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Deep play, urban space, adolescent place: a multi-sited study of the effects of settings on adolescent risk/reward behavior

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Deep play, urban space, adolescent place: a multi-sited study of the effects of settings on
adolescent risk/reward behavior

A Dissertation

Submitted to the Graduate Faculty of the
University of New Orleans
in partial fulfillment of the
requirements for the degree of

Doctorate of Philosophy
in
Urban Studies

By

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May, 2012

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Acknowledgment

“The chief consideration in achieving concrete security of values lies in the perfecting of *methods* of action. More activity, blind striving, gets nothing forward. Regulation of conditions upon which results depend is possible only by doing, yet only by doing which has intelligent direction, which take cognizance of conditions, observes relations of sequence, and which plans and executes in the light of this knowledge.” John Dewey. *The Quest for Certainty* (1933), publ. Capricorn Books, 1960.

I would never have been able to complete the dissertation without the conversations and criticism provided by my wife, Dr. Elizabeth “Birdie” Shirtcliff. The above quote from John Dewey succinctly describes her contribution. I was fortunate to have had access to an interdisciplinary committee with a wealth of knowledge and experience with urban design, human behavior, research and writing. Their input drastically improved the readability of the document, preventing key conceptual arguments from getting lost. I would also like to acknowledge those teens in New Orleans who remain active shapers of urban life. It is because of their continued use of public space that I was able to write a dissertation looking at the relationship between urban environments and adolescents. I firmly believe that urban planners and designers would benefit by following their lead.

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Abstract

The extant literature on the play behavior of youth normalizes adolescent behavior in public space as transgressional, resistant, and in need of social control. The dissertation counters this trend by looking to see if physical qualities, peer effects, and neighborhood context of settings play a deeper role in youth behavior. The study documented urban context, peer effects, physical features, and play behavior across 21 urban settings in New Orleans. Unobtrusive observations employed a highly innovative technique based on YouTube videos and analyzed using hierarchical linear modeling. Coded observations of risk-taking and prosocial behavior demonstrated some stability in behavior amongst adolescents—“youth” ages 12-19—within each site, suggesting that site-specific factors can constrain youth behavior. Yet, more interesting, teens appropriated sites. Specifically, the study found that (a) adolescents consistently adapt play behavior due to settings and (b) that adolescents adapt sites to support play behavior. The latter finding is novel and diverges from normative theory on adolescent behavior by suggesting that teens exercise interdependence when engaging in urban environments away from home and school. Interdependence is a term derived from economics that means mutual dependence upon others for some needs. That adolescents display increased risk-taking behavior in environments with low appropriation and increased prosocial behavior in environments with high appropriation advocates for cities to support adolescent appropriation of urban space.

Adolescent behavior, Play, Settings, Appropriation, Hierarchical Linear Modeling, Interdependence, YouTube.

Preface

The most desirable outcome of any research project is to find something meaningful. I have made two findings during my study on the effects of settings on adolescent play behavior. The first is that the urban environment influences observable adolescent behavior. The finding contradicts current theory on adolescent behavior that identifies teens as behaving in a predictably inappropriate manner whenever they playing in public space. The second finding is that teens adapt settings to support their desired play behavior. The significance of this finding is that teens are a creative force altering cities to facilitate play. Adolescents found playing in such settings are more likely to be supportive of each other and less likely to engage in high risk behaviors. The introduction begins with a concrete example illustrating this finding. On the other hand, when teens were found playing in settings where they have little opportunity for creative adaptation, they tended to engage in higher risk behaviors and were less likely to evidence support for one another. The findings have important implications for studies on youth and for urban planning and design. Cities desiring to affect the lives of youth in a positive manner would benefit by viewing their creative adaptation of urban environments as an asset towards positive youth development as well as the successful activation of underused urban spaces. Researchers studying the play behavior of youth need to realize that the urban environment does influence their behavior and to look for signs as to how behavior shifts from one setting to the next as evidence of important environmental factors.

Chapter 1. Sites, Settings, and Play Activity: What does Deep Play have to do with Adolescent Place in Urban Space?

INTRODUCTION

The tall, scrappy white kid knew exactly how fast he was going as he jumped the gap between pancakes and performed one final flip trick onto the sidewalk below the Claiborne overpass. It was fast enough that he missed his exit and barreled towards busy Canal Boulevard. The sudden contrast of unfiltered sunlight to dark shadow caused by the expressway above makes it difficult for drivers to see and he knew it. The reckless maneuver guaranteed injury in the tangle of traffic. Fortunately, there was a big guy right in front of him, a big, black guy who dropped his skateboard as he went to grab him. The blow was substantial and the two were heading into the street. The group of young skaters and their friends had already pushed the space of activity right to the edge by standing in the parking lane. The skater was clear of the sidewalk at this point and his skateboard had flown into the shins of another kid recording the event on a cell phone. Several other hands and arms came forward from the next two rows of people to prevent the scene from going really, really bad. The teen had executed his trick perfectly and with finesse. His risk was theirs as well. He landed and laughed, shaking it off. In this study, I coded 283 similar settings (adolescent place) examining the relationship between urban sites (urban space) and teen, risk-taking/prosocial behavior (deep play). “Risk taking” assesses the degree of observed risk in a particular maneuver, while “prosocial” assesses observed support from peers during and immediately following the trick. The example above represents a reckless maneuver but also indicates very high prosocial behavior.¹ The group had temporarily appropriated the busy, urban space on “Go Skate Day!” with a wooden bridge



Photo by Author

Figure 1. The Pancakes on Canal Street, New Orleans, LA

spanning one of the squat, concrete cylinders they refer to as “pancakes”. The following study decodes similar activities for the relationship between the urban environment, peer support, and the use of physical artifacts to support play.

Current theory on adolescent behavior describes adolescent activity in the city as unruly, resistant, and in a constant struggle for independence (see Colls and Harschelmann 2009). In the dissertation, I suggest that “interdependence” best explains social and risk-taking differences in observed play behavior of early, middle and late adolescents and emerging adults across locations and urban contexts. Interdependence is a term derived from economics that means mutual dependence with others for some needs. Interdependence is an inherent quality of living in society. In terms of architecture and cities, unused spaces will fall into ruin and become subject to the whims of contemporary society. Protoadults, on their quest for individuality,

access urban locations that support their desired activity. In this study, I adopt the term “interdependence” as a social concept with spatial implications. A sanctioned skate park on the edge of the suburbs is an example of a dependent space. A crew of “guerilla skaters” momentarily seizing a guarded public plaza is an example of youth being independent of space (Flusty 2000). Interdependence suggests that the meaning of space is as dependent on the activity of an individual as the activity is dependent on the space for meaning. The current study is about urban sites and measures urban sites as interdependent with youth by assessing how teens play in the city.

Adventuresome kids play anywhere in the city, but they, like adults, adjust their behavior to retain access to public, urban, open space. Interdependence suggests that behavior will vary across sites but will remain similar within settings.² In this study, I suggest that observed youth behavior evidences moments of interdependence in reference to observed levels of “appropriation.” Appropriation is the notion that individuals in society lay temporary claim to shared urban space for their exclusive use. A car, for example, simply cannot simultaneously share the exact same urban space with a pedestrian. “Appropriation” transforms a site into a setting of human activity. Appropriation of urban sites measures how each of the observed locations of play activity becomes a setting. “Settings” in this study are sites actively used for play behavior by youth. In the study, I noted type and degree of play activity in each setting, i.e., how a particular individual appropriated a site; the general location of other participants (the mutual appropriation of sites); and, the use of permanent and temporary props, such as improvised concrete ramps, skateboards, and backpacks. Appropriation was divided into three categories by intensity: presence (where appropriation was limited to the presence of youth); temporary (instances of the use of temporary site modifications); and permanent (instances of

permanent site modifications). The intensity of appropriation observed from urban youth playing across twenty-one settings is the most reliable indicator of interdependence.

“Deep play” or “play” describes the type of activity observed during the study. Deep play is activity that entails a certain amount of risk and reward. Skateboarding is the primary documented risk-taking activity. “Risk-taking” characterizes the performance of a trick that tests an individual’s ability. A risky trick is often incomplete. However, incomplete tricks are not always risky. Accordingly, an incomplete trick does not equate to an increase in risk. All tricks in skateboarding entail a certain amount of risk. All observed tricks were categorized by an increasing amount of risk (cautious, restrained, risky, reckless, and destructive/injurious, see Table 2. Variables Coded in Study, p. 79). Play seeking adolescents pursue risks with some reward. The study captured an aspect of reward through the observation of peer support.

“Prosocial” describes the level of peer involvement or support, like a “high-five,” applause, or hands up and shouting in congratulations for a trick. The level of participation of a group of peers in relation to the performance of a trick was categorized by an increasing amount of prosocial behavior (passive, some, detectable, more evident, and most evident). Taken together, risk-taking and prosocial create a risk/reward ratio that reflects a continuous scale of deep play. Deep play measures adolescent activity as the outcome variable. Urban space and adolescent place (sites and settings) serve as the criterion supporting deep play.

Sites and settings “afford” a limitless extent of criteria supporting deep play.

“Affordance,” a term developed by James Gibson, suggests that the environment affords—that is, creates and limits—opportunities for activity. “Sites” are urban locations observed and documented apart from teen activity. “Settings” are the same locations with youth present. Sites include variables that do not change during the study, like stairs, crime, and predominant land

use, to name a few. Settings include variables that do change, for instance level of appropriation, number of peers, and observed level of urban life at the time of observation. I designed the study to employ a powerful statistical method well suited for teasing out the relationship between concrete places and adolescent behavior. Multilevel modeling (MLM, also referred to as Hierarchical Linear Modeling or HLM) received acclaim amongst social scientists because of its power to identify why students in one classroom in a particular school would perform better on standardized tests than equivocal students in other classrooms in other schools. MLM analysis nests data, like eggs in a basket, and permits parameters to vary at multiple levels, i.e. students (age, race, gender) within classrooms (well-lit, cleanliness, supplies, odors, and noise). Since students are very likely to influence one another, a statistical method was needed that could overcome the assumption of independence of observations. Independence of observations assumes that one observation does not influence the probability of another and is a fundamental assumption of General Linear Models, such as Analysis of Variance (ANOVA) or linear regression. MLM analysis assumes that individuals in a setting are likely to influence one another, making the assumption of independence of cases irrelevant. The current study used MLM to nest site parameters that changed during the study and setting parameters that remained the same within each site. For example, the Pancakes (pictured on p.3) always have gaps and steps and remain in the business district. The number of peers, the incorporation of temporary site modifications, and the level of urban activity are parameters that change within the site.

The null hypothesis replicates normative theory on adolescent behavior in urban space. The null hypothesis—that there is no relationship between two measured phenomena—states that all of the variability in play activity is due to individual differences and there is no consistency in observed play behavior due to site-specific factors. Testing this concept occurs

through the intraclass correlation (ICC). A nonsignificant ICC is meaningful both statistically and conceptually. Statistically, it would have meant that MLM was unnecessary as there was no evidence for dependence or interdependence of observations and I could proceed with simple linear regressions or ANOVAs. Such a finding would have strong conceptual intrigue, as it would imply that sites or settings do not influence play activity in a systematic or consistent manner. This is consistent with normative theory describing adolescents as independent of place. Nonetheless, the ICC—which looks at how residuals (chances of error variance) are correlated within sites—indicated that urban sites significantly ($p < .05$) accounted for 23% of all variance attributed to observed risk-taking and prosocial factors. The finding is supportive of arguments that urban design factors are influential and improve cities for adolescents.

The results of the research project indicate that sites and settings play a role in the behavior of youth. However, deep play is not derivative of site features, context, or presence of peers. That is, the ICC is not perfect; suggesting that the activities of youth within a site also inform deep play. The study shows that the intensity of appropriation of urban space best explains risk/reward outcomes. The dissertation shows that adolescent place in urban space supports deep play through their adaptation to settings and the adaptation of sites through appropriation. The implications are that adolescents benefit by playing in settings where they establish some level of creative appropriation.

REVIEW OF THE LITERATURE

The dissertation approaches the subject of how teens use space in the three-part framework described in the title: deep play, urban space, and adolescent places. I refer to urban space instead of sites, and adolescent place in lieu of settings, because space and place are the

terms typically found in the literature. The structure tells the full story behind a seemingly straightforward question: how do teens use space in the city? This broad-reaching question gains focus by asking in this case, how do people ages 12–19 play in outdoor, urban open space in the City of New Orleans? The question participates in a larger discussion on urban design and cities. As issues of sustainability and social equity become more pressing following increased urbanization, design can no longer afford to be a solipsistic approach of form following function. Teens, following a century of social control and public neglect, represent a novel arena of opportunity to rethink urban space in cities. Such an opportunity is due, in part, to the fact that teens actively rethink urban space for their own uses. The literature review establishes the criteria upon which such a reevaluation may occur.

Deep play captures the life world of observed youth activity. The everyday activity of youth is in question. The section on deep play reviews studies that have collected empirical research on teen activity in public urban space over the past twenty years. *Urban space* considers the abstract socioeconomic ideals placed upon cities and the adolescent struggle for identity within this domain. Space remains a fundamentally abstract concept. The section on urban space reviews authors discussing abstract rules, norms, and ideals that inform perceptions of human behavior in cities and of youth in cities. *Adolescent place* provides the historical framework structuring the current place of youth in cities. Since the dissertation focuses on how teens play in the city, adolescent place reviews the larger historical practice of creating places for youth to play. The literature review establishes the threefold criterion necessary for a study on adolescent play in the city of New Orleans.

The literature review intentionally does not follow the title in its organization of deep play, urban space and adolescent places. Building off a parallel discussion on space by Henri

Lefebvre, the review begins by considering urban space as an *abstract space* that frames social norms. The premise is that only through abstraction can designers consider that urban space has an intended use or user. Next, the literature review moves into a review of adolescent place as *conceived space*. Urban designers conceive adolescent place to fulfill idealized perceptions of youth. The place of youth in the city is distinct from adult space due to the dangers of urban life and the innocence of youth. Such conceptions structure the place of youth in the design, construction, and planning of cities. Finally, the review brings together these concepts to deep play as *representational space*. Deep play is a representational space of everyday activity. Youth represent “being-in-place” through play behavior. Being-in-place, *sic*. Miles Richardson 1982, describes the full participation of an individual in a setting and is differentiated from simply passing through a site. The threefold narrative of urban space (abstract), adolescent place (conceived), and deep play (representational) persists for the remaining literature review.

Lefebvre identifies space as abstract, conceived, and lived. Lefebvre (1901–1991) was a French sociologist and Marxist intellectual who suggested that the production of social space benefited capitalism. In *The Production of Space*, Lefebvre writes, “Space still appears as ‘reality’ inasmuch as it is the milieu of accumulation, of growth, of commodities, of money, of capital; but this ‘reality’ loses its substantial and autonomous aspect once its development—i.e. production—is traced” (1991:129). In other words, a discussion on teens playing in a public park would miss the point if it did not include how the park came about. The space, a public park, did not bring itself to fruition but society created it and maintains it according to changing conceptions of its intended use. Following this Marxist principle, space is not simply a dimension. Rather, it follows the laws of accumulation of capital as produced by society as a producer of space. If we think of space in the words of Walter Benjamin, another European

intellectual influenced by Marx, then “history is the subject of a structure whose site is not homogenous, empty time, but time filled by the presence of the now” (Benjamin 1968:261). So too is urban space not simply an empty void filled with accumulated stuff like people, buildings, streets, and plazas. It is filled with urban activity shaping daily life. Using this approach, Lefebvre identifies the threefold nature of space—abstract, conceived, and representational. I will discuss space and teens by building on these three terms. At each level, space is social space. Abstract space supports the dialectical movement of capital, normalized social practice, and the continued production of space. Conceived space structures sites that reinforce social relations. Representational space reflects daily life. The literature review builds on Lefebvre’s threefold framework in reference to youth. In urban space, teen identity is subject to abstraction by means of differentiation by age. In adolescent place, constructed environments reflect the creation of sites supporting idealized notions of youth. In deep play, other researchers and theorists on the relationship between human activity and urban space provide insight into the activity of adolescents.

The literature review format also frames the research method. Urban space is approached through the collection and analysis of the abstract, urban context surrounding urban “sites.” Urban sites are locations in New Orleans that have been conceived for youth by being set aside or by youth by being claimed as opportune settings to play. Simply put, urban sites evidence play activity. The analysis of such sites looks for intrinsic properties that “afford” play. “Affordance” is a term, developed by James Gibson, meaning that the environment affords or supports activity. The term describes the dependent relationship of people to spaces that support behavior. Deep play consists of *observations of play behavior* occurring in each site. Documented cases of play behavior are representational or reflect instances of teen play activity.

The results section follows the same format. The discussion, however, returns to the original title structure, privileging the new, empirical research collected on deep play so that we may better analyze and reconsider adolescent place in urban space.

The terms young people, youth, teens, adolescents are interchangeable descriptors of the population under discussion. The terms remain indifferent to gender or race unless otherwise indicated. The basis for the generalization rests on how “teen” is a means of categorizing people due to a similarity of circumstance. Young people under the age of seventeen in New Orleans, for example, are all subject, though not equally subjected, to laws such as curfew and truancy that limit access to urban space. Devices like skate stoppers, prohibitory signage, and omission of places to play also control their play behavior (deep play) in urban. Such laws and controls generally remain unknown to younger children or adults. Children have prescribed places to play like playgrounds, and an adult nearly always accompanies them. Since Hurricane Katrina, for example, neighborhoods have built over fifty “Kaboom!” community-built play structures around New Orleans. Entertainment districts, like the French Quarter, ostensibly cater to adult play in the city. Red Bull floated a skate barge down the Mississippi River to New Orleans, a city without a skate park, and donated it to the city. The skate equipment now sits disassembled beneath an inaccessible overpass. Beyond lack of access to prescribed places to play, law prohibits unaccompanied teens from entering the French Quarter after dark. The law enforcement officer approaching a teen in the French Quarter after hours does not see child or adult but an unaccompanied minor who has broken the law by accessing public space. Skateboarders, whose presence remains ignored, are equally subject to such enforcement. While the study does not focus on skateboarding, skateboarding is the predominant type of play and represents an instance of deep play. The spatial limits of youth play are dissimilar to those of

children or adults. Society defines youth as not-adults and youth define themselves as not-children. Homogenous, spatial practice in urban space does not support the in-between identity of teens. The fringe identity of youth compels them to structure space for themselves, leading to creative interpretations of urban life. In the literature review, I incorporate studies from space and youth to support a focus of research on deep play, urban space, and adolescent places.

SITES AND URBAN SPACE

Urban space is space that occupies the conceptual fields of social, spatial practice, *perceived space*, use value, appropriation, and power. Urban space is abstract because it supports the homogenous, social practice of society. So long as human behavior remains consistent or homogenous, the social relations intended in the initial production of that space maintain space. Lefebvre writes: “The spatial practice of a society secretes that society’s space; it propounds and presupposes it, in a dialectical interaction; it produces it slowly and surely as it masters and appropriates it” (1991:38). This means that abstract, urban space is for *a priori* social interactions. A brief example may make this concept clear. The social interactions of a teenager in a high school are a product of the social production of the high school in the first place. The institution does more than provide an education. The institution also serves as a model of normalized, social practice. Peers adapt to a hierarchy ranked by age. Competitive activities further organize the few over the many by rewarding individual scholastic and athletic achievements. The system provides a parallel to Marx’s critique of capital. Capital generates competition for labor by maintaining a relative surplus population of unemployed (Marx and Engels 1965:442). The institutionalized form of spatial practice in a high school adapts teens to the capitalistic mode of operation in urban space. The dialectic between spatial practices and

produced space, between producers and produced, is an evolving, continuous dynamic that negates any conception of space as autonomous. As an abstract space, urban space contains the social and political consciousness that leads to the production of some places and omission of others.

