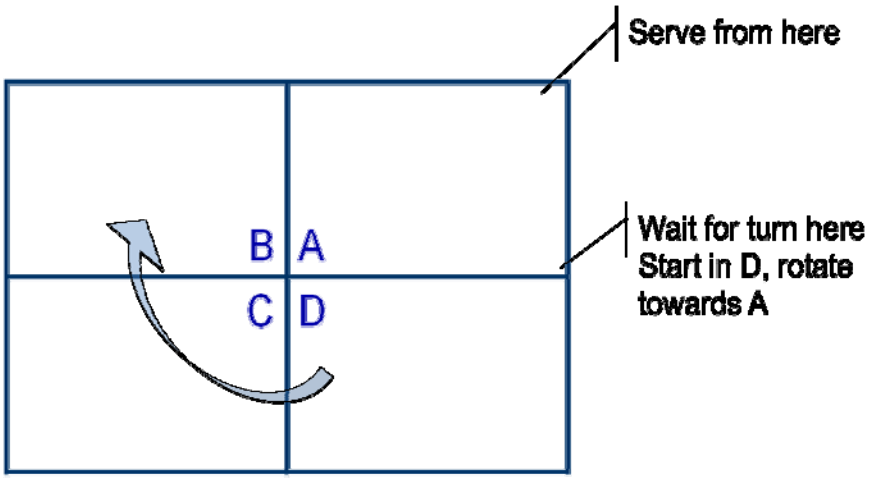


Figure A.1

Basic Rules for Four square

i. Each turn at play is begins with a serve from player in A square
j. Ball is only to bounce one time in each square except on service
k. You cannot catch and hold the ball
l. When someone gets "out" they go to the end of the line. Everyone moves up a letter to fill in the vacated square and a new player comes into the D square
m. If the ball hits the line the person who hit it is out
n. If the ball lands outside any squares the person who hit it is out
o. If the ball lands in a players square, and they do not return it, they are out.
p. **All rules of play are subject to change under the specific game's calls!**

Types of calls

Most calls fall into one of four general categories delineated by involvement with (1) the boundary line and the ball, (2) the body and the ball, (3) the body and the boundary line, or (4) how the ball moves through the volley. In terms of the mechanics of the game the different types of rules impact the ways a player can get out. Below is a list of calls that were in play in Pacific, and a general description.

Rules:

(1) Boundary line and the ball
(2) Body and the ball
(3) Body and the boundary line
(4) How the ball moves through the volley

The ways you can get out:

(1) Missing the ball when it is volleyed to you
(2) Not performing the correct move for the rule
(3) Being the last person to perform the movement of the rule
(4) Hitting the ball in the wrong place

Table A.1, List of calls in use at Pacific

	Name of Call	**Basic Description**	**Type of call**
1.	Cherry bombs	a ball slam where you try to get the ball over the head of the player whose square you slam It in. often defined by how high the ball goes, and how high the hands are when launching the ball	2
2.	round the world	means ball must move in a counter clockwise direction A-B-C-D-A..	4
3.	waterfall	like cherry bomb, but not a slam. Ment to go high in the air, but not fast	2
4.	rainbow	when the A square calls out "rainbow" and runs the ball to the center of the squares and everyone	2

		must put their hand on the ball, last one to touch the ball is out	
5.	spiders	same as rainbow but call is “spiders”	2
6.	spikes	same as rainbow/spiders, but you cannot touch the ball, the hand is to hover over it (ie the ball has spikes coming out of it)	2
7.	cupcakes	Same as rainbow/spiders, but call out is “cupcakes” and players have to touch the bottom of the ball (ie the top has frosting)	2
8.	pac man	not unlike the video game. The A square calls it and then tries to tag the other players with the ball (while holding it), however all players must remain on the lines of the court. Each outside corner spot is a safe spot. So the players run from corner to corner while the a square tries to tag them with the ball	3
9.	bus stops	each student must get their foot on the outside corner , their bus stop. Last foot is out.	3
10.	million dollar dish	ball is tossed from player to player, somewhat gently, whoever drops it is “out”	2
11.	Popcorn	when the ball comes into the players square they catch it, throw it up in the air, and then clap their hands while it is in the air.	3
12.	Babies , sometimes A-B-C, or USA	Player with the ball runs to the edge of another players square and drops it just over the line, holding the ball low to the ground. If it bounces three times before the player whose square it is in hits it to another square, they are out.	2
13.	Blackjacks	Player calls blackjacks and if they catch the ball before it lands in the square, the person who hit it to their square is out	2
14.	Chicken feet	when called, it means that if the ball lands on the players feet preventing them from returning the volley no one is out, and the round is started over.	2
15.	War	a back and forth between just two players, chosen by the server in the A square	4
16.	Teacups	same as war, but usually done by two players who want	