Urban Space informs Social Relations

As an abstract space, urban space informs all social relations occurring within that space. Like reigning political and social ideals, abstract space is slow to change and is dialectically built upon the logic of accumulation of capital. Marx further explains the homogenous nature of urban space as it relates to people: “It is not the consciousness of men that determines their existence, but their social existence that determines their consciousness”(Marx 1860:7). Marx is referring to the combined working day and how hundreds of men cooperating on a similar task, with similar pay, would have similar social existence. His point is that such individual relations in space reflect a homogenous human condition (Marx and Engels 1965:224–226). The notion that a homogenous condition influences social relations is particularly poignant to the current study on youth. The Western world, for example, separates teens from direct role in labor but permits them to maintain a persistent role in consumptions of goods and services, including things such as education. The homogenous condition of youth in urban space institutionalizes normalized forms of spatial practice.

Urban space informs individual relations through the institutionalization of homogenous spatial practice in abstract space. Abstract space plays a central role informing the spatial practice of everyday life. In abstract space, Lefebvre indicates that “the spatial body of the social subject is simultaneously produced and is the production of space, subject to all of the determinants of that space” (Lefebvre 1991:195). The body of each individual in urban space

participates in the social relations of that space. The body is a subject of space and the social relations in that space determine social relations. “Determined,” here, indicates that the body is inseparable from the reciprocal relation of “produced by and producing space.” Lefebvre’s use of the word biosocial describes how the relation of an individual body in space is influenced by age, race, gender, or ability. The category of youth fits with Lefebvre’s use of the word biosocial. Lefebvre writes that “Space is ... governed by determinants which may be practical (work, play) or biosocial (young people, children, women, active people)” (Lefebvre 1991:190). Instead of relying on terms like biosocial determinants, I refer to youth as a category of people and homogenous as a practical condition of spatial activity. Following Lefebvre, the concept “urban space” describes an individual’s relation to homogenous space as governed by demographic conditions that they have no control over, such as age, race, or gender. The current study focuses on teens whose social practice is subject to such constraints because of their nonadult status.

A principle goal of social practice in abstract, urban space is to support the homogenous use of space. Institutions and norms that can only govern through categorization of identical use maintain the homogenous structure of urban space. Such norms maintain rights to space by excluding difference. Teens, for example, are frequently referenced in the literature as being confronted by authority figures because they are lingering, loitering, or just hanging-out (Colls and Harschelmann 2009). Teens frequently use urban space in manners that were unintended. Such behaviors are nonhomogenous uses of space and seen as disruptive to the desired flow of commerce. The body of the teen is perceived as unruly, in need of social control, and is treated as nonadult in their social relations (Colls and Harschelmann 2009). In my own research on youth in New Orleans, it was difficult to locate adolescents in public space because they were

continuously asked to move along by authority figures. The body of the teen is a subject of normative perceptions maintained by dominant society, or reigning ideology, in abstract space. Teens then represent an example of how urban space governs individual relations by identifying difference and excluding heterogeneous spatial practice from urban space.

Difference is a fundamental part of urban space. Individual differentiation occurs by being dissimilar through one's identity or through activity. The governing of difference permits certain people or behaviors in one space or time and not in another. The earlier mentioned example of how a curfew governs teens from entering the French Quarter after dark fits well here. The curfew is spatial because it prohibits the nonconsumptive activity of a category of people in an iconic part of the city that is responsible for generating its primary economy. Lefebvre's argument about how spatial practice determines all social relations becomes clearer in reference to how difference is pushed out or marginalized as "abstract space in pursuit of homogeneity" (Lefebvre 1991:287). Teens, in this case, do not possess the disposable income or age necessary to access adult space. A guiding social practice of abstract space—to maintain social relations—does so by marginalizing difference. The differentiation of youth as nonadult with heterogeneous activity excludes and pushes them outside of the center of the city.

Lefebvre's theory on spatial production is useful for identifying how youth become different due to a categorical identity and alternative spatial practice. Lefebvre's concept of the production of space can be summarized with two important arguments that are carried forward: (1) urban is a social centrality—this is based on the argument of spatial practice and the logical clustering of increased social relations as definitively "urban;" (2) space is always owned by someone and, as abstract space, is subject to the forces of capitalism and the logic of cooperation of the working day. The examination of difference analyzes the reigning form of spatial practice

in urban space. Difference results in conflict. The conflict represents a spatial duality occurring in everyday life. The duality is key to understanding the contradictions between how space is perceived and produced in society (Lefebvre 1991:347). The dual character of city suggests that there is always some other place to send heterogeneous activity and people. The ownership of space in the city to support exchange plays a central role in the lives of youth. Aside from consumption, teens are unable to participate in commerce. Youth participate in central urban areas but are often driven out because they are not engaging in the intended use-value of the space. The evaluation of such homogenous spatial practice has a well-established history in urban studies. The works of four authors, Lofland, Hall, Richardson, and Low, shed some light on how social practice is ordered, perceived, textualized, and spatialized.

Studies of Urban Space and Social Relations

One of the foremost ethnographers of social relations in cities has discussed the role of such homogenous spatial practice. Lyn Lofland's text, *A World of Strangers*, provides a history of the uses of public spaces as evidence of deterministic experiential and spatial ordering (1973:56). For Lofland, the concept of ordering influences the experience of space through the perception of how it is coded. Ordering is the perception of hierarchical social structures that are physically embedded in the environment by culture. According to Lofland, individuals learn how to perceive the ordering of space through their own experience and by observing the behaviors of others. Children, logically, would have less experience than adults would. However, in some settings, children may have access to inside knowledge unavailable to inexperienced adults. The spatial decoding gives the place a particular meaning that elicits an appropriate behavior. Lofland's concept of deterministic experiential and spatial ordering fits well with Lefebvre's notion of social practice. However, Lofland includes culture as a concept

only touched on by Lefebvre. Specifically, she suggests that culture is responsible for physically embedding social structures in the environment. Culture embeds structure by ordering the activity within space. The ordering occurs through the previous experience of the individual who observes the behavior of others. Teens, however, are not a culture but represent a sub-group category. Accordingly, research focusing more on how culture embeds spatial ordering at the individual level may offer some insight into the process of homogenous activity.

Following Lofland, culture accounts for the similarities observed in spatial ordering of human relations in urban space. The current focus, however, is not on similarities but on difference. Specifically, how have youth been determined as different in urban space? Edward Hall's work on proxemics is similar to Lofland's type of study. "Proxemics is the study of man's perception and use of space," according to Hall (2003:51). Hall is concerned with the personal territorial domain, or distance setting, and the corresponding behavior. His research is focused on asserting that two people in the same place cannot perceive it similarly due to "selective screening that admits some type of data while rejecting others" (2003:52). Similar to spatial ordering, "selective screening" is the filtering of spatial information based on the individual's prior history in a particular culture. Like Lofland, Hall describes individuals with similar cultural backgrounds as having similar proxemics, but selective screening based upon unique individual histories accounts for differences between individuals. Here, Hall identifies selective screening as a very useful component of proxemics for a study on youth. Selective screening develops from an individual's prior experience and accounts for difference between individuals. Teens may have different cultural backgrounds but are similar by age.

Hall identifies observable moments of selective screening with three types of space: fixed, semi-fixed, or dynamic. The relation between individual filtering and these three types of

space are visible through the different treatment of distance or territory by different cultures. According to Hall, walls and boundaries are fixed; furniture is semi-fixed; the distance between individuals is informal and dynamic (Hall 1963).³ Hall suggests that the relation between the individual and physical environment will vary depending on the prior history of the individual as well as the treatment of the objects within the place. The observable relation of youth to fixed, semi-fixed, and dynamic space, however, represents a window into how a study on youth might best approach their relation to urban space. An examination of the individual relations of youth to fixed, semi-fixed, and dynamic boundaries may reveal a similarity in the treatment of space by youth.

Hall's text focuses on issues relating to culture. However, his concept of proxemics and the static or fluid nature of spatial experience is relevant to the individual's interaction with the physical environment. Boundaries play a formative role in the individual interaction with place and with other individuals within a space. The concept that different cultures and different individual histories interpret boundaries differently creates a case for inhibiting or promoting homogenous activity within a space through the appropriate use of boundaries. Hall's questions at the end of his text indicate the direction for further research:

What relationships, activities, and emotions are associated with each distance? ... What screening needs are there? For what senses and which relationships? What is the nature of the sensory involvement for the different relationships in the normal course of everyday life? (Hall 2003:64–65).

His questions stem from his central theory of proxemics. However, a similar line of questions is how proxemics relates to the unique state of youth. An examination of youth relationships,

activities, and behaviors associated with sites with varying use of distance, screening, and everyday settings forms the basis of the current study.

The differences in individual histories within sites are visible through individual interaction with boundaries. The examination of such differences leads to a means of measuring individual variation in abstract, urban space. Miles Richardson provides a very useful framework for the manner in which variation in individual experience can be similar, outside of cultural background, directly in relation to urban space. Richardson uses comparative analysis to explore interdependence, the mutual dependence of people and space. Comparative analysis is a method used to study interdependence by observing how individuals act in separate environments. Richardson studied observable human behavior in a market and a plaza (Richardson 1982). He supported his methodological framework by the phenomenological notion of “being-in-the-world” as opposed to simply “being-there” (p. 421). “Phenomenology” is the study of the life-world of human experience (see Husserl 1997). Being-in-the-world involves the participation of the individual in a setting, whereas being-there references passing through a space. Richardson proposes that urban space fixes experience, similar to textual discourse, as the objectification of our subjective experience. Settings determine the similarity of social interactions. The means by which the individual is able to move from being-there and being-in-the-world is through engagement in a setting. Richardson identifies three analytical steps aiding in the transition from being-there to being-in-the-world paraphrased below:

- (1) the preliminary definition supplied by the material culture of a setting;
- (2) the interaction occurring within that setting; and
- (3) the image emerging out of the interaction and completing the definition by restating that situation’s sense of place (Richardson 1982:423).⁴

Every individual, Richardson suggests, employs these three analytical steps when moving from being-there to being-in-the-world. In his perspective, urban space acquires its abstract, spatial homogeneity through the setting. Richardson’s comparison of individual interactions within the market and plaza suggests that “Interactions are preliminarily defined and facilitated by the material setting” (p. 427). Paying homage to Erving Goffman, a definitive observer of behavior in public space, Richardson notes that the market is a place of “engaged participation, intense action and offstage performance,” and the plaza is a place for “disengaged observation, serene action, and onstage performance” (p. 430). Accordingly, the physical world, following Richardson’s model, is the “creation of a setting that impinges directly upon the social responses to that setting” (p. 434). The introduction of teenagers, for example, with alternative interpretations of urban space can change a setting. A gathering of teens in City Park, for example, complete with props and skateboards, transforms the pastoral setting of a classical



Image capture from (t382 June 26, 2011)

Figure 2. Youth shown skateboarding in the Peristyle at City Park. For future reference, the use of the box-bench is an example of temporary appropriation.

peristyle and gazebo into an active space of physical engagement. The clamor of skateboards on pavement, rails, and steps negates the cultural creation of a space for peace, quiet, and serene contemplation. The site facilitates the creative, social response by youth. The teens have successfully made the transition, in Richardson's terms, to being-in-the-world. Onstage, the peristyle preliminarily defines a setting of cultural decadence through social performance. The teens are clearly performing. Their engagement with the acoustical value of the space reverberates off the roof above. A failed flip trick or a body falling on the stage has a different value than a smoothly executed maneuver. The image emerging out of the setting is their own creation and completes their own definition of the space. Richardson notes that "Out of that response meaning arises, and that meaning is objectified upon the setting so that the setting becomes a full statement, a read text, and therefore the material image of the situation" (p. 434). "Meaning," for Richardson, is the interdependent, social response to a situation that creates or completes a setting.

Richardson's textualizing of spatial experience leads to an explanation of urban space as the embodiment of culture in a setting with individual activity as the social response to that setting. Interdependence suggests that a place remains incomplete until the individual who is actively being-in-the-world engages urban space. The individual's relation to space then is neither spatially determined by individual history or the cultural creation of homogenous, urban space. Rather, interdependent interactions create a situation that "makes a complete statement" (Richardson 1982:434). The culture of space as a setting and the social response of the individual within the setting embed homogenous social relations through each individual's response.

The work of Setha Low provides further exploration into the relationship between spatial practice and space. Low's work focuses on the concept of spatializing—to locate physically, historically and conceptually—social relations and social practice in space (Low 2000). She is specifically looking for how public space in urban society becomes a meaningful reality, or how space is socially constructed to have meaning (Low 2000). Low begins with the social construction of space and the role of architecture style, as informed by society, on the space. Citing Lefebvre, Low notes that space is produced by and is the producer of social relations (Low 2000). Similar to Richardson, Low supports her analysis by comparing two public places. Low conducts observational studies, as well as interviews, that explore why certain groups of people use one plaza and not the other plaza. The resulting information begins to show how individuals embed social relations within the social life of the plaza. Further, Low questions and interviews the architects of one of the plazas to find the intent of the plaza design. She found that the design intent of the architect was to embed a very specific social relationship. One of the architects admitted that he intentionally designed a plaza to have the longest sightline for watching girls in the city. Low's research illustrates the relation of urban space and the social being of an individual as influential to creating a setting.

The review of these four authors, Lofland, Hall, Richardson, and Low has identified key points that will be useful in a study on youth in urban space. The creation of a setting, following Richardson, is the result of an interdependent relationship of individuals responding to urban space. Individual variation in response to sites can alter the creation of a setting from the desired outcome. In contrast, as Low indicates, the site itself results from architectural designs for a desired setting. Individual histories with sites influence the interpretation or creation settings. Particularly, following Hall, individuals in settings show differences in selective screening based

upon individual experience. Selective screening suggests that different people in the same place simply cannot experience the same thing. Each author supports the role of individual participation in homogenous spatial practice but each also suggests that similarities in differences factor into the interpretation of space. Observable individual relations to boundaries, following Hall, are a means of understanding differences in spatial relationships. The individual response to settings, following Low and Richardson, precedes the initial production of space. The alternative responses of teens, then, present a window into the production of space by disrupting the homogenous creation of a setting.

Studies of Urban Space and the Social Relations of Youth

Youth is the population under discussion. The following review highlights key arguments from the literature that make a connection between urban space and the activity of youth. In literature on youth, there is not explicitly just one means of activity specific to or uniformly descriptive of “youth” in the city (Freeman and Riordan 2002). Freeman’s point should not prevent a study on youth from going forward but it does identify the risk of “essentializing” youth. Essentializing increases the probability of committing the ecological fallacy—that what was true of the group is also true of the individual. Other researchers agree that the spatialized concept of youth and the sociospatial practices surrounding young people need to be understood further as it relates to the “youth” identity (Holloway and Valentine 2000:763). As a group or category, youth is one of the ways in which individuals are differentiated based upon membership (Wheaton 2003). In her research on youth, Gill Valentine has found that the boundaries separating child from adolescent, child from adult, or youth from adult are difficult to define across cultures (Valentine 2003). Because of the challenge in clearly establishing boundaries by which youth is practiced, Valentine suggests that youth should be

considered as having a “processual identity” (Valentine 2003). The processual identity is in a state of change or developing and is by nature not homogenous. Janssen’s (2009:84) review of the historicity of boyhood asks, if we can think of “dimensions and tropes of place/place as reciprocally connected to notions of boyhood, then how does the activity of youth in these spaces support the categorization or construction of a group identity?” Janssen was particularly focused on maturities, genders, spaces, and bodies as co-constructs that emerge and function as interdependent ideas rather than particular spaces (Janssen 2009). The temporary nature of the identity is one of the historic challenges to understanding the sociospatial practice of youth in the city.

Spatially, youth are segregated from adult spaces and are dependent on adults for access to permissible youth spaces (Valentine 2003). Youth, in Western cities, are shown in the literature to be intentionally marginalized, oversimplified as a group instead of being a part of many subcultures, possessing limited access to decision making regarding their environments, found to use the environment differently than adults, and to be dependent on public services more so than adults (Freeman and Riordan 2002). Multiple studies show how space perforated by youth activity is used to generalize youth as unruly, their appropriated space as the site of resistance, and the deployment of exclusionary tactics to continue to marginalize youth so as to encode a normalized spatial identity (Robinson 2000; Howell 2005; Nemeth 2006, 2004; Vivoni 2009; Woolley and Johns 2001; Stratford 2002; Kelly 2003; Flusty 2000; Fusco 2007). The systematic exclusion of youth from public spaces (Rogers and Coaffee 2005) have been shown to cause youth to seek out “liminal” spaces (Robinson 2009). Liminal spaces are underused environments in urban space that are more conducive to alternative behaviors. In their study of urban policies, Rogers and Coaffee show how identifiable groups of youths and activities make it

easier for policies that explicitly remove them from public place. Following Rogers and Coaffee (2005), this is examined by studying how youth act as a tribe and how tensions between urban policy and spatial use-values became manifest in their study of policies prohibiting skateboarding (Rogers and Coaffee 2005). Such prohibitory policies are mutually supported by Atkinson's (2009) study on *parkour* as a critique of urban life, and Nemeth (2006) and Howell (2005) separate examinations of urban policies surrounding youth skating in LOVE park as evidence of exclusionary tactics and class displacement. Some researchers argue that such spaces are found to be subject to the same normative power relations because they are also divided along gender, racial, and heterosexist lines (Fusco 2007). Researchers explain that youth maintain marginalization within their own groups and use urban space as a site of resistance through their group dynamics. Other studies are more optimistic and show how youth use public space to differentiate themselves as a group and to establish a unique cultural identity (Borden 2001b; Hitchings 2001; Pomerantz et al. 2004). For example, Pomerantz, et al., in a study of the Park Gang in Vancouver, B.C., support such positive differentiation of skater girls and the challenges they face as females engaging in a male-typical form of urban play. The exclusion of youth activity and the pursuit of liminal spaces for activity are a hallmark of adolescent identity in contemporary society.

Lefebvre suggests that such exclusionary spaces are set aside for youth to pass tests so as to be able to ascend to the social space of society. Thus, youth, as subjects, are situated in space (Lefebvre 1991:35). The only alternative to such domination for youth, Lefebvre suggests, is by revolt. He writes that "It is only by way of revolt that they [adolescents] have any prospect of recovering the world of differences—the natural, the sensory/sensual, sexuality and pleasure" (p. 50). In urban space, Lefebvre suggests, society maintains homogenization as its goal and

continues to marginalize and exclude difference. Youth suffer a dual role of exclusion, one that is due to their body as a site of difference, and another due to the homogenous practice of society that excludes difference from the center. This review will examine exclusionary tactics in further detail as cities push youth and youth activities out of the center, despite the continued attempts by youth to infiltrate and participate in urban space. Such exclusionary tactics in urban space leads to the creation of places intended for youth.

Spatial context lends insight into how youth show preferences for spaces, suggests Bradley (2010), who examined the reasons youth gave for using certain spaces, such as skate parks, and the factors encourage or constrain urban play in these locations. Youth have been described as embodying a continuous “processual” process of biological and social development that accounts for their awkwardness in spatial practice (Horton and Kraftl 2006; Valentine 1996, 2003). Processual suggests that, because of their unique developmental state, youth spatial activity is independent of urban space. The spatial activity of youth is neither in-place nor out-of-place. The point is even more poignant following Richardson’s analysis of plaza and market behavior (Richardson 1982), where interdependence, or being-in-the-world, is in-place as opposed to out-of-place. Such independent activity by youth transgresses typical spatial boundaries. For example, Nolan (2003), found youth transgression and the spatial tactics of transgression to be nuanced and to operate at multiple scales. Nolan’s study examined different responses to skateboarding in public spaces and the conflicts that arise as a result of youth transgression of spatial norms (Nolan 2003). Nolan found that youth display tactical preferences, citing time of day and general urban activity, in selecting spaces for play. His research identified that such preferences served as an important aspect of the spaces youth use. However, the literature on the urban contexts youth play is often isolated to extreme examples of

contested environments. The reliance on such extreme examples promotes Nolan's argument of transgressional behavior while at the same time limiting research to places of increased confrontations. Youth preferences for urban space, following these studies, reflect how urban context supports independence and transgressional behavior.

Youth possess a unique identity that differentiates them in homogenous, urban space. Additionally, youth engage in activity that marginalizes them from homogenous social settings. Lefebvre suggests that "spatial practice can be observed, described and analyzed on a wide range of levels: in architecture, in city planning or urbanism, in the actual design of routes and localities, in the organization of everyday life, and, naturally, in urban reality" (Lefebvre 1991:413–414). Urban space contains the realm of homogenous spatial practice. Lefebvre here gives us some hint that urban space becomes manifest through the organization of daily life. He provides further depth to this structure by suggesting that social relations must be considered as participating in such abstract urban space. Lefebvre writes:

Social relations, which are concrete abstractions, have no real existence save in and through space. Their underpinning is spatial. In each particular case, the connection between this underpinning and the relations it supports calls for analysis. Such an analysis must imply and explain a genesis and constitute a critique of those institutions, substitutions, transpositions, metaphorizations, anaphorizations, and so forth, that have transformed space under consideration (1991:404).

All social relations, following Lefebvre, are produced and actively engaged in the production of space. A critique of space is necessary if the study is to identify the connection between homogenous space and youth spatial relations. For purposes here, this critique focuses on the production of youth identity and the activity of youth as subject to the spatial norms that have transformed space. Lefebvre later adds that contradictions between use and intended use render these abstract social relations visible. Accordingly, the literature review and study will need to identify such contradictions as a window into the spatial relations of adolescents.

SETTINGS AND ADOLESCENT PLACES

A foundational aspect of the exclusion of adolescent participation in urban space is the creation of separate sites intended for youth activity. In the following section, I discuss adolescent and children places because of the fact that cities separate young people from urban life. “Young people” often implies not-yet-adult. Adolescents are described as not-adults and self-described as not-children. As a demographic shifting from its previous identity, the *play place* section begins with what it means to transition beyond the place of children by asking: how did children become subject to having a place? This section reviews idealized constructions of childhood and locates two recent examples, *rest place* and *skate place*, where older youth are subject to such child-like constraints. The subjection of youth to spatial constraints points to a paradox in creating places for adolescents. The very nature of the transition from child to adult decries the efficacy of a bounded place. Accessible public, urban space in the city is adult space by default. Adults generally conceive of space for other adults. In reference to not-adults, should urbanists construct adolescent place in the city in a fashion similar to children or should adolescents participate in creating their own place?

Lefebvre refers to “conceived” space as the creation of places that differentiate urban space to support homogenous spatial practice. Lefebvre writes that “Space is conceived of as being transformed into ‘lived experience’ by a ‘social subject,’ and is governed by determinants which may be practical (work, play) or biosocial (young people, children, women, active people) in character” (Lefebvre 1991:190). The current study builds upon two of the “determinants” Lefebvre mentions here: play and young people. The practical separation of spatial activity into work or play addresses the differentiation of urban space to structure social relations. Under this logic, urban designers strive to achieve the practical goal of separating work and play. For example, as will be shown in more detail, architects and concerned citizens structured playgrounds for the practical play of children. The success of these playgrounds at removing children from urban space and incidentally increasing property values suggests that such *places* may also serve adolescents. The playground removes play from the street because the street is a means to get to and from work in a car. The target demographic, children, are at risk in the street. The removal of children from the street by providing a place to isolate play is an example of how sites result from the structuring of social relations. Accordingly, conceived place is the spatial dimension for architects, planners, and urbanists.

Architects, designers, planners, and policy-makers conceive places to support abstract, spatial practice. While designed places reflect the design intent of the authors, the interpretation of such places through human activity warrants further attention. Lefebvre suggests that the contradictions and conflicts in the everyday interpretation of spatial practice are the site of opposition to the dominant ideology producing space. Youth, for example, interpret places beyond design intent. Such interpretations may result in conflict and the conflict represents a contradiction in urban space. For example, the cool, clean, white travertine steps and sidewalk at

One Shell Square on Poydras Street in downtown New Orleans projects the image the oil company desires to maintain. Well lit and under constant maintenance and surveillance, the site is free of any element that may contradict the design intent. Thanks to such things as easy access to public transportation, security, maintenance, and lighting the place is also a great place for young people to skate after hours. Raucous skaters usurp the collected atmosphere with their own urban rhythms. The tension, “*agonism*,” occurs when the image is in this state of contradiction. Michel Foucault writes that “Rather than speaking of an essential freedom, it would be better to speak of an “*agonism*”—of a relationship which is at the same time reciprocal incitation and struggle: less of a face-to-face confrontation which paralyzes both sides than a permanent provocation” (Foucault et al. 1983:222). *Agonism* suggests that the struggle is less



Figure 3. One Shell Square, New Orleans

Photo by Author

between youth and adults than between adolescent place and urban form. The ensuing conflict at One Shell Square between the youth and authority is not about skating or protecting the solid stone steps. The tension results from maintaining a desired social response to urban space. This relates to the driving force of urban space as the homogenization of spatial practice (Lefebvre 1991:287). Foucault is prominent in the literature regarding how institutional forms of social control and disciplinary power operate in society. The primary forms of control concerning urban space are systematic exclusion and a normalizing gaze. Systematic exclusion is the isolation of individuals due to a rationalized social order. Normalizing gaze is the maintenance of a homogenous social order. A further discussion of Foucault's ideas will offer some insight into the structure of space to support dividing practices in society. The place of youth will then be discussed as subjected to spatial differentiation.

Identity is one of the criteria architects, planners, and policymakers use to conceive place. An Alzheimer's garden is dissimilar from a skate park, a high school less so from a prison. Foucault classifies that a technique, or "a form of power," is employed when individuals are



Image capture: (t382 June 26, 2011)

Figure 4. Move along kids, move along.

subjected to something like spatial determinants. He writes that: “This form of power applies to the immediate everyday life which categorizes the individual, marks him by his own individuality, attached him to his own identity, imposes a law of truth on him which he must recognize and which others have to recognize in him. It is a form of power which makes individuals subjects” (Foucault et al. 1983:212). The take home message is that youth, who are difficult to categorize except by age, are not autonomous agents but marked subjects in urban space. As such, they are subject to an identity that is in conflict with how space has been intended. The construction of urban space, accordingly, needs to be read against the grain, not from the perspective of the architect or designer, but from how places maintain the categorization of the individual as subjected to their identity.

Youth identity is preconceived prior to their participation in public space. The physical body of youth, accordingly, is the initial site of social ordering and activity in society. The physical body of teens is amorphous, changing, and liminal. It is neither child nor adult. The literature describes youth as embodying a continuous, “processual” process of biological and social development that accounts for their awkwardness in urban space (Horton and Kraftl 2006). Often, adults treat early adolescents as non-adults, or as children, and the value of this transitional stage diminishes in favor of innocence. Traditionally, the material construction of childhood considers children to be sponges and in need of special environments that carefully negotiate what they should and should not absorb (Kraftl 2006). As Kraftl argues, however, these adult constructions of childhood span not only national and regional ideologies but also extend to the local construction of their environments. The creation of such environments fulfills social perceptions of youth activity. However, insufficient work has been done to date focusing on the details of youth environments—the banal, everyday life in which youth actually practice

spatial activity (Horton and Kraftl 2006; Kraftl 2006). Adult perspectives set limits for the body of youth, socially and physically, with little attention given to how they navigate their own urban space.

The body of youth is only the initial site of differentiation in urban space. The manner in which place is conceived only further serves to objectify the subject. Foucault suggests that the dividing practices, specifically of exclusion, in society manifest in a spatial sense (Foucault 1984). As outlined by anthropologist Paul Rabinow, a Foucault scholar, Foucault offers two modes of objectification of the subject for exclusion: (1) dividing practices: “the constituted subject is a victim in the process of objectification and constraint”; (2) scientific classification: “the body is treated as a thing, an objectified subject” (1984:8–10). I will discuss the two modes of objectification in this section on creation of places for young people in urban space following dividing practices and scientific classification. Play places, rest places, and skate places are three examples of these two modes of objectification where youth are subject to such classification and exclusion.

Play Place

The “place” of young people in contemporary society cannot be separated from the historic moment when youth and child-play became part of the infrastructure of the city. My analysis in this section on children’s play place deviates a little from the discussion on “adolescent” place. Play place is the designation and construction of specific urban locations to remove children from the street and to prevent obesity. The logic is that the success of children’s place needs to be reviewed as the same platform used to structure adolescent place. It is unnecessary to discuss that there have always been children and that young people have always found a place in the city. However, when youth and children’s places became a resource or

product of the city, that is, something to be shaped and controlled, then the place of all pre-adults changed as well. The protection of youthful identity and the creation of places became as important to cities as buildings, streets, utilities, and all the functional support needed to ensure that commerce endures. By the end of the 1850s, reform movements in America's largest city, New York, had successfully managed to alter the physical space of the city to include the first grand urban park for recreation. Central Park included a few designated spaces for children, as called for by reformers from institutions promoting children's rights such as the Children's Aid Society, established in 1852 (Gaster 1992:37). By the end of the nineteenth and the beginning of the twentieth century, public education authorities, parks departments, the Playground Association of America, the influential reformer Jakob Riis, and President Theodore Roosevelt all proclaimed that children have rights to play and child welfare should support safe places to play (Gaster 1992:39). National and local governments began to take control to protect the "sacred domain of childhood" and remove play from the dangers of the city streets (Gaster 1992; Howell 2008:972). Reformers saw city streets as a threat to child welfare due to traffic. Reformers referenced traffic incidents—for example, 39 children in New York City were killed playing in the street in July of 1920 (Gaster 1992:40)—stranger-danger, and the perceived risk of children being luring into crime as reasons to keep kids off of the streets. Additionally, since many parents were unwilling to let their children play in the streets due to the dangers, a national concern over the health of children and gross-motor skill development grew with the densification of urban areas. In response to such claims of the dangers of the public realm, urban reformers declared the playground as the best response to protecting play in the physical environment of the city (De Visscher and Bouverne-De Bie 2008). Thus, youth welfare initiated

a paradigmatic separation of the young person from the city constituting an “understandable” and “acceptable” segregation of a group of people from the public realm.

Play and the grounds for children to play became flags waved during the reform movement to call playgrounds to the attention of politicians and city planners in the 1920s and 1930s. However, neither the city planners nor the reformers were actually interested in child’s play (Gaster 1992; Howell 2008). The reformer perspective argued that organized playgrounds provide “political socialization” and places to “supervise and control” children (Howell citing Cavallo 1981). The reformers implicit goal was to make good citizens out of children who would someday become adults. “Play” became an institutionalized act used to extend the hand of proper society over people at an early and influential age. Playgrounds institutionalized age segregation, specialization of function, and supervised play (Lynch 1981). Urbanists ignored the actual needs and desires of the children for the perceived benefits of organized play.

The planning perspective of the 1930s argued for playgrounds that were “a piece of land in charge of a play director,” intended to improve the physical structure of the city (Howell 2008:962). John Nolen, an influential planner, coined the phrase “play pays” to show how real estate development could financially benefit from making more humane neighborhoods (Howell 2008:973). Higher quality neighborhoods with playgrounds would create higher return for developers and for the city’s tax base. Professional planners, a recent profession at the time, grabbed on to the warranted need for safe places to play and the improved property value resulting from parks—as was proven by Frederick Olmsted, a landscape architect, with his design for Central Park in New York. “Ground” was located and designed to control children and property value. This partially explains the continued drab and unchangeable characteristics of most playgrounds, as homeowners prefer changeless landscapes free of clutter and noise.

Early playgrounds responded directly to the prerequisite role of supervision in organized play and neat and orderly play areas. Creative alternatives, such as adventure playgrounds and junk playgrounds, have been wildly successful for children in Europe and the U.S. since the 1950s and 1960s. However, the noise of children playing and the unsightliness of these structures has prevented them from being constructed in most neighborhoods (Frost 1986; Howell 2008). De Visscher writes: “The basic idea of the adventure playgrounds is the replacement of order by chaos” (2008:606). Playground structures, like merry-go-rounds, swings, and seesaws were replaced with junk like wood, rope, canvas, and tires. Supervision was limited to helping children manipulate these spaces by teaching basic building techniques and moving heavier objects. While the concept may be fun for children, the lack of success reflects parental safety concerns and the conflicting aesthetic ideals between young people and adults. Accordingly, playgrounds from the outset were all about youth but not necessarily for young people. Play was valued for its socializing promise and ground was valued for stabilized real estate exchange.

Current theory on “child-play-place” continues to reflect these early origins. De Visscher (2008), from the Department of Welfare Studies in Belgium, argues in “Recognizing Urban Public Space as a Co-Educator, (2008)” that there is a continued need to properly socialize children. His argument presents a unique strategy, however, in suggesting child-friendly cities and child-oriented public spaces. The public realm, he suggests, is a necessary agent in the development of children into competent citizens. His research on free play and autonomous movement of children reveals one critical point, that “children tend to accept most boundaries imposed upon them and to elaborate strategies to maximize their social and cultural opportunities within these boundaries, rather than consent to them” (p.612). But, adolescents transitioning

from childhood are even less likely to consent to such boundaries and are likely to create even more elaborate strategies to “maximize their social and cultural opportunities” in urban space. This finding supports the continued attempt by landscape architects to design places that enhance the creativity of children. Susan Herrington, from the Department of Landscape Architecture at the University of British Columbia, recommends that “landscapes designed for children’s use should consider developmental and play needs, and the unique contributions a landscape can offer on a daily basis” (2006:63). Herrington proposed “seven C’s” to enhance the physical dimensions of childhood: character, context, connectivity, change, chance, clarity, and challenge. The seven C’s are based on “what we know about the development of children” and the fundamentals of landscape design (pp. 64–82). Recent theory on child-play takes a scientific approach and reflects a better understanding of child development and socialization than earlier models. Current approaches continue to build off old theory, locating children in a delineated environment (ground) and making recommendations that improve childhood development (play).

Since the initial playground movement, different strategies for child-play in the city have been discussed, but none has been as well instituted as the iconographic “structured playground.” One point from these studies has shown that children prefer environments with boundaries in which they can interpret the things found there in their own way and appropriate their own space (Veitch et al. 2006; Veitch et al. 2007). This research reflects an interpretive and creative strategy that seems to be synonymous with the act of play in relation to place. Play continues to be a means to socialize youth. Physical health and gross motor skills are again a major concern following the recent obesity epidemic and juvenile onset diabetes, two diseases completely preventable with a healthy lifestyle. Because of recent parental safety concerns, playgrounds have lost most of their early structures, including swings and see-saws, that eventually proved

too hazardous due to injuries from creative interpretations (Frost 1986). However, no studies I have found have gone so far as to examine play in nonprogrammed, public environments. Play remains ritualized and constrained to locatable “places” or playgrounds. Where are public “grounds for play” that are off the street and are not deemed “safe” but are actually quite fun for adolescents to play in? How does play in the city serve as a threshold (see Franck and Stevens 2007) for the development of youth? How is the urban environment a threshold for the transition to adulthood or as a rite of passage?

Rest Place

“Rest places” are important locations for adolescents to retreat from the social and parental pressures of daily life. Rest places are urban sites designed for therapeutic reasons to aid teens in dealing with the pressures of daily life. Rest places aid adolescent identity development and social development in public green spaces (Abbott-Chapman 2006; Mäkinen and Tyrväinen 2008). Rest places serve as restorative environments (Milligan and Bingley 2007). Therapeutic landscapes (Sampson and Gifford 2010), such as urban woodlands (Milligan and Bingley 2007; Tyrvainen et al. 2007), have become a prime site of recent discussion on youth and place. As opposed to play places for children, rest places offer older youth the opportunity to escape. In 1963, Erving Goffman proposed a metaphor regarding the change in human behavior from a theatre performance to daily life that is useful for understanding how adolescents use public places as a theatre to be on stage and the neighborhood as a backstage retreat from being on show (Goffman 1963). Further studies on favorite environments, place preferences, and youth interpretation of environment show that the two activities youth look beyond home and school to afford are social interaction and retreat (Clark et al. 2002). The city is a place for youth to show off and be on stage (Goffman 1963; Owens 1997; Owens 1994b,

1994a, 2002). Commercial areas and public parks are valued for the ability to support social interactions as an urban centrality (Kato 2009). The neighborhood is the place for youth to retreat. Neighborhood areas are the places most frequently used by youth to avoid family or peers (Clark et al. 2002). Several authors have found that favorite places serve an environmental strategy of self-regulation, calming or peaceful, and that the potential for the environment to afford a restorative experience would help to fulfill functional principles taken to guide self-regulation. The literature recognizes that participation in favorite places nurtures adolescent self-regulation. The use of rest places by youth improves their self-esteem, confidence, and personal satisfaction. Additionally, it is restorative in improving their own identity, self-concept, or how they imagine themselves. Finally, being in such places is described by youth as helping them to deal with emotional struggles and feelings (Korpela and Hartig 1996).

“Rest places” provide a means to structure space that become more than just places to play and socialize. Rest places afford experience to rebuild and develop individual identity. Unlike physical play places, rest places reflect a public concern for the mental health of youth. Empirical, scientific observation and research esteems the benefits of rest places to afford youth opportunities to improve their mental health. Play places differ from rest places as the focus has shifted from healthy, physical development to mental health. Additionally, the general population is no longer children, but teenagers who are described as existing in a tumultuous state of storm and strife, and struggling with their changing identity. Rest places represent a strategy similar to play places. The focus is problem driven and motivated out of a larger social concern for the well-being of “rational” youth. Despite the therapeutic promises, rest places represent the scientific classification of normal youth and isolates youth behavior from urban space by emphasizing the self-subjectification of youth to their identity.

Skate Place

Participation in sports, activity, with an increase in activity as youth age, including skating, shows positive implications in youth development (Dodge and Lambert 2009).

At some point in recent history, it became clear that older children and adolescents do not enjoy the play structures designed for younger children, at least not in the same manner. One of the more popular playground structures to show up on playgrounds recently has been the “skate park.” Skate parks provide designated places for the opportunity to skateboard, bicycle, and scooter (Freeman and Riordan 2002). Skate parks emphasize the success of individual technique, exhibition, and “catching air” in a trick (Vivoni 2009). Skate parks simultaneously eliminate the social and the practical, as only one skater can enter a bowl or ramp at a time (Beal 1995; Wheaton and Beal 2003). Unstructured activity, like skate parks, have been shown to have positive implications for youth development (Bradley 2010). Bradley, studying behavior in skate parks, found that unstructured activity aids in (1) focus and concentration, (2) developing competencies, (3) exploring, achieving, expressing identity, (4) setting goals and striving to achieve them, and (5) social interaction, acceptance and support by others (Bradley 2010:293). Skate parks increase opportunities for youth to skate, are exciting places to learn from others, and are more than just places to skate (Shannon and Werner 2008). In defense of skate parks, studies have found that skate parks do not have the number of injuries stereotypically and inaccurately associated with them. They are, in fact, a safe alternative to avoid traffic collisions responsible for most skate-related accidents (see Vaca et al. 2007). The notion that skateboarding in skate parks is less dangerous than free skating in cities reflects less on skateboarding than on how cities are used (Vivoni 2009; Woolley and Johns 2001; Woolley

2006). Increasingly, urban designers are revamping cities to be more pedestrian oriented. This design shift represents a reaction to previous attempts to deter any other use in support a single use by cars. In this manner, like playgrounds, skate parks serve to segregate and isolate the practice of skateboarding to specific spaces and very often fail to be constructed as originally promised by the local government (Woolley and Johns 2001; Nemeth 2006; Kaysen 2004). Skate parks serve to normalize adolescent behavior to specific locations, separated from the practical use of cities. While many skaters enjoy park skating over street skating, the creation of the former often comes at the expense of the latter. Skate park skating becomes the norm by prohibiting skating elsewhere.

Beyond marginalization, skate parks implicitly exclude some youth as they are less accessible to the average citizen than centrally located, multiuse places like urban plazas (Nemeth 2006). Skate parks further reaffirm the culture of mistrust as skate parks are perceived as attracting many peripheral elements unfairly associated with skateboarding, such as graffiti, drugs, violence and vandalism (Nolan 2003). Such claims are unsubstantiated in the literature regarding skateboarders. Skate parks do, however, support many of the negative stereotypes associated with skaters because, like any public place, skate parks attract leisurely skateboarders and other nonusers who have less respect for the skate park than do serious users (Bradley 2010). “Serious skaters”—those who campaigned for places to skate from the local community—have participated in civic life and acquired social capital as teenagers by succeeding in having skate parks built (Weller 2006). These skaters tend to take pride in their accomplishments. The contradiction in space, between skaters’ appreciation of space and the appearance of skaters as contributing to negative social activity, presents a window into how the social construction of

youth spatial practices continues to conceive of youth as a fixed, homogenous social identity in need of isolation.

Limits of Place

Play place, rest place, and skate place are all fundamentally limited to structured environments with preconceived notions of acceptable youth behavior. Further, each of these is representative of the continued response to youth problems and as problems. The result is to try to remove or limit their presence in social space. Youth transgression of spatial limitations (Janssen 2009) continue to result in maintaining normalizing notions of youth resistance, subversive meanings of place, and the ongoing reconstruction of space (Robinson 2000). Such transgression, however, may have less to do with the adolescent than the limited design intent of the place. Architects, landscape architects, urban planners, and designers continue to believe that the places they design promote “good” social encounters (Dobbins 2009). As long as human behavior is confined to the predictable, movements are limited as predicted in the design (Gieryn 2002, 2000). Recently, concepts such as “inclusive design” have emerged with the potential to undermine this basic premise of design and suggest that human movement is more diverse than currently anticipated in the design process (Burton and Mitchell 2006; Carp 2008; Zabielskis 2008). The physical environment, as Gibson argues, affords experience (Clark and Uzzell 2002; Gibson 1979), but how and for who remains a strong point of contention for creating more sustainable urban environments for everyone (Turner 2002), including youth (Collins and Kearns 2001; Mugan and Erkip 2009; White 1993; Woolley et al. 1999) and skaters (Freeman and Riordan 2002; Stratford 2002; Nemeth 2004, 2006; Woolley and Johns 2001). What this section reveals is a gap in research to look beyond the place of youth. The behavior of young people in nonprogrammed space remains largely absent. In this brief review, I have captured only a

fragment of current theory on the structure of youth places to fulfill a social “good.” The review also illustrates how recently social scientists began to develop normalizing strategies classifying children and concepts of childhood. The literature reveals that the environment continues to be one of those means normalizing concept of youth.

Play place, rest place, and skate place represent three detailed concepts illustrating how cities structure place for children and adolescents. The behavior of young people is in conflict with daily life. Institutions propose limits in public space that constrain and remove this conflict from daily life. These examples all serve to reference the exclusions of children and adolescents from spatial practice in the city.

The current study intends to participate in this practice of identifying the youth as a subject and examining their spatial practice in society. However, unlike studies on play place, rest place, or skate place, the study aims to examine their spatial practice in unstructured space. Urban environments not structured for adolescent play are also intentionally designed to deter the presence of teens and prevent adolescent activity. Crime prevention through environmental design (CPTED) is an example of this technique in urban space. CPTED proposes to design public space so that no part of it remains out of sight of a passing patrol car. Authors like Steven Flusty have written extensively on the practice of “interdictory space” that builds paranoia about



(Technologies 2009)

Figure 5. Mosquito. Image courtesy of <http://www.movingsoundtech.com/>

difference and creates urban environments that are “designed to intercept and repel or filter” would be users (Flusty 1994:16). Paranoia is built into the environment through the extensive use of fencing and barriers, security cameras, excessive street lighting, prohibitory signage, benches that cannot be slept on, and seat walls that cannot be used for sitting. In reference to youth, it will be important to discuss how urban environments intercept youth. The “Mosquito” from Moving Sound Tech is an example of such a technique. The Mosquito is an anti-loitering device that produces a high pitched, annoying sound effective only on the younger ears of youth between the ages of 13 and 25. Private property owners install the device on buildings adjacent to public spaces where teens tend to hang out.

Youth “rights to the city” suffer limits by a loss of mobility, parental safety concerns, and a general perception of mistrust of youth agency in urban areas. Youth are prevented from exploring the urban environment out of safety concerns by their parents from traffic and predators (Woolley 2006). From this loss of mobility and loss of outdoor space for children, a problem-driven response has led to increased attention to youth play environments and to parental desires for the environment to support appropriate, youthful activity (Karsten and van Vliet 2006). Suburban developments, for example, are rarely located within walking distance of convenience stores, malls, major parks, or any public gathering space. This distance creates a physical isolation that prevents youth from accessing public places without using public transit, if available, or requesting permission (a ride) from a parent (Calthorpe 1993; Kelbaugh 1989). Access to public gathering places for adolescents is not the only limitation most youth face. The physical area within urban areas is often overdesigned and is limited by adult interest to meet youth needs (Owens 2002). Adolescents are unable to congregate or use public spaces because they are viewed as a negative element (Owens 1997; Owens 2002; Kato 2009). Accordingly, the

perception of youth in public space and the social ideals of “youth” limit the opportunities for them to participate in public space.

The neighborhood effects of urban areas and suburbs on the physical activity of youth has become an important point of discussion regarding childhood obesity (Aarts et al. 2009; Binns et al. 2009; Craddock et al. 2009; Dunton et al. 2009). Interestingly, all of the discussion regarding youth and physical activity in the urban environment focuses on programmed space. This makes sense given that child play places are the historic site of programmed places meeting the child’s desire (or was it the parent’s desire) for “play.” As the mental health of youth has become a subject of much scientific discourse, a more recent trend has led to a call for more therapeutic places that meet the needs for youth to “retreat” (Shirtcliff 2010). Even alternative sports such as skateboarding have entered into the equation to solve youth problems through the production of “unstructured” skate parks (Bradley 2010). Each of the three, programmed environments—play place, rest place, and skate place—have been used here to illustrate how places have been created around the lives of youth. These structured environments are part of the continued domination of youth identity by society. Such environments place youth in space rationalized by scientific analysis and institutionalization of definable “youthful” needs.

Following the pattern set by Foucault, e.g., how disciplinary power functions in society, I have connected rationalized spatial practice in homogenous urban space to the lives of youth. Foremost, the literature on youth finds an increase in restricting freedom of access to the city. Second, restricted mobility leads to diminished physical activity and the necessity of programmed environments for youth to engage in approved play. Finally, I have endeavored in this section to present the limitations of programmed environments for permitting an engagement by youth with other urban spaces. The inclusion of new structured youth-environments often

serves to further push youth away from central urban space. The construction of space surrounding the lives of youth presents a window into the historical development of adolescent place and the persistent restriction in their freedom of movement in cities. A clear result is the increased practice of domination over the lives of youth. In the next section of this literature review, I will review the play behavior of youth in public space.

YOUTH ACTIVITY AND DEEP PLAY

In this section on “deep play”, I will focus on the everyday activity of youth in cities. Deep play is a form of play that goes beyond preconceived boundaries and involves a certain amount of risk, reward, mastery, and creativity. Deep play builds upon the earlier discussions of urban space and adolescent place to look more closely at the observable activity of adolescents. In this section, I explore studies that have examined the activity of youth in public places, specifically studies focusing on play. Deep play is an example of urban behavior that fits nicely in to Lefebvre’s concept of “representational space.” Representational space is about everyday life in urban space and includes the appropriation of space for everyday use. In terms of the narrative flow for the literature review, I have ventured from ideas of place, to conceptions of place, and now I turn towards the use of place. Everyday activity in representational space includes everyday uses, alternative uses, transgressions, and the conceptual reproduction of space through art or philosophy. Representational space belongs to “inhabitants and users” (Lefebvre 1991:39). Lefebvre writes further that “As a space of ‘subjects’ rather than calculations, as a representational space, it has an origin, and that origin is childhood, with its hardships, its achievements, and its lacks” (Lefebvre 1991:362). Representational space is a space of

subjective, lived experience. Lefebvre continues to discuss space as social space using “lived experience” as the definitive identity of this type of space.

Lefebvre suggests that the actions of individuals in representational space carry the implicit meaning of abstract and conceived space. Representational space is composed of language, signs, and abstraction that attempts to grasp meaning lost to lived-experience and re-embodies experience through metaphor into something empirical (Lefebvre 1991:203). Unlike conceived places that represent the ideologies of a society, representational space is a space of subjective experience (Lefebvre 1991:362). Subjective experience is fleeting or lost to the moment. Individuals, however, make subjective experience the focus of their creative and analytical efforts. Lefebvre indicates that such depictions of representational space are found in the work of artists, poets, and philosophers. I will argue that this includes the work of those social scientists, such as anthropologists, who also interpret observable, everyday activity in an empirically meaningful manner. Social scientists observe empirical evidence of lived experience in the traces of otherwise lost moments and the observation of human activity. Physical traces such as photographs, recorded videos, and the deterioration and physical manipulation of urban space provide access to evidence of lived experience. In this dissertation, for example, I use the anonymously posted videos of adolescents skateboarding in New Orleans as evidence of lived experience.

The key point to grasp from this section on representational space and deep play is that the author becomes producer. The author, a poet or scientist, produces a document that is representational of a moment or moments. This process of the embodiment of meaning in empirical space—from lived, subjective, experience—is how the subject also participates as a producer of space (Lefebvre 1991:407). This is an important point in establishing the

relationship between abstract, conceived, and representational space, and it is a critical point to acknowledge now. Up to now, the study of everyday activity—call it representational or deep play or lived—would only look for evidence in line with how structured space is *known* to support abstract ideas of urban space. The goal of this dissertation, however, is to identify the *unknown* or overlooked ideas used to create urban space. Urban space and conceived place are not autonomously produced but are the products of people with reigning ideas of urban spatial practice. Lefebvre and Foucault both identified that the tension, *agonism*, between the individual and rationalized spatial practice reveals how such ruling ideas operate in society. The contradictions between how space is intended to be used and how it is actually used are found in the study of everyday human activity. The challenge is making subjective experience empirically meaningful. “Representational space” is a rather complicated way of directing attention to those artists, poets, philosophers, and scientists who are producing empirically meaningful windows into the activity of individuals in urban space. Deep play is an example of activity that contradicts intended use. I discuss deep play below, as it relates to the lives of teens, following an introduction to the concept of representational space.

Representational Space

Before I move on to a discussion on adolescent play from the literature, the concept of representational space needs further clarification. Representational space is about rendering meaningful subjective experience that would have otherwise been lost. For example, active living researchers routinely use automated counters to calculate when children start and stop play activity in a park. The devices capture frequency and duration of activity. These measures are useful in understanding how to build better parks or to better structure the activity time of children. Such social scientists are providing calculations of known factors in programmed

places. The empirical evidence serves as a calculation and ignores other observable activities of the individual. Play is activity and activity is a measure of constructed places. The relationship between the places of adolescent activity and the activity remains intangible in such studies.

This section on representational space briefly departs from the discussion on teens and reviews the work of three philosophers, Walter Benjamin, Michel de Certeau, and Gaston Bachelard, as producers of representational space. Each of these authors' works exemplifies the challenge of how to make subjective, individual experience in everyday life empirically meaningful. Walter Benjamin writes about the poetry of Charles Baudelaire. Benjamin's analysis of Baudelaire demonstrates how representational space works through the poet's effort to produce Paris in the *Era of High Capitalism* (Benjamin 1997). Michel de Certeau and Gaston Bachelard both discuss the meaning of space that lies within their own individual experience. De Certeau (1984:123) uses metaphor to reveal how the story of space is a "culturally creative act." Bachelard, along the same lines, says that poetry instills a perception of space of which we would not otherwise have access. In both cases, the subjective meaning of experience in space is re-accessible through the experience of its narrative or poetic. After a review of these three authors, the literature review will move on to a review of scientific studies that focus on the experience of youth in cities.

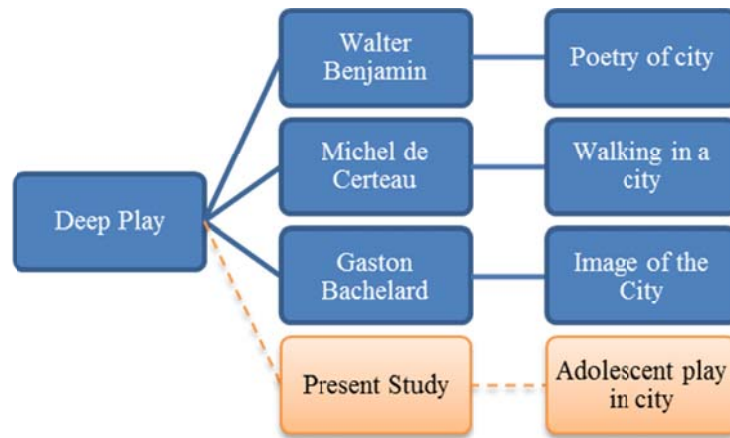


Figure 6. Narrative Flow of Representational Space

W. Benjamin: Baudelaire as a Producer of Space

Walter Benjamin’s essay on *Charles Baudelaire: A Lyric Poet in the Era of High Capitalism* is an excellent example of how poetry captures lived experience. Benjamin’s scholarship is, among many things, historical. Benjamin’s form of analysis is the historical materialist method. Historical materialism suggests that society, under capitalism, is in a continuous state of struggle and that this struggle is evidenced in the conflicts and contradictory material conditions produced by society. Benjamin found a window in the poetry of Baudelaire that described everyday life during the Second Empire—the time of Haussmann’s massive beautification of Paris through boulevards, the construction of fascinating arcades for shopping and, overall, the obscene densification of cities due to industrialization. Benjamin compares two stanzas, one from Auguste Barbier, 1841, and one from Baudelaire, 1857, to conjure up very different images of the effect the crowd had on daily life in the streets of Paris.

Finally, within a huge and somber mass of things,
A blackened people, who live and die in silence.
Thousands of beings, who follow fatal instinct,
Pursuing gold with good and evil means.
(Barbier, *Iambes et poemes*, Paris, 1841 in Benjamin 1997:123)

Benjamin interprets Barbier's poetry of the crowd as "using a descriptive method that caused a rift between the masses and the city" (Benjamin 1997:122). Barbier's depiction of everyday life presents a window of despair and constant torment. Everyone in the city faces all of the evils that arrived with the industrial era. Barbier's poetry is in line with visions of the city described by Lewis Mumford and Robert Fishman, who characterized the city as evil or hell on earth. Benjamin then writes that in Baudelaire's poetry the crowd is always present: "His [Baudelaire's] crowd is always the crowd of the big city, his Paris is invariably overpopulated" (Benjamin 1997:122). Benjamin references a passage from *Les Fleurs du mal*:

Amid the deafening traffic of the town, / Tall, slender, in deep mourning,
with majesty, / A woman passed, raising, with dignity / In her poised
hand, the flounces of her gown;

Graceful, noble, with a statue's form. / And I drank, trembling as a
madman thrills, / From her eyes, ashen sky where brooded storm, / The
softness that fascinates, the pleasure that kills.

A flash...then night! O lovely fugitive, / I am suddenly reborn from your
swift glance; / Shall I never see you till eternity?

Somewhere, far off! too late! *never*, perchance! / Neither knows where the
other goes or lives; / We might have loved, and you knew this might be!
(Baudelaire, *Les Fleurs du mal*, Paris 1857 in Benjamin 1997:124–125)

Benjamin writes that “What this sonnet communicates is simply this: far from experiencing the crowd as an opposed, antagonistic element, this very crowd brings to the city dweller the figure that fascinates. The delight of the urban poet is love—not at first sight, but at last sight” (Benjamin 1997:125). The two poets produce two very different images of urban life. Barbier describes the crowd and the city that brings suffering to civilization. The anonymous masses are oppressive and dark. Baudelaire presents that what emerges from the crowd, at last sight, is the glimpse of possibility, which is swiftly lost to the darkness of the crowd. Benjamin’s reading of Baudelaire captures the historical moment, where cities transformed civilization, from the representational experience of the individual poet. Where Barbier or Victor Hugo endlessly described the city, Baudelaire thrust himself into the crowd itself to access urban life firsthand. Benjamin characterizes Baudelaire’s efforts to capture such moments, “Baudelaire’s poetry drew its force from the rebellious pathos of this group. He took the part of the asocial. He achieved his only sexual relationship with a whore” (Benjamin 1997:171). The whore, who is “seller and commodity in one,” describes the daily life of the poet (p.171). Baudelaire’s poetry is, in light of Benjamin’s argument, a representational space of everyday life during a historic time. The take home message is that Baudelaire’s poetry contains such empirical evidence because the poet tirelessly participated in everyday urban life. Accordingly, those studies that build from observations of the activity of adolescents in public space will be the most representational of adolescent experience in the city.

Walking as an Appropriation of Space

De Certeau’s discussion on space and place presents another means by which the subjective experience of the individual becomes readable. In *The Practice of Everyday Life*, de

Certeau considers the concepts of place and space as a metaphor. In his approach, the act of walking becomes “the pedestrian speech act” (1984:98). De Certeau writes,

The act of walking is to the urban system what the speech act is to language or to statements uttered. At the most elementary level, it has a triple ‘enunciative’ function: it is a process of *appropriation* ... on the part of the pedestrian; it is a spatial acting-out of the place ... and it implies relations among differentiated positions, that is, pragmatic “contracts” in the form of movements ... (1984:97–98).

The movement of pedestrians in cities is of “a swarming mass” in an “innumerable collection of singularities” (p. 97). De Certeau is using the act of walking as a mode of entry into the experience of spatial practice in cities. Rather than relying on transportation surveys or place mapping that traces walking on city maps, de Certeau is suggesting that there is more involved with the pedestrian who is actively “passing by” on the street. The pedestrian is engaged in a process of appropriating urban space or temporarily claiming a right to the space. Pedestrians are “acting-out the place” through their movements, pauses, and change of pace. Such movements, de Certeau argues, imply “relations among differentiated position” or pragmatic solutions to the fact that people must appropriate spaces together. The “triple enunciative function” of walking leads de Certeau to identify three modes of analyzing experience: the present, the discreet, and the *phatic*. The present is what is visible to the actor. The discreet is that which is not visible, such as the intentions of others. The *phatic* is the emotional or social exchange through language and movement that creates a union between what is visible and what is hidden. de Certeau describes social exchanges in urban space through “The phatic aspect,” meaning “the function, isolated by Malinowski and Jakobson, of terms that initiate, maintain, or interrupt contact ...” (p. 99). The phatic considers the inevitable exchanges between individuals

with differentiated social positions. Phatic is an adjective describing speech, utterances, and movements that “serve to establish or maintain social relationships rather than impart information” (OED, 3rd ed., s.v. “phatic”). Through these three modes of analysis, de Certeau proposes that everyday activity becomes something accessible for further study as a pedestrian speech act. The representational space of subjective experience becomes accessible in the observation of everyday life through these three forms of analysis: the visible, discreet, and phatic. For the purposes of this study, the focus will be on researchers who examine the activity of adolescents as participating in such acts of appropriation (visible), spatial acting out of place (discreet), and subjected to pragmatic contracts (phatic) in their movements. Adolescents are visible in their appropriation of public space and, while their intentions remain discreet, their spatial interactions render explicit subjective experience that would have otherwise remained unavailable.

The Created Image of the City

Gaston Bachelard, in *The Poetics of Space*, uses a similar approach to de Certeau and looks towards works of poetry as a means of accessing the intimate meaning of spatial experience. Bachelard’s writing focuses on how “images” like house or city are burned into our mind with meanings whose origin we are often unaware. Bachelard begins from a point similar as the current discussion:

How can an image, at times very unusual, appear to be a concentration of the entire psyche? How—with no preparation—can this singular, short-lived event constituted by the appearance of an unusual poetic image, react on other minds and in other hearts, despite all the barriers of common sense, all the disciplined schools of thought ...?
(Bachelard and Jolas 1994:xix).

Bachelard is describing here the same challenge presented earlier with questioning representational space. The challenge of representational space is not to calculate human movement but to access and represent subjective experience in an empirically meaningful way. Bachelard suggests that phenomenology “—that is to say, consideration of the onset of the image in an individual consciousness—can help us to restore the subjectivity of images and to measure their fullness, their strength ...” (p.xix). For Bachelard, poetry is a creative act that restores the subjectivity of images and permits the interpretation of the meaning of space by the poet. The phenomenological method proposes that the life-world of individuals is visible in the individual’s relationship with objects in everyday life. Bachelard goes on to use poetry in *The Poetics of Space* to approach the image of the house as the specific entity for his phenomenological investigation into the meaning of spatial experience (Bachelard and Jolas 1994). The image of the house, following his investigation, defies definition and provides structural support for memory to be fixed to a space (1994). Bachelard’s text is foundational in its use of the phenomenological method to access spatial experience. His text leaves us with an important point to consider regarding the play behavior of youth in cities. The image of the city available to youth is only accessible through the observation of their actions. Adolescents are actively creating an image of the city meaningful to their experience of space.

In the texts of Bachelard and de Certeau, we find that subjective experience is made accessible through the “speech-act”—an important moment where experience is rendered visible instead of lost (de Certeau 1984:98). Benjamin’s text reveals how the author produces space in representational space. From the three authors it becomes clear that subjective experience is accessible through how individuals interact in urban space. Adolescents are producers of space. Appropriation and social interactions are key entry points to observing the subjective meaning of

the city. The actions of youth represent a creative response to an image of the city. Deep play represents such a creative act. Adolescents engaged in deep play in the city are creating a unique image of the city. As producers of space, their subjective experience is available through their play behavior, appropriation of urban space, and social interactions with others in the city. The following review focuses specifically on empirical studies of youth behavior in public places.

Representations of the spaces youth value and adequate discussion based on observations of youth spatial practice are remarkably absent from the literature. Thus, the focus of this dissertation: how does urban, public open space in the city afford unsupervised youth opportunities for play? Before moving on to discussions of youth activity in space, a brief review of Michael Atkinson's (2009) work on "*parkour*" in Montreal presents an excellent example of a study focusing on how people create space for lived experience through deep play. Atkinson examines how *parkour* produces a "use-value" that extends beyond traditional urban perspectives of space valued for exchange, commercial, value. His study is an example of a scientific analysis of a representational space.

Parkour is a process of physical training or exercise that treats the city as an obstacle course with planned routes and people running, jumping, and skipping in groups of enthusiasts. According to Atkinson, *parkour*, is an example of urban nature, where the act puts one in "communion with one's own habitat" (2009:169). He bases *parkour's* natural method of exercise in the city as one that is not restricted to programmed space in which physical activity is said to occur (p.171). He goes on to identify how *traceurs* (*parkour* athletes) are like the *flaneurs* of Baudelaire's Paris. Referencing Benjamin, he writes that *flaneurs* "deploy spectacular forms of street theatre or movement to criticize the uniformity of speed and anonymity of urban life" (p.174). He argues that *parkour* represents a disruption in the concept

of homogenous activity in an environment conceived for practical action alone. Citing Lefebvre (1991), Atkinson writes that the “social production of urban space is fundamental to the reproduction of social-cultural power relations and chances shared between people” (p.175). Beyond the disruption of spatial tactics, Atkinson describes *parkour* as a post-sport culture, “one that subverts modern ideologies of sport and challenges the dichotomies of the civilized body with athletic movement” (p.179). Atkinson goes on to suggest that *parkour* is not a typical youth resistance or urban critical subculture, “like skaters” (p.182). *Parkour*, instead, is an example of the “political reappropriation of commercial urban spaces” (p.183). Despite his unsupported exclusivity of *parkour* as “beyond typical youth resistance” (another example of the homogenization of youth identity to a culture of resistance and mistrust), Atkinson’s study on *parkour* establishes a very similar field of research that supports an interpretation of urban space for heterogeneous activity. The term “deep play” extends directly from Atkinson’s logic of *parkour* as activity not restricted to programmed space.

Studies on youth activity in the city often describe how youth hold certain values for different places (Travlou 2004; Travlou et al. 2008). Travlou used an inventory of park conditions, interviews, surveys, and observation to assess young people’s values in the use of parks. Travlou found that “the environments of teenagers are not just appendages of the adult world, but are special places created by teenagers themselves and invested with their own values” (Travlou 2004:2). The specific locations the teenagers in the study identified as valuing, however, were not invested with their own values but with the values of society for consumption. The list included shopping malls, cinemas, and commercial centers. The findings do support other studies on favorite environments, place preferences, and youth interpretation of public space. The two activities youth look beyond home and school to afford are social interaction and

retreat (Clark et al. 2002). The city, commercial centers and shopping malls, is a place for youth to show off and be on stage (Goffman 1963; Owens 1997; Owens 1994b, 1994a, 2002).

Commercial areas and central public parks are valued for the ability to support social interactions as an urban centrality (Kato 2009). While Travlou may have been reading into her study, adolescents and teenagers have been shown to prefer to appropriate their own spaces instead of using programmed and formally designed environments (see Nemeth 2004: 75–76, citing Valentine, and Woolley and Johns, 1997 and 2001). Studies on specific urban spaces often refer to the importance of the social and physical makeup of the space as a factor in the urban play of youth.

Adolescents produce space by creating settings that meet their interests. According to Eric Fredericksen, the urban environment becomes a possibility and urban youth resist containerization in the physical environment (2002:46-50). Fredericksen found that skaters, for example, “creatively use the environment around them” because they have so few spaces to skate (2002:46). The urban space teens interact with provides opportunities that are responsive to their particular needs. As Iain Borden describes, objects in the city transform human experience in relation to the skateboard (Borden 2001b:191). Teens use props, like skateboards, and will occasionally manipulate the design of urban places by waxing edges, installing steel edges, or building their own concrete ramps. Karen Franck and Quentin Stevens have labeled the concept of appropriating space for spontaneous social practice as “loose space.” They write that “People create loose space through their own actions. With their bodies they lay claim to public spaces, pursuing activities of their choice, activities not intended in the design or program of these spaces” (Franck and Stevens 2007:35). Space is “appropriated” when someone claims a right to a segment of the city as a space of social encounter and interacts with the urban environment in a

moment of spontaneous practice (Franck and Stevens 2007:99). Deep play describes the actions of adolescents in producing space. Lefebvre, waxing utopian, defines play as the moment where use-value gets the upper hand on exchange-value and the appropriation of space may achieve dominion over domination as the representational space. Play is the moment where being-in-the-world creates a setting that is distinct from the constraints of capitalism. Play creates a moment where “the imaginary and utopian merges with the real” (Lefebvre 1991:348). Through the creation of such situations for play, the city becomes a playground (Flusty 2000:154).

In the section on conceived space, youth “rights to the city” reflect limited mobility, that is, restrictions due to parental safety concerns, and a general mistrust of youth being in urban areas. Because of these limitations, a number of problem-driven solutions address youth obesity, promote positive social encounters, and provide places to play. Several authors in urban studies and children’s geographies have responded to this deficit of youth rights. Young people’s embodiment practices, performance, emotion and materiality have been studied in response to larger cultural concepts, like rethinking of architectural space as affect (Kraftl and Adey 2008), how boyhood represents a distinct subject for study (Janssen 2009), or how girls hang-out and consume space in the city (Thomas 2005). The following reviews these more specific empirical studies that capture current trends in studies on youth, by focusing on youth play behavior in public urban settings.

Youth have been shown to socially structure place and whose social structure is informed by engagement in shared public places (Nolan 2003; Simpson 2000; Horton and Kraftl 2006; Veitch et al. 2007; de Vos 2005; Robinson 2009). Following Els de Vos (2005), the design and layout of different public spaces favors or excludes some activity. De Vos examined how youth and other citizens appropriate public spaces through observation of their spatial activities in three

parks in Ghent. His study concluded that there is no such thing as a “general public interest” in parks and the “park visitors routinely consisted of diverse subgroups with an identity and interest of their own” (2005:1058). De Vos’s observations of youth activity in public parks supports the argument that youth appropriate spaces differently than adults and that the unique characteristics of each park was influential in where youth chose to locate their activities.

Youth access places that serve important developmental and social functions (Korpela et al. 2001; Maddison et al. 2009; Bradley 2010). In his study of the unstructured play behavior of adolescents in skate parks, Graham Bradley addresses a common misconception of adolescents: “Unstructured activities—particularly those involving free time spent in the company of peers—is related to antisocial behaviors such as violence, public nuisance, property damage, and substance use” (2010: 293). Bradley’s study involved three steps: he interviewed teens, skate park users and community stakeholders; he trained observers who participated in activities with teens in skate parks; and, he asked teens from two secondary schools to complete a questionnaire on perceptions of skate parks. As opposed to common perceptions of adolescent behavior in skate parks, unstructured activity, he found, has positive implications for youth development. Unstructured activity aids in (1) focus and concentration, (2) developing competencies, (3) exploring, achieving, expressing identity, (4) setting goals and striving to achieve theme, and (5) social interaction, acceptance and support by others (Bradley 2010:293). His study supports the argument that teen’s engagement in unstructured activities, such as skateboarding, produces space through appropriation and social interactions. Youth described the skate park as serving more than a place to engage in risk-taking behavior. He writes: “They are places to meet and mix to ‘chill’ and ‘hang out,’ where skateboarders share knowledge, encourage others, and generally ‘look after their own’” (2010: 299). The youth in his study claimed that it was boring

to skate alone and that social interactions in skate parks were what made the experience fun. Bradley's study supports the notion of deep play as a risk/reward activity of risk-taking amongst supportive peers.

Studies on the political and cultural geography of young people occur in specific urban places, like plazas, parks, and central urban areas. Studies focusing on such urban places tend to emphasize the appropriation of space by youth for graffiti, skateboarding, or hanging out (Woolley and Johns 2001; Vivoni 2009; Simpson 2000; Stratford 2002). These studies provide in-depth insight into how youth structure physical environments in the use of public space (Robinson 2000). Catherine Robinson's (2000) study found that youth organized space between those in which they felt safe and reaffirmed, and those that they viewed in a negative way or from which they thought they would be excluded. Robinson then went on to link space to identity, furthering the process of classification by overemphasizing the inherent value of the subgroup identity as it relates to the construction of place. Talia McCray's (2011) study of low-income adolescents also found that sense of safety mattered in the construction of space for social activity. Her study relied on the self-mapping of teens' safe locations. She asked them to provide a list of fifteen activities they were likely to engage in beyond home and school, conducted a separate analysis of spatial data of total crime, and received comments from youth on neighborhood safety. McCray et al, found that teens tended to view their street as safe but streets a couple blocks away as less safe and streets further away from the urban center as more safe (McCray and Mora 2011). Using mixed regression analysis, they found that teens structured their spatial activity based upon perceptions of safety. The anticipation of unwanted social interactions limits the activity of teens in urban environments.

The material conditions of public spaces constrain or limit youth's ability to appropriate space. Peter Kraftl's (2008) study of two urban buildings found that individual urban spaces "preconfigure, limit, and engender particular affects to accomplish certain goals" (Kraftl and Adey 2008:213). Their study suggests that play by urban youth represents an alternative means of inhabiting such spaces. Kraftl's study leaves room for the play of adolescents to produce space as a creative act. Jenny Veitch's (2007) study examines the role of public spaces on young people's active free play. Using small focus groups, Veitch examined how young people felt about playing in public open space, the presence of barriers to use public open space, and the factors which motivated them to play in public open spaces (Veitch et al. 2007). Veitch's study noted that access, independent mobility, social and environmental factors, and the condition of equipment and facilities influenced their use of these spaces.

One of the largest barriers to public space is that most public spaces are designed for adults. Mary Thomas (2005) used interviews and user-generated photographic records to examine how girls (n=25) learned to reinscribe social differences like race and class when hanging-out in adult spaces (Thomas 2005). Thomas's study suggests that the social interactions of youth in adult spaces tend to reflect the same homogenous identity that adults encounter. The challenge of appropriation of urban space for youth is that they are accessing adult-space. Elaine Stratford (2002) highlights the importance of this challenge by showing how the problem of skateboarding conflates with the problem of youth in public spaces. Stratford's study uses findings from a research program on youth, urban governance, and skating in Australia to examine a particular site, Franklin Square. Stratford found that adolescents were routinely grouped together and faced the contentions of other users in a location that is used by multiple groups with multiple conflicts. Her study augments debates about situated and contested

sociospatial relation to disrupt practices that marginalize skaters by spatializing homogenous space (Stratford 2002).

“Spatial context,” the activity happening in a location, influences adolescent appropriation and social interactions in public space. Cara Robinson (2009)—whose study examined how street and park spaces were complex systems offering the youth who appropriated these spaces the chance to transition into adults—used the examination of the qualities of space as a starting point to understand youth. The study examined how free space and consumerized space was polarized in the lives of young people, how free space was an important factor in the creation and organization of local knowledge, and how liminality was a useful tool to explain the condition of youth (Robinson 2009). Robinson’s study highlights the importance of considering how youth appropriate space. Youth engagement in public space informs them with local knowledge. Timothy Simpson’s (2000) study examined a particular place, a record store and adjacent plaza, as to why it attracts particular groups of people and how public life is generated by the way people appropriate public space. The activity of the record store served as a catalyst supporting youth appropriation because of the social interactions teens anticipated. Olivier L’Aoustet’s (2004) study further established how everyday activities govern adolescent use of public space. Specifically, the study investigated why youth preferentially invest their time and effort in a space, how they organize it among multiple uses, and their logic behind their actions (L’Aoustet and Griffet 2004).

Board-stops on stairway rails and seat walls signify that designers and policymakers are confining human movement. As cities continue to diversify, it will be insufficient and ineffective to continue to constrain places based on “single use.” “Skate parks” only serve to further segregate uses of urban space by reducing the skateboarder’s unique claim to the street

(Gans 2002; Dumas and Laforest 2009; Freeman and Riordan 2002; Miller 2004; Nemeth 2006; Thompson 1998; Vivoni ; Woolley 2006; Woolley and Johns 2001). Unfortunately, skate parks also fail to engage the most disenfranchised members of this population because they are located away from centralized urban areas. Lyn Lofland argues that the “public realm” suffers through this continued focus by designers to limit land form by use and deter alternative interpretations of how the city supports urban life (Lofland 1998). Skateboarding is a social activity that can cross designed boundaries of spatial identity (Borden 2001a). The activity of skateboarding—the appropriation of the street as a claim by an individual to spatial practice—defies this logic of segregation and homogenization of the city. Such arguments clearly set a precedent for continued research on skateboarding as a type of deep play.

The primary means by which cities are reappropriating urban space for practical use is through the implementation of physical design barriers and the privatization of public space, which gives private authority over urban environments. Privatization of public space and power of private authority controls youth and skate conduct in seemingly public environments. The intentional confrontations by skaters can only be viewed in this circumstance as resistance (Flusty 2000). As a sociospatial practice, skateboarders fight for a space of their own (Borden 2001b). Increased security and surveillance in public spaces deter activities such as street skateboarding, and challenge the abilities of youth to forge social bonds and enhance their own relationship with the physical environment of the city (Nemeth 2006). Shopping malls and office plazas are examples of semipublic spaces where security guards assume an above the law authority to protect what the mall is supposed to be used for (Nolan 2003; Flusty 2000). Rights to the city limit more than the urban play of youth.

In summary, I have situated this dissertation amongst similar studies looking for insights into how youth use urban space and how physical and spatial context effect youth play. Sites in urban space preconfigure or limit youth play. Settings support the activity of youth through a creative process of appropriation. Deep play characterizes the activity of youth engaging in unstructured play in urban areas. The literature reveals that youth participation in public urban open space serves an important role in identity and development. The literature also characterizes youth as independent of space and resistant homogenous spatial order. The studies address the social and material qualities that factor into play for urban youth. However, both the mundane details of the physical environments and variations in how play manifests in response to differing spatial contexts remains unknown.

LIMITATIONS AND SIGNIFICANCE

The literature reviewed to this point has provided a context detailing how adolescents (youth) participate in public space differently than adults, has identified a link between this difference and the marginalization of teens, and has shown how participation in public space serves an important function in the lives of youth. Three primary research strategies emerge from the literature: studies that occur in environments designed to support youth play; studies that examine identifiable groups of youth in public space; and, those studies that examine urban public spaces as settings for youth activity. The primary mechanisms for conducting research from this literature are referenced in Table 1 (p. 67).

Research on young people's participation in environments designed to support play is restricted to those adolescents who can access and would choose to use these places, as well the initial social construction of place and activity. The limitation is that the user is as much of a

function of the site as the use. Studies on known groups of youth in public places are inversely limited to those sites that meet the functional needs of the group, and so are similarly constrained to the social construction on place as it relates to a specific group identity. Studies on settings probably best situate the research proposed here because they tend to study youth activity that is not bound to a specific group or place. Such studies provide insight into how youth access public space for their own benefit; however, no study to date has examined variations or similarities of the place of play across multiple sites or with users of varying social dimensions or larger, urban contexts. This is partially due to the degree to which studies rely on youths' interpretations of their preferences about spaces, with less attention paid to the nature of the space itself. Few studies have even observed youth directly engaging in activities in spaces in an unobtrusive manner. Studies that have direct observation of youth focus on the youth themselves, with the characteristics of the space noted, however mostly muted in the background. Yet, each space is different, and each affords different types of activities for different groups of individuals. This study is unique in approaching two familiar subjects, youth and urban space, with complimentary methods not previously employed together in the literature. This dissertation fills a gap in the literature and inverts the prevailing logic by focusing on the space from the perspective of urban design, with youth as the users of a space remaining necessarily muted in the background.

Table 1. Research Approaches from Referenced Literature

Research Method	Frequency	Reference
Interviews	15	Beal 1995, Bradley 2010, Freeman 2002, Karsten 2006, Korpela 2001, Kraftl 2006, 2008, L'Aoustet 2004, Nolan 2003, Owens 2002, Robinson 2000, Shannon 2008, Simpson 2000, Thomas 2005
Focus Groups	9	Clark 2002, De Visscher 2008, Horton 2006, Pomerantz 2004, Robinson 2009, Travlou 2004, Veitch 2007, Wheaton 2003, Woolley 2001
Archival Research	9	De Visscher 2008, de Vos 2005, Howell 2008, Johnson 2009, Nemeth 2006, Rogers 2005, Vivoni 2009, Woolley 2006, Fusco 2007
Participant Observation	7	Atkinson 2009, Beal 1995, Doane 2006, Kraftl 2006, Robinson 2000, Simpson 2000, Travlou 2004
Nonparticipant Observation	6	Beal 1995, Bradley 2010, de Vos 2005, L'Aoustet 2004, Nolan 2003, Robinson 2000
Site Analysis and Site Survey	6	De Vos 2005, Freeman 2002, Kraftl 2008, L'Aoustet 2004, Simpson 2000, Travlou 2004
Surveys and Questionnaires	4	Bradley 2010, Nolan 2003, Robinson 2000, Travlou 2004

Chapter 2. Gleaming the Tube: How can Researchers Access Evidence of Youth Play Behavior?

RESEARCH PURPOSE

The purpose of this study is to identify how urban public open spaces in New Orleans “afford” unsupervised adolescents (“youth,” ages 12 to 19) opportunities for play in a nonprogrammed setting. The concept “afford” indicates that the study focuses primarily on environmental factors as they relate to adolescent activity. The study examined twenty-one public urban open spaces (sites) in New Orleans as settings of deep play amongst adolescents.

The alternative hypothesis for this dissertation is that different sites harbor similarities and differences in affording adolescents opportunities to play, and that the analysis of each site, surrounding context, and behavioral observations of youth play would reveal interdependence between urban design and youth. The null hypothesis is that all of the variance of adolescent behavior from coded observations reflects individual differences alone and that no similarities can be reliably or systematically attributed to external factors such as urban context, peer context, or physical environment.

The research conducted for this dissertation questions how patterns and variations in urban open space could provide further detail as to how the urban environment supports play through a study of multiple sites. The main research question is: how does urban public open space in a city afford unsupervised youth opportunities for play? The study intended to answer this question by examining the patterns that emerge from the documentation of various physical environments, spatial context, and observations of youth activity.

In this study, I proposed to conduct research on deep play, urban space, and adolescent places. According to Diane Ackerman:

Deep play is the ecstatic form of play ... It testifies to how something happens, not what happens. Games don't guarantee deep play, but some activities are prone to it: art, religion, risk-taking, and some sports—especially those that take place in relatively remote, silent, and floaty environments, such as scuba diving, parachuting, hang gliding, mountain climbing (1999:11).

While Ackerman's text clearly leads to a preference for a very isolated and extreme type of play, the play of urban adolescents in nonprogrammed, urban environments is "risk-taking." Skateboarding and other nonprogrammed types of urban play are referred to as risk-taking, participating in something "more natural," and transcendent (Atkinson 2009; Nemeth 2006; Kaysen 2004; Freeman and Riordan 2002). Deep play involves an inherent risk but also a sense of mastery. Individuals conduct repeated attempts and often rely on the support of peers to complete a risky maneuver. Accordingly, deep play is distinct from mundane urban uses like "hanging-out" or vagrancy. Adolescent play in urban space participates in a performance. A successful performance amongst a group of supportive peers evidences a certain amount of reward. I recognize this aspect of deep play by including observations of peer support as evidence of prosocial behavior in addition to observations of risky behavior. In such a manner, risk-taking and prosocial interactions define a risk/reward scale of deep play. The proposition is that deep play is about having fun and that risk-taking amongst supportive peers engaged in a similar activity is even more fun.

RESEARCH SETTING

The researcher studied several neighborhood parks; well-known city parks; popular plazas and squares; abandoned, urban, open space; and accessible, semi-public plazas/building entrances. Sites were all located within the urban area of New Orleans. Affordances of each urban setting were measured in terms of urban context, observed social/peer context, and the specific site features in each location. Adolescents in these sites were observed and coded from in-field observations and from online, anonymously posted videos. All locations were public open spaces found in the New Orleans urban area.

Data was collected from in-field observations and documentation of urban environments following the below procedures. An initial pretest of sites (n=17) and times included the following: plazas and squares, Spanish Plaza, Jackson Square, Annunciation Square, Coliseum Square, Washington Square, Lafayette Square, Clay Square, and Congo Square; building plazas/entrances, including One Shell Square, World Trade Center, Riverwalk Marketplace, and French Market; and parts of urban parks, including City Park, Audubon Park, Louis Armstrong Park, and the Fly. Initial site selections followed suggestions from the literature, as well as representing the most likely variance in terms of neighborhood context, scale, centrality and daily use. This strategy follows the extreme-case method to maximize variance (Gerring 2001), permitting a model that examines relations between sites and youth to promote probabilistic analyses of both within and between case variations. Since the primary unit of analysis is the setting in which youth play around New Orleans, initial observational research efforts maximized locations and times. Locations were added and removed during the study as new information became available or sites were eliminated due to underuse.

Certain nonperforming sites were eliminated halfway into the study from further observations, as no observations had been made to date. These sites include Congo Square, Louis Armstrong Park, Audubon Park, The Fly, Lafayette Square, World Trade Center, Coliseum Square, and the French Market. These sites remained in the study for site analysis and urban audit but were limited in terms of observations. The number of sites with successful direct or indirect observations totaled 14 of the final 21 sites selected for the study. The addition of four sites, Laurence Square, City Hall Plaza, Lee Circle and the Peach Orchard, brought the site list from 17 to 21. The Peach Orchard is a DIY (Do It Yourself) skate area that has not been condoned by the City of New Orleans as a skate park.

The research period began in the first week of December 2010 and extended until sufficient observations were completed for statistical analysis. The completed 10-month period is longer than most reported studies in the literature, which most commonly ranges from three to four weeks. Following extensive in-field observations in late spring and early summer, in-field observations peaked on 21 June 2011, which was “Go Skate Day,” and dramatically declined with the advent of summer storms and heat.

The researcher initially conducted a site analysis of each site from the perspective of an urban designer. Site analysis documented the imageability, enclosure, human scale, and composition of each site as well as the physical features, barriers, edges, centers, and use of hard surfaces and vegetation. Site analyses have been used as a research strategy to understand perceptions of urban public space design from cultural and economic perspectives of various users, politicians, and professionals (Pugalis 2009). Site analysis records detailed physical information about each site that is not specific to a particular group or spatial practice, but which has only become an object of analysis for this study due to youth participation and involvement

with a particular site. Site analyses were conducted prior to observational research and during school hours, as well as during observation sessions. Hand drawing on existing aerials in the field, notes, sketchbooks, and photos documented the site noting conditions of use, physical traces, limits, and potentials of each site. Physical traces are observed by systematically looking at the physical environment to find evidence of activity (Zeisel 2006). The collection and examination of physical traces permits researchers to infer the recent history of a urban space, the decisions made by designers and developers about the space, how people use the space, how people feel or think about the space, and how a particular space meets the needs of the people using it (Zeisel 2006). Observation of physical traces is highly illustrative of the relationship between people and the physical environment, and it provides a rich context for content analysis or “thick description” (Lee 2000; Webb 1966). The method is unobtrusive and does not require being present at the time the trace was created. Physical traces look for the by-product of use (what people do to a site: erosions, leftovers, missing traces); adaptations for use (changes to a site to make it better suited for a use: props, separations, connections); displays of self (changes to imply ownership: personalization, identification, group membership); and public messages (communication practices in place: official, unofficial, illegitimate) (Zeisel 2006). The site analysis was updated during the course of the study, with additional notation and dated entries throughout the observational process. Further, an inventory of urban context was conducted to identify how each site fits in to a larger spatial context. The inventory, offset 500 meters from each site perimeter, documented information on visible vacancy, such as the presence of empty lots, predominant land use, and observed activity level of the area. The inventory builds on site-specific information by connecting the site to an urban location.

Unobtrusive, observational research was used as the recommended strategy in studies of behavior and human use where participation or interviews might interrupt the activity under observation (Lee 2000). The study proposed 150 and completed 173 observation time points—site visits. At no time during the study was the researcher confronted by youth. In the field, I maintained sufficient distance to minimize interactions as I conducted observations and made hand sketches in notebooks. Behavioral observations varied considerably across sites. Of studies with multiple sites, published results (Forsyth, et al., 2008) have relied on 20 observations per focus area for a sufficient success rate. For this study, the average maximum recorded observations was 20 with the overall average 8(SD=5) due to the inclusion of low performing sites.⁵ At the end of data collection, I estimated about 400 independent observations of youth playing in different urban locations would successfully be coded for quantitative analysis. Average *n*'s for studies thoroughly observing behavior typically count from as low as 30 to as high as 700 observations, with an average around 250. At the close of data collection, 283 separate observations had been successfully coded for further analysis, placing this study well within boundaries established in precedent studies.

Sampling Schedule

“Behavioral sampling grids” were selected because they have been successfully used in studies of children and in studies of systematic observation of neighborhoods (Sampson and Raudenbush 1999; Travlou et al. 2008; Travlou 2004; Castonguay 2010). Session locations and times varied so that the same observation session was not observed on two consecutive days and that two sessions are never carried out on the same day. This strategy was recommended by Castonguay (2010) to help the observer to remain unnoticed, thus decreasing interaction effects. The study proposed to conduct approximately 150 observation sessions altogether, with 68

sessions in the first round divided among the 17 identified urban spaces. Sites were identified based on literature supporting where youth have been reported to play in the city: public plazas and squares, private building plazas and entrances, and urban parks (Owens 1994b, 1988, 2002; Travlou 2004). The study used a sampling grid of known urban, public open spaces in New Orleans, with observation of times and locations based on the greatest likelihood of youth being present—e.g., after school, holidays, and weekends. Youth were not observed in the evening as the City of New Orleans had initiated a dusk to dawn curfew. Known urban locations within the city were thought to enhance feasibility, as both the researcher and youth are likely to have access to these places. Observation days and times were set up to best accommodate sporadic site usage. Sites were clustered into three groups, as follows:

- Group A: Spanish Plaza, Jackson Square, World Trade Center, Ferry Terminal, Riverwalk, Woldenburg Park, French Market, and Washington Square
- Group B: City Park (Main Lawn Area and Poppo Fountain); One Shell Square, Hunter's Field, Pancakes, Lafayette Square, and Peach Orchard
- Group C: Annunciation Square, Coliseum Square, Clay Square, Laurence Square, The Fly, Audubon Park

Site clusters were randomly assigned dates, ensuring that an equal number of site visits have been assigned per weekday. The advantage of this change is that if activity is found anywhere in the cluster then observations can be made, yet it remains statistically unbiased for a particular site where observations are more likely to occur.

On each observation day, the researcher approached each site as part of a route that minimized travel time and maximized frequency of site visits, in order to verify whether the site is currently being used by youth. The route alternated in terms of direction and departure times

but largely follow this sequence: The Fly, Clay Square, Annunciation Square, Coliseum Square, Canal Street Ferry Terminal, Spanish Plaza, Woldenburg Park, [Congo Square and Louis Armstrong Park], the “Pancakes”, Hunter’s Field, and City Park. The route was approximately 24 miles and took two hours to complete with 5-minute observations at each site. Whenever youth were visible in a location, the researcher stopped and observed for a period of 30 minutes to one hour. An audio data recorder was used to document site usage during this route and during observation sessions. Notebooks were also used, documenting and drawing this information, in addition to an audio recorder, and the notes were then coded into a dataset. Behavioral sampling observed each setting in its entirety, noting each time a particular behavior occurs, duration, and description number of individuals involved (Lee 2000). This method allowed patterns to be discerned during analysis, rather than being immediately obvious, and it permitted the mundane to become interesting (Lee 2000). Settings were observed and notes were vigorously made as events clearly ended or changed. An observational journal was maintained, with notes being made as to who is doing what and where, as well as noting time intervals of activity. The researcher entered data points into a GIS model linked to SPSS for further statistical analysis. All settings were given X,Y coordinates and the completed dataset was successfully integrated with ArcGIS.

A digital camera (Nikon D70) was used to document the sites for photo analysis. As suggested by Sampson (2010), site notes were audio recorded during each session to improve observer coding of sites and activity, as observers tend to get distracted in the field (Sampson and Gifford 2010). When the situation permits, i.e., when it was not awkward or conspicuous, the researcher sat in the area and sketched and took notes as unobtrusively as possible in the field. A tape measure or other device was used to measure distance and elevation in the field.

Additional data relevant to each setting and indirect observations of youth playing in the separate sites were collected using online resources. Data on urban context was collected from online resources to identify how each site fits in to a larger, spatial context. Data on urban context—offset 500 meters from each site perimeter—documented information on the walkability, total crime, and validation of land use and vacancy.

Anonymously posted online videos of youth playing in these sites were also collected during the course of the study. YouTube videos are publically available documents posted by youth to share amongst friends. While it may be argued that presence of a video camera changes social behavior, most research studies on youth require parental consent and the successful building of a trust relationship with the researcher. Such prerequisites are known to interfere with natural play behavior. Furthermore, the use of online video permits access to settings of activity that would otherwise remain inaccessible to researchers.

The study collected 104 unique videos, which had been watched 254,436 times, from online video search engines such as YouTube and Vimeo. I entered key words such as Skate, Sk8, Skateboard New Orleans, New Orleans Skate, and combinations thereof in internet search engines. As the number of videos collected increased, the time period of posting, within the past week or month, became a more reliable means of filtering and identifying videos. I spent approximately forty hours searching for and downloading videos over the 10-month period from November to August. From the five and a half hours of video that was scanned for unique content specific to sites in New Orleans, approximately one hour (54.5 minutes) from 62 videos posted by 22 unique authors was deemed acceptable for coding.

Videos took considerably more time to code, averaging 45 minutes, than originally estimated. The number of videos to be analyzed was determined based upon the feasibility of

watching and coding short videos within the appropriate period of a dissertation. This information was then tested to ensure that the final sample size would produce reasonable effect sizes for urban studies research. A preliminary investigation reveals that the average length of YouTube video posts are 2.5 minutes. An additional .5 minutes per video was allotted for loading the video, and an additional 7 minutes per video was allotted for coding and data entry, for a total of 10 min allotted for each video.

The process of coding videos took well over the allotted number of hours with time spent coding each video ranging from 15 minutes to 3 hours. The range was dependent on the number of scenes and amount of information contained within each scene. An initial coding scheme was developed and updated during this process. During this period, in-field observations were entered into the same dataset using the same coding scheme, drawing information from notes where possible and leaving information as missing when not.⁶ All videos, regardless of whether they were coded, were archived with internet address, author's alias, number of views, duration of video, date originally posted and the date at which it was archived, whether or not youth were present, and which specific site was used in the video. The archive is available upon request. Video names were standardized prior to being coded. Data was then analyzed using chi-square, regressions, and hierarchical linear modeling in SPSS 19.0.

MEASURES: VARIABLES AND CODING STRATEGIES

Deep Play as an Outcome Variable

Deep play is the outcome variable measured in this study. Deep play was measured through a risk/reward scale where increased levels of risk-taking were factored with increases in prosocial behavior. The scale characterizes observed youth behavior specific to each trick. The

extreme limits of the scale ranges from a destructive/injurious trick with no evidence of peer support to a trick demonstrating restraint with an overwhelming display of peer support (prosocial behavior). For example, a highly risk-taking maneuver with low social support from peers is an example of risk-taking with diminished reward, whereas a risky maneuver with high levels of peers support implies a combined level of success. This outcome, or dependent variable (DV), is a continuous scale of observed behavior factored from categorical observations of prosocial behavior and risk-taking behavior. This DV was selected because it best represents individual behavior occurring in a peer setting and because it is in keeping with the null hypothesis—individual differences alone account for all of the significant variation in behavior. By measuring behavior in this manner, the risk-taking behavior of each individual trick is always put in the social context of the degree of peer support present. Since neither prosocial behavior nor risk-taking behavior are predictors of behavior, but rather the outcome of each documented behavioral action, the use of this DV will successfully evaluate the criterion variables without interference.

The dependent variable was developed as a factor of two ordinal variables collected during study, namely prosocial and risk taking (see Table 2. Variables Coded in Study). Prosocial measures the amount of observed peer support generated by the group in each setting. The prosocial variable was defined as an ordinal level variable with increasing levels of observed behavior: (0) the default, none, escalated to (1) some but barely detectable, (2) to detectable but limited to a few observed individuals, (3) to more evident more than half of people in setting show support, (4) to most evident or the number of individuals showing support greatly outnumber those who did not. Risk-taking was also entered as an ordinal level variable ranked from no observed behavior noted, to cautious, to restrained, to risky, to reckless, and finally

Table 2. Variables Coded in Study

Variable	Type	Values	Measure
Risk/Prosocial	DV	Prosocial -3.99 to Risk-taking 3.025	Continuous
Risk Taking	DV(+)	(0) No Behavior; (1) Cautious; (2)Restrained; (3) Risky; (4) Reckless; (5) Destructive/Injurious	Ordinal
Prosocial	DV(-)	(0) None; (1) Some but barely detectable; (2) Detectable but limited to a few individuals; (3) More evident, more than half of the peers show traits; (4) Most evident, the number of individuals showing support greatly outnumber those who don't	Ordinal
Location	CV	Urban Location in New Orleans, Spanish Plaza, Jackson Square, Ferry Terminal, Woldenburg Park, One Shell Square, Hunter's Field, Pancakes, Annunciation Square, Coliseum Square, Clay Square, Laurence Square, The Fly, City Park, Lee Circle, City Hall Plaza, French Market, Washington Square, Peach Orchard	Nominal
Appropriation	CV	(0) Presence, (1) Temporary, (2) Permanent	Ordinal
Individual Approximate Age	CV	(0) Cannot be determined; (1) Young Adolescent (9-12); (2) Mid-Adolescent (13-15); (3) Late Adolescent (16-18); (4) Emerging Adult (19+)	Ordinal
Individual Ethnicity	CV	(0) White; (1) African American; (2) India; (3) Other	Categorical
Individual Gender	CV	(0) Male ; (1) Female	Categorical
ID of Site Feature	CV	Not Specified; Barrier; Driveway; Furniture/Bench; Gap/Pot Hole/Storm Drain; Parking Lot; Railing/Hand Rail; Ramp; Sidewalk; Steps; Street; Wall (+3'); Feature/Fountain/Sculpture; Planter/Seat Wall; Landing/Ledge (-3'); Playground Equipment	Categorical
Total Crime	CV	Range (0 to > 0) 42 - 1,612 Reported Crimes	Continuous
Walkability	CV	Range (0 to 100) 31 to 100 Recorded Scores	Continuous
Urban Context	CV	(1) Residential; (2) Tourist Destination; (3) CBD	Categorical
Location Description	CV	Abandoned Urban Location Empty outside of Youth; Busy Urban Area with Traffic; Minimally used but not abandoned urban location; Moderately busy urban location; Park Area	Categorical
Observed Play Activity	CV	Skateboarding; Rough-housing; parkour; hanging-out; graffiti; manipulating urban space	Categorical
Trick Type	CV	Flip Trick (Ollie); Aerial; Slide or Grind	Categorical
Trick Completion	CV	Yes/No	Categorical
Group Size	CV	Small (1-5); Moderate (6-10); Large (10-19);Very Large (20+)	Ordinal
Group Gender	CV	(0) All Male; (1) Mostly Male; (2) Mostly/All Females (3)	Ordinal
Group Ethnicity	CV	(0) All White; (1) Mostly White; (2) Even Distribution; (3) Mostly non-White; (4) non-White	Ordinal
Non-Youth Users	CV	None (100% Youth); Few (1-10); Some (11-20); Many (21-30); Busy (31+)	Ordinal
Police Activity	CV	(0) None; (1) Walk through Site; (2) Interacted with Youth; (3) Confronted youth	Ordinal
Confrontations	CV	Yes/No	Categorical

escalating to destructive/injurious. The coding rule for risk-taking was that: cautious required the use of safety equipment (at no point during the study was this observed); restraint required that the speed and skill at which a trick was executed was observed to be within the means of the individual; risky requires some additional measure either environmental or personal to escalate the potential for damage to the individual or private property; reckless suggests that the individual executed a trick without sufficient restraint to avoid damage but somehow managed to not get hurt or break anything; and, destructive/injurious was coded when individuals were clearly hurt, either a concussion or excessive bleeding, or a trick injured another person or property. The two ordinal level variables were then entered using PCA. A “principal component analysis” (PCA) was utilized to create a factor score that merged both risk-taking behavior and prosocial behavior into a single construct. Consistent with other work in which PCAs are computed with two measures of interest (see Essex et al, 2003; Shirtcliff and Essex, 2008), the interpretation of such a factor is that higher scores are associated with a preponderance of risk taking behavior over prosocial behavior; while lower scores are associated with a preponderance of prosocial behavior over risk-taking behavior. This variable was normally distributed (). This permitted a scale where either end of the spectrum indicated the absence of the other and the mean represented equal amounts of risk-taking and prosocial behaviors.

Injurious maneuver with no evidence of prosocial behavior. The young skater in front is in the process of bouncing back up after colliding with the ground. The crowd was unphased.



Reckless maneuver where the adolescent lost control in a busy area and flew backwards onto his back at a very high speed.



Risky maneuver where the youth jumped over the chain fence to land in Claiborne Avenue with no spotter for traffic.



Restrained maneuver where the skater performed tricks well within his ability and had no chance of collision with other people.



Figure 7. Examples illustrating scale of risk-taking behavior

Example of a scene with very high prosocial, the majority of the peers presents showed signs of support.



Example of a detectable but limited to a few level of prosocial support.



Example of some but barely detectable level of support, one of the people in the crowd gave the skater a high-five as he went by.



Figure 8. Illustrations of Prosocial Scale

Notes: Figure 6 and 7 illustrate examples of risk-taking and prosocial behavior. All of the examples from videos of the prosocial category “more signs of support” involve background noise that are not captured in a still image. For an example of no prosocial behavior, see the first example in Figure 6.

PCA for risk-taking/prosocial behavior. High scores (+) indicate preponderance of risk behavior with low prosocial; low scores (-) indicate high prosocial with low risk.

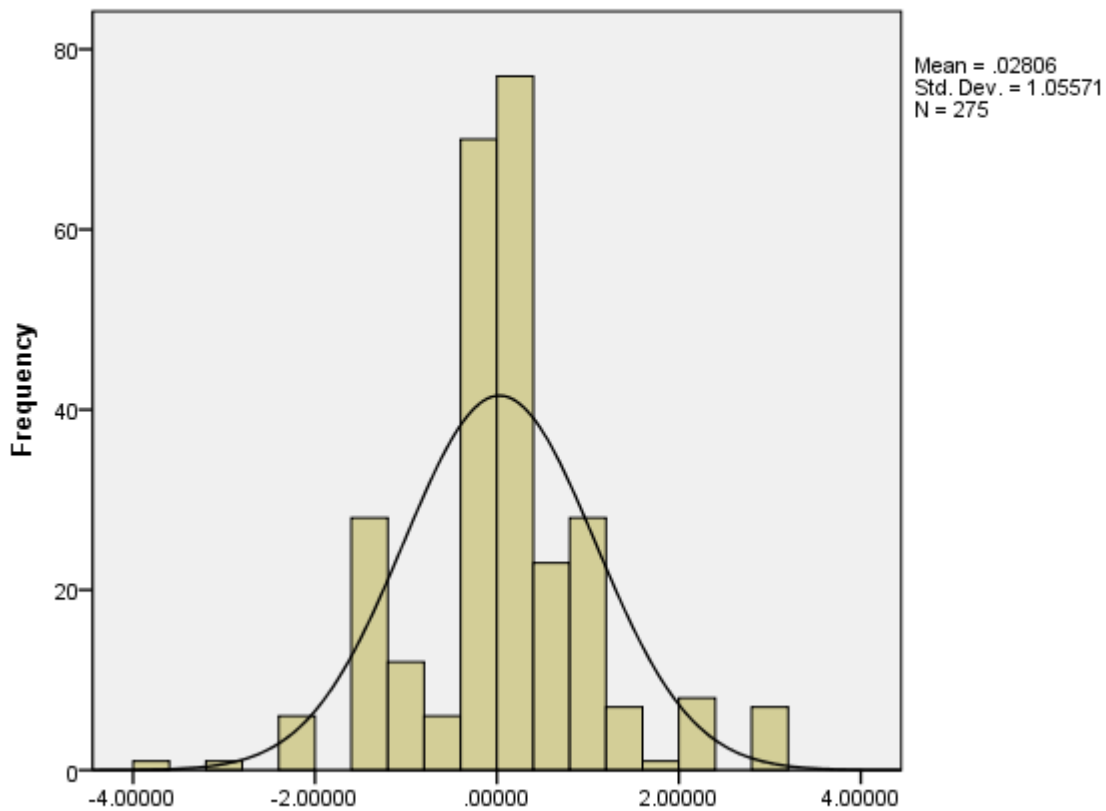


Figure 9. Distribution of DV Risk/Reward Scale

Affordances as Predictor Variables

Affordances describe the available opportunities and limitations of sites to support settings of adolescent play. Urban context, social/peer composition, and physical features of sites are the categorical variables affording deep play in this study. Urban context in terms of centrality and liminality has been used in the literature to explain adolescent play behavior and preferences. Social and peer networks have been frequently relied on as predictors of where groups are likely to hang-out, based on their group identity. Moreover, in terms of play, physical features are the first thing to come to mind when structuring play and providing ground for play.

The urban environment affords experience through the context, social setting, and physical elements found in each location.

Criterion Variable: Appropriation

Appropriation was identified as an important measure during the early stages of research. As defined above, appropriation suggests that we all make temporary claims to publically accessible space. Appropriation does not imply ownership and typically is subjected to social norms. However, this changes when personal property is used to appropriate such spaces. New Orleans neutral grounds are, for example, temporarily appropriated by canopies, chairs, ladders, and barbeques during Mardi Gras festivals. Such appropriation represents an important shift in norms to accommodate a temporary but valued need. Appropriation was treated as an ordinal variable with increasing levels of appropriation (similar to Hall's discussion of the use of boundaries in proxemics): presence (dynamic), temporary (semi-fixed), and permanent (fixed). Presence is the default strategy demonstrating when youth used no site modifications to support the activity (see Figure 27, p. 152). Temporary appropriation describes situations when movable objects were used (see Figure 2, p.20). Permanent appropriation identifies the use of materials that are less easy to remove, such as concrete and glued steel rails (see Figure 33, p. 158). The observed intensity of appropriation for each site is shown in Figure 14, p. 110.

Criterion Variable: Social/peer Context

Social context measures attempted to account for peer context of each setting. Group size was an ordinal level variable describing the size of the group present from small (1–5), moderate (6–10), large (10–19) and very large (20+). Group gender accounted for the variation of sex amongst the peers from all male, presence of one or more females, to all female. Group

ethnicity was used to account for variability in terms of divergence of ethnicity from the default, white, to mostly white, to relatively even distribution, to mostly nonwhite, and finally nonwhite.

Criterion Variable: Individual Descriptors

Individual variables recorded observed gender, approximate age, and ethnic divergence from white as default. Age was classified by adolescent stages of development: young adolescent (9–12), mid-adolescent (13–15), late adolescent (16–18), and emerging adult (19+).

Criterion Variable: Urban Context

Context variables included descriptive measures observed in the field, namely the level of urban activity at the time of the observation, and typical measures in urban studies including, total crime in a 500-meter radius, Walk Scores, and dominant land use type. Urban activity level was entered in as a nominal level variable describing whether the area was: abandoned, busy urban area with lots of traffic, minimally used but not abandoned, moderately busy, a park area, and a residential area. Walk Scores (scale ranges from 0–100) were gathered from the publically accessible, online database [walkscore.com](http://www.walkscore.com) to measure the specific walkability of each site in the study within a quarter-mile radius. Walk score points were then entered into the dataset and X,Y coordinates were assigned. Walk scores were mean-centered for analysis in SPSS. Walk scores describe the number of destinations within a quarter-mile walking distance and represent the pedestrian activity of a given area. Total crime was downloaded from the online, government-supported database: <http://www.crimemapping.com/map/la/neworleans>. Crime statistics extended back to January 20, 2011 and an initial 1/2 mile radius used for each site and later reduced to the 500-meter radius discussed in the literature. Data was initially entered into excel.

The excel file was loaded into GIS as a table and the address of each crime was geocoded using an existing dataset of New Orleans streets and block numbers. Data was then defined by site and limited to the 500m radius in GIS. Each crime was given an X,Y coordinate. Crime data was then exported to a database file for use in SPSS. Crime data was then cleaned up and consistently defined following UCR classification codes. In this manner, areas around sites could be compared to citywide averages if deemed necessary. This would permit further analysis of how each site related to the city average in terms of violent and nonviolent crimes. Total crime was standardized for analysis in SPSS. Vacancy was measured in field through visible abandonment or vacancy of property around each site. Last, each site and its 500-meter context was defined by the dominant land use type using SPSS. The three variables—residential, business, and tourist—were selected by the researcher as the best descriptors of the main land use type.

Criterion Variable: Site Features and Trickability

Environmental and physical feature variables were continuously updated over the course of the study as new observations made way to new features used by youth. Physical features were entered in as rail or barriers, driveway or sidewalk or street, street furniture, gaps, ramps, steps, walls, grass, feature or planter or fountain, landing, and other, such as playground equipment.

Tricks and the completion of tricks were also included as measures in the study. The three categories of tricks are ollie, aerial, and board slides or grinds. Tricks were also classified by whether or not they were landed successfully. All forms of observed play were recorded, including skateboarding, roughhousing, *parkour* or urban acrobatics, socializing or hanging-out,

making-out or courting, graffiti, and manipulating or vandalizing the physical environment. Observed police activity was entered in as a measure, and observed confrontations with police or authority figure was entered in as well.

ANALYSIS

The study uses qualitative and quantitative methods to analyze the relation of observed youth behavior to the selected sites. Qualitative analysis relies on the interpretation of field notes, collected data, and photographs to describe how each of the sites fits into the urban context of New Orleans as designed environments. Following Stevens' (2006) suggestion, thick description describes the site in its physicality, making connections to the economic, political, historical, and locational context. In this case, a trained practitioner and instructor of urban design provided insight into the specific spaces, their limitations and advantages that would not necessarily be known or relevant to youth. This stage of analysis looks at sites separate from the observation of youth. Sites are considered in detail as physical places in the city. Each site is reviewed for how it fits into a specific urban context and for the physical features available. The results from this analysis are presented in the next chapter.

Quantitative analysis relied primarily on multilevel models nest the physical elements, urban context, and human behaviors at each site. Multilevel models permit the analysis of within-site and between-site variations without having to generalize across all sites. Multilevel modeling is a complex quantitative strategy whereby the coded observations, spaces, site features, spatial data, and behavioral observations were entered into a dataset and several multilevel models were run to structure within-space and between-space. After collecting

multiple measures from each site, comparison models were run examining the amount of variation that exists between sites relative to the amount of observed variation observed within each site (Hruschka et al. 2005). Multilevel models were used to overcome the known limitation that aggregated means scores provide an inadequate examination of sources of individual variation. Additionally, multilevel models are robust to concerns of parametric modeling and system-missing variables (Tabachnick and Fidell 2007). Multilevel models permit the modeling of data simultaneously at the moment where it was collected and the site, an estimate of variation at each level, and a means to see how variables, such as presence of physical material, predict variation at different levels (Hruschka et al. 2005). Models were run using SPSS vs. 19.0 Linear Mixed Models software. Following Hoffman (2007), restricted maximum likelihood (REML) was used to make estimates and inferences about covariance parameters as it is the best method available to measure residual variance (Hoffman 2007). This strategy permits variation in use as well as frequency of use to be modeled as they relate to the risk/reward scale. The results from this analysis are presented in chapter four.

In the methods section, I have described where research occurred, who the focus of attention was, what the researcher was interested in collecting, and how I collected data. The study took place in several sites across the city of New Orleans. The study is on deep play, urban space, and adolescent places and focuses on how site affordances affect adolescent play behavior. Deep play is the behavior of interest and is studied through the prosocial/risk-taking scale as an outcome of play across all observations. Observations occur within urban space through settings that vary in affording play activity due to changes in physical features, social/peer context, and urban context specific to each site. Adolescent place is measured through the level of appropriation teens engaged in during each observation. I collected

observations in the field and through online videos and then coded them in a spreadsheet for further analysis. The next two chapters will parse out the sites as known urban spaces affording activity and the results from modeling the observed activities of youth.

Chapter 3. Thrashin' My City: What do Urban Designers Already

Know about These Sites in New Orleans?

In this chapter, I identify known physical and contextual properties for the sites in the study. Tools, such as site analysis and inventory, well known to landscape architects and urban planners accomplish this inventory and analysis. Since the goal of the study is to reexamine public urban open space in light of how youth play in the city, locating these sites within a framework familiar to professionals is the necessary first step. Familiar terms, such as urban context, land use, perceived vacancy, transportation, drainage, amount of sunlight, enclosure, human scale, identity, and pedestrian-friendly, are used in professional fields to describe and convey meaning about urban locations. This section reinscribes how each site fits into the urban space of New Orleans. Sites were examined for particularly meaningful features and how features supported social functions.

URBAN CONTEXT

Painted with broad brush strokes, the final twenty-one sites considered in this study fall into three types of perceived space: space for business and commerce, space for tourism and entertainment, and space for the residents of the city to live, exercise, and meet their neighbors. While sites varied considerably within these three typologies, the three urban contexts describe these physical environments and social norms under such generic terms. The key term here is “for.” Spaces for businesses, for residents, and for tourists, can and are used by a wide range of people with differing expectations on what the space can and should be used for, making for a

sometimes funny and sometimes scary exchange of human behaviors. I will briefly describe what I mean by context as it applies to these locations in New Orleans and then discuss the indicators used in the inventory of urban context.

Residential Settings

The Fly, Audubon Park, Laurence Square, Coliseum Square, Annunciation Square, Clay Square, Hunter's Field, Peach Orchard, and City Park possess a perimeter of homes as the defining land use. Residential parks and open spaces traditionally support either passive or active recreation activities. The Fly, for example, has several baseball and soccer fields for active recreation, along with views of the river and plenty of open grass for Frisbee, kite flying, barbeques, and enjoying being outdoors with friends. Coliseum Square, on the other hand, is identified by the large fountain in one portion, a reminder that the site served as a basin in the early days of the city. While people sit around the fountain reading newspapers, less fortunate community members push bikes weighted down with plastic bags across the park and a group of thirty-somethings practice yoga. The two spaces clearly fulfill different needs and yet both are inherently residential in context. The most unifying indicator of this is that all of these spaces have a curfew, symbolically protecting the neighbors from nighttime transgressions.

Business Settings

One Shell Square, Pancakes, Lafayette Square, Lee Circle, and City Hall Plaza fulfill another kind of open space requirement. Each space acts as a constructed buffer between places of business and transportation. These are the places William Whyte famously studied in *The Social Life of Small Urban Spaces*, and they have not changed much in New Orleans. In One Shell Square, for example, white, middle-aged men still strut together in suits gawking at women who, according to Whyte, enjoy being objects of their attention and dress accordingly. Sun and shade

still matter, and people still cluster in pockets to smoke, eat lunch, chat, or stop right in the middle of the sidewalk and have a conversation. At the Pancakes, on the other hand, business is not quite as booming and the spaces set aside underneath a busy, raised highway for shade covered smoke breaks or lunch tend to reveal that other group of people who frequent business executives, commonly called panhandlers, bums, homeless, and vagrants. Each of these areas reflects the same workday phenomenon of weekday activation and relative silence at other points in time. The fact that commuters frequently wait idling next to each site implies that a wider portion of the urban metro area sees these locations. Accordingly, imageability is very important while maintenance and surveillance are key to the success of the space. Private security and frequent police visits protect the success of these places throughout the day and into the off-hours. Residents choose to live in this area and tourists stay in hotels in this area. However, their respective claims to the space shift dramatically at the start and stop of each workday.

Tourist Settings

Spanish Plaza, Jackson Square, the Canal Street Ferry Terminal, Woldenburg Park, Louis Armstrong Park, Congo Square, the French Market, and Washington Square, are definitively inscribed by their role as shaping the tourist experience of New Orleans. While the French Quarter is home to thousands of residents, millions more benefit from its streets, walks, bars, boutiques, restaurants, and historic views. Trendy joggers may occasionally make their way down the riverfront path in Woldenburg Park—dodging the musicians, shoe-shiners, tourists, children, strollers, drunks, vagrants, gutter-punks, researchers, and dogs—but their presence is atypical no matter how frequent. Washington Square, a more residential park in scale and attributes, is inseparable amidst this influx of visitors due to its proximity to the tourist industry that dominates the uses of each of the other sites.

Each of the areas surrounding the sites has zoning, rules, and prohibitions that govern the site and the surrounds in a sympathetic manner. Some of these rules are written down, while others are “known” and enforced by police when the time calls for it. Drunken stupor is more tolerated during nonevent times in tourist areas than in business or residential areas. Context is critical when we begin to consider complex concepts like appropriate social behavior. I do not intend to reproduce the ethnography of these social spaces here. Rather, I want to illustrate that the study depicts these three types of urban spaces found in New Orleans. In addition, I do not intend to reproduce those formal and informal social covenants property owners, policymakers, and law enforcers lay over these spatial types, only to remark that these things too change depending on the urban context. What concerns the study is the extent to which context supports the behavior of city-using youngsters.

A few central themes emerge that are related to context during the hours I spent in the field observing these sites, how people generally interacted within the sites, noting how youth interacted with the sites as physical and social settings, and how others responded to the presence of youth. The ubiquitous theme was the absence of youth from these spaces. There was no consistent or systematic use of space by adolescents at any point in the study. What I learned from talking with some of the folks at the local skate shop is that young skateboarders hang out in a place until confronted and then they move on to somewhere else. I had the opportunity on a few occasions to witness just such confrontations taking place between authority figures and kids. Two types of settings related to context provoked confrontations: those where kids were playing and being loud enough to disturb someone who was in the process of trying to elicit sales in the tourist area (interrupting commerce); and, those where places were very busy and youth were competing for space with other users of the site. Because of this, I was sure to include the

general activity of the urban area whenever making observations. How busy was it? Moreover, was there anybody trying to make a sale of one kind or another?

Adolescents are more likely to have confrontations with pedestrians than with cars. One way of approaching this aspect of urban context and confrontations is by evaluating its walkability. The Walk Score, as discussed in the methods section, measures contextual factors like destinations with a .25-mile radius for pedestrians. The higher the walk score, the more likely an area supports a lifestyle of walking, the lower the walk score, the more it supports automotive transportation. The Walk Score does not measure the physical environment aside from distance between intersections. For example, some of the best places to walk in the city in terms of condition of the paths or aesthetic interest of the environment are City Park and The Fly. However, both of these sites have the lowest walk scores. Accordingly, it is a good measure of the economic context supporting pedestrian movement. The walk score is discussed specifically as it relates to the observed behavior of adolescents in the next section. For the current study, the walk score is an effective measure of how urban context influences the decision-making process of urban play through avoidance of potential conflicts or in response to conflicts.

The assumption is that the higher the walk score, the more frequently people walk in a given area. From my observations in the field, I found no fault with this measure as accurately representing the general use of these areas. Woldenburg Park, scoring a perfect 100, is accessible to everything needed within a quarter-mile. The cluster of riverfront sites ranged from 100 down to 89 in terms of walkability. This fits with general observations that noted a buildup of urban activity at the center of this area, Woldenburg Park and Jackson Square, 97, and a decrease towards the edges of the French Market, 95, and Spanish Plaza, 89. In each of these places, vehicles are prohibited, suggesting further support for the high walk scores and the

popularity of walking in these places. All confrontations observed during the study occurred in these locations. Hunter's Field, a park half-covered by an expressway and bordering an off-ramp, is across the street from a discount store where many customers leave drinking out of brown paper bags. The walk score of 68 reflects the decrease in destinations surrounding the park. Observations there revealed that the majority of traffic was cars and a few people would walk by and cut through the site, with walk traffic peaking around the end of the school day. However, most of the time, it was eerily empty and discomforting. During the study, one confrontation occurred at Hunter's Field. On "Go Skate Day!," a few hundred skaters and their friends were asked to leave so the park could be used for a little league softball game.

Another urban contextual factor—discussed in the literature and included in my observations—was the general maintenance or dilapidation of the environment. Documenting disuse follows the "broken windows theory," which suggests that people tend to behave differently in neglected and abandoned environments where more broken windows are visible (Kelling and Wilson 1982). Under the theory, the presence of blight, vacant land, abandoned buildings and cars, debris and uncollected refuse, vandalism and some types of graffiti are linked to an increased likelihood for criminal behavior. Accordingly, the study included a 6-month review of all reported crimes within a 500-meter radius of each site. During the course of the study, a blighted property adjacent to Hunter's Field was demolished and another one raised by fire, contributing to already high number of vacant properties surrounding the site.

Appropriation was highly related in one dramatic manner. Beyond the implied relation to criminal behavior, vacancy promoted an increase in temporary and permanent modifications to the separate locations. Temporary modifications may be the sudden sweeping clean of abandoned areas covered in trash and rubble by kids so they can skate. Permanent modifications

would be the use of concrete to build a small ramp between the concrete ground and adjacent wall. Those urban contexts with constant maintenance, the fewest broken windows and least vacant, also revealed the least amount of evidence of modifications. Each day was nearly the same as the day before. However, those urban contexts that bordered the abandoned and neglected afforded the researcher a more organic reflection of persistent human activity. With each site visit, I became increasingly aware of these evolving environmental manipulations and fascinated by the constant maintenance and erasure of human use in other areas. The inclusion of this relationship in the study provided the best explanation of interdependence.

More crime is reported in the areas with the highest maintenance and least amount of visible vacancy, Woldenburg Park (1,612) and One Shell Square (1,553) top the list in terms of total crimes and most attention paid to maintaining an unchanging environment. They also top the list in terms of walkability. The most manipulated places, the Peach Orchard (59) and Hunter's Field (223) show considerably lower scores in total reported crime over the same six-month period and score low on walkability. The most likely explanation is the sheer increase in the number of targets in tourist and business centers, and that these areas with intense human use require a more intense maintenance regime. The daily erasure of use hides the fact that a female is 30% more likely to be raped in the area around One Shell Square (21 counts over 6 months) or 16% around Woldenburg Park (11) than anywhere else. Erasure also reduces the perception of ownership of public spaces by people. Homeless city-dwellers who spend the most time in public spaces are increasingly reduced from sight. The homeless and dispossessed are forced to move along and relocate throughout the day. The pancakes illustrate this phenomenon at a slightly slower temporal level. Instead of the daily encounter, here people were observed to lay claim to the space for some time until sufficient materials, blankets, bags, clothes, and refuse

accumulate to a more visible level. Then, in a moment, the people and all of their accumulated stuff vanish. The pancakes also ranks one of the lower places for reported crime, 127 over 6 months. If human behavior does change across contexts, the possession, temporary or permanent, and manipulation of urban sites seems inversely related to the amount of total criminal behavior and walkability.

To summarize this discussion on context, when youth were observed in the field—playing, and just being in public space— they were often observed in the same public spaces adults most frequent, that is popular tourist destinations. On any given day, no matter what time or day of the week, there were certain places where I would be more likely to find and observe youth. If it was a humid, hot, and sunny afternoon, I would have better odds heading to those places protected by the raised expressways. If the weather was tolerable, those destination places along the riverfront were more likely to be successful. Walkability is a good predictor of confrontations for the use of public space as well as for a high level of maintenance and erasure of attempts at possession of public space. Vacancy is a good predictor of temporary and permanent manipulations of urban sites and also of attempts to possess or establish one's identity on a location. Crime, on the other hand, does not actually decrease with fewer traces of environmental decay but increases as environments become more used and more anonymous.⁷



Figure 10. Hunter's Field. A partially shade-covered, concrete paradise in a heavily blighted part of New Orleans



Figure 11. Woldenburg Park. A highly visible, popular destination for tourists and youth



Figure 12. The Peach Orchard. A DIY Skate Park on a forgotten strip of concrete between I-610 and the Southern Pacific Railroad

THE PHYSICAL ENVIRONMENT

The sites varied considerably when measured by the senses. At Hunter’s Field, the repetitive “bum-bump, bum-bump, bum-bump” of vehicles passing overhead at 60mph dominates the space. The highway noise fills the entire park, with its concrete, amphitheater stairs and walls all projecting the continuous sound to the best places to sit. The smell of a previous crawfish boil fills the air with the odor of decaying carcasses emanating from the now tipped over trashcans. Air circulation here is stifled in contrast to the breezes coming off the Mississippi River down by Woldenburg Park. Similarly, the passing train at the Peach Orchard, which is built partially on railroad property, causes the native soil to vibrate excessively. The effect of persistent movement causes the transitory concrete ramps of the DIY park to fracture

and crack. Every conversation along the riverfront is stifled when the Steamboat Natchez blows its deafening horn at 11:30, 1:30 and 3:30, and every show-person performing in the area is present upon its return to exchange their talents for a couple bucks. The immediate, physical features of each site contribute to its success as a setting.

All of the sites selected for in this study are publicly accessible urban open spaces. All the sites are also designed environments. The focus here is not on the design intent of the architect nor on the skater as participating in the conception and production of social spaces meeting certain “known” values. Instead, the focus is on the sites as potential settings for youth activity.

Riverfront means Elevation Change

The riverfront sites, going downstream, include The Fly, Spanish Plaza, Canal Street Ferry Terminal, Woldenburg Park, Jackson Square, and the French Market. These sites receive their inherent meaning, structure, boundaries, and scale, from the levees that protect the city from the river. With the exception of the French Market, each site offers its own opportunity to elevate above street level in the city and interact with the river. The change of elevation creates the need for a variety of urban elements to be installed in the urban environment, such as stairs, ramps, and handrails. This creates a unique circumstance for a city with very flat topography. The riverfront provides a series of opportunities for kids to skate, jump, run-down, and climb-on that are unavailable elsewhere. Each of these sites receives a visible edge from the river and the other edge from the city. Of these sites, the two linear parks, The Fly and Woldenburg Park are not predominately paved. The key features to draw from these sites are stairs, handrails, ledges, walls, ramps, and landings, which all result from the need to help people navigate changes in elevation. Nearly every stair railing in these sites includes the physical trace of board-slides

(paint leftover from the bottom of skateboards). Longer runs of stairs and planter walls often have a dark edge left from the wax that skaters use to speed up grinds and board-slides. None of the steps or ledges showed sign of chipping or breakage, a symptom frequently cited as vandalism against those who skate.



Figure 13. Paint on a stainless steel hand rail is evidence of board slides.

Residential means Structure(s)

The more typical residential parks include City Park (really, more of a regional park), Laurence Square, Coliseum Square, Annunciation Square, Clay Square, Washington Square, and Hunter's Field. These are all definable urban parks in residential areas. Of these sites, only Hunter's Field and Annunciation Square suffer from a lack of a definable edge. Hunter's Field is edged by blighted private property, streets, and highway structures. The park also lacks a

definable center. However, the site is extremely imageable with cultural references, as all of the concrete walls offer representations of life through murals and graffiti art (Figure 24, p. 148). Annunciation Square is bordered by streets and residential lots and lacks a definable vegetative or structural buffer. Washington Square and Clay Square are ornately fenced and gated. Coliseum Square is graced with a fountain as a center point and a full canopy of mature trees throughout the site. These features afford a sense of enclosure, human scale, and persistent identity. Annunciation Square is exposed, lacks a definable sense of human scale, and has no persistent image or identity specific to the site. The surrounding community uses these sites to support active recreation, with the exception that Coliseum Square and Washington Square are limited to passive recreation opportunities. During the course of the study, I never found the basketball courts at Laurence Square, Annunciation Square, and Clay Square unused by adult men. Washington Square probably has the best sense of enclosure due to its mature trees, fenced edge, built urban edge, and geometric paths and planting patterns all framing in one large open grass area. Observations of youth in Washington Square were limited to romantic young couples seeking privacy and the occasional use of playground equipment as a prop for older kids to play on. The site primarily served as a meeting place for French Quarter ventures during the course of the study. Hunter's Field and Clay Square both afford long concrete edges, steps, and raised areas for unstructured play opportunities. Laurence Square has a short parapet wall with a 3-inch diameter steel pipe along its concrete perimeter that also serves for unstructured play. Given the size and scale of City Park, it is much more difficult to qualify in terms of imageability, human scale, and enclosure. For the purposes of this study, it is sufficient to note that it employs all of these design elements very well in different areas in response to the function or use of the area.

City Park has a number of structures, a pavilion, peristyle, and fountain that serve as means of taking advantage of structured elevation changes and obstacles via steps, raised edges, or walls.

Business means Architecture

The utilitarian business plazas, parks, and open spaces, including Lafayette Square, One Shell Square, Pancakes, Lee Circle, and City Hall Plaza, located in the Central Business District share a common theme of a definable urban edge. The buildings serve as urban walls creating a sense of enclosure unlike anywhere else in the city. Here, trees serve to provide some shade and a sense of human scale. None of the sites are particularly imageable in terms of design. One Shell Square engages simplicity of materials, smooth stone landings, steps, and walls that serve a variety of public uses (Figure 3, p.30). The plaza itself has no definable edge or center.

Lafayette Square, a grassy area with geometric walks and plantings facing Gallier Hall, the old courthouse and current reception/meeting/event area, has a definable center, a statue of Henry Clay, and open vegetative edges with tall canopy trees. However, it is heavily patrolled and illegal to picnic here or lounge on the grass for any extent of time, so it tends to be a green, pass through space. The Pancakes are as utilitarian as urban life gets, with zero plant life, and 100 percent concrete. The site is composed of a series of circular raised steps making a stacked pancake form. These forms provide a subtle elevation change and gaps in an uninspiring urban environment, lacking image, center, or edge (Figure 1, p. 3). Lee Circle and City Hall Plaza both represent part of the generally unused, green spaces, valued by cities for ornamentation but overwhelmingly underused as urban green space. Lee Circle is a busy roundabout containing a monument to Robert E Lee as its center, raised on a series of large blocks that provide some elevation. City Hall Plaza has some ramps, railings, and stairs intertwined amongst the area edged by parking garages, city hall, and a vacant urban building. The plaza lacks anything

imageable or in the center, save for an inaccessible pavilion with an out of proportion, wooden roof. Physical traces of use here are similar to other sites with the exception of the wooden bridges occasionally found in the pancakes. These bridges are used to span the gaps of the stairs, making for a longer, safer landing area after jumping the gap between two sets of pancakes.

DIY means Do It Yourself

One urban site stands out as an exception to the other publicly accessible urban open spaces selected for the study. The Peach Orchard was a late comer to the study as one needed to find out about the site by meeting one of the creators of the DIY skate park. Skate parks are not a part of the study because they are programmed sites. However, the site is not condoned by the city and, as such, New Orleans continues not to have a programmed, skate park. The Peach Orchard is a transitional space. Here, a section of Harmony Street was found between the I-610 overpass structure and the Southern Pacific Railroad by a skater looking for a place to build a skate park (Figure 12, p. 99). Unlike any other urban space in the study, this site had been completely abandoned following the improvements made to the bordering transportation corridors. At the Peach Orchard, skaters and other youth become urban shapers, locating materials and researching means by which to construct an urban environment in their image. Without the aid of architect or urban plan, the piling of debris smoothed over with a fine concrete surface and a pool coping salvaged from an abandoned pool on the West Bank, provides a frequently used destination for urban youth. Organically, the group builds new obstacles as a means of elevating oneself from the ground plain and then paints over everything with graffiti. The paint effectively decreases the friction of concrete and adds some color to the site. The site is always clean of debris and the only empty containers observed on the site were water bottles.

The site lacks scale, center, or edge and presents a unique window into a fully reappropriated urban environment.

In summary, the physical environment affords opportunities similar to urban context. Those areas with the most public investment in terms of site materials are also the sites with a relationship to the river. River sites afford opportunities for recreation and, except for the Fly, do not structure for programmed play. I found the areas with the highest private investment into elaborate and expensive architectural details in the central business district (CBD). CBD sites afford social interactions and reflect prestige and they are not structured for play. Surrounding neighborhoods influence residential sites and afford structured play. The appropriation of an abandoned site in a residential area for a skate area fits with the “structured” approach to residential sites. The comparison of observations across sites will lend further insight into the meaning of these sites as they relate to the observed play behavior of youth.

Chapter 4. Land Of The Rising Son: What Do Youth Reveal About These Sites as Settings for Play Behavior?

In this chapter, I review the results of coded observations of individual and peer behaviors of youth in the sites selected for the study. I coded observations from in-field observation and from online anonymously posted videos. Observed human activity is the gauge measuring settings in demonstrating the deep play of adolescents in urban space. Multilevel modeling compares the variation in sites for the factors most likely to contribute to increases in risk-taking and prosocial behaviors. The outcome variable is the risk/reward scale developed from observations of risk-taking and peer support.

DATA COLLECTED

The study managed to successfully collect and code 286 separate observations of youth playing in urban settings. Of these, four cases had missing ethnographic data (n=282). In terms of age group ($\mu=15-16$), 27 young adolescents (9-12), 104 mid-adolescents (13-15), 98 late adolescents (16-18), and 54 emerging adults (19+) were coded from observations. Since ethnic variations were heavily skewed to two groups ($\mu=.63$), the variable was dichotomized into white (62%, n=178) and mostly African American (38%, n=105). Gender, highly skewed towards males (n=280) over females (n=3), was not included as a variable. The sample size is consistent with similar studies in the literature.

Table 3. Frequencies of Individual Descriptors

Individual Characteristics			
	Variable	Frequency	Percent
Relative Age			
Young Adolescent (9-12)	1	27	9.4
Mid-Adolescent (13-15)	2	105	36.5
Late Adolescent (16-18)	3	98	34.0
Emerging Adult (19+)	4	54	18.8
Total		284	98.6
<i>Mean 2.6; SD .9</i>			
Ethnicity			
White/Caucasian	0	178	36.8
non-White	1	106	61.8
Total		284	98.6
<i>Mean .37; SD .48</i>			
Gender			
Male	0	281	98.9
Female	1	3	1
Total		284	
<i>Mean .01; SD .1</i>			

The outcome variable for this study, the scale of risk-taking and prosocial behavior (deep play), recorded the level of risk-taking and the level of prosocial behavior in each observation.⁸ A principal component analysis (PCA) was utilized to create a factor score that merged both risk-taking behavior and prosocial behavior into a single construct. PCA converts potentially correlated variables from observations into linearly uncorrelated values. PCA is used for exploratory data analysis and for predictive modeling. The PCA revealed a single component with an eigenvalue of 1.11 that explained 55.3% of the total variance in the two variables. The factor loadings indicate that higher scores on the PCA are comprised of greater risk taking behavior (loading=.744) and less prosocial behavior (loading= -.744). This factor structure was anticipated given the negative correlation of prosocial and risk taking behavior ($r(273) = -.11$,

p=.079). Consistent with other work in which PCAs are computed with two measures of interest (Essex 2003; Shirtcliff 2008), the interpretation of such a factor is that higher scores are associated with a preponderance of risk taking behavior over prosocial behavior; lower scores are associated with a preponderance of prosocial behavior over risk-taking behavior. This variable was normally distributed. This scale was sufficiently normalized—273 recorded observations with 14 missing, ranged from the most prosocial (-3.99) to the most risk-taking (3.03), a standardized mean near 0 (.032(1.06)), a sufficiently even distribution with a skewness of .172(.147) and mild kurtosis of 1.286(.293)—to avoid further transformations (, p. 83). The scale is used to predict similarities across sites in affording positive play activity.

Table 4. Risk-taking and Prosocial Distributions

Frequency Distribution of Risk-taking Behavior

	Variable	Frequency	Percent
No Behavior Noted	0	3	1.0
Cautious*	1	0	.0
Restrained	2	188	65.3
Risky	3	63	21.9
Reckless	4	16	5.6
Destructive/Injurious	5	5	1.7
Total		275	95.5

Mean 2.38; SD .73

*Cautious required safety equipment which was not observed during study.

Frequency Distribution of Prosocial Behavior

	Variable	Frequency	Percent
None	0	120	41.7
Some but barely detectable	1	96	33.3
Detectable but limited to a few individuals	2	14	4.9
More evident, more than half of participants show traits	3	35	12.2
Most evident, the number of individuals showing support greatly outnumber those who don't	4	16	5.6
Total		281	97.6

Mean 1.04; SD 1.2

Table 5. Frequency Distribution of Outcome Variable (DV)

Deep Play (DV) as Risk/Reward Scale

	Variable	Frequency	Percent
Prosocial Levels (-)			
	-3.99385	1	.3
	-2.83634	1	.3
	-2.11218	6	2.1
	-1.53342	28	9.7
	-1.17134	2	.7
	-.95466	10	3.5
	-.59258	6	2.1
	-.37591	67	23.3
	-.23051	1	.3
	-.01383	2	.7
	<i>Subtotal</i>	<i>124</i>	<i>43.1</i>
Risk-Taking Levels (+)			
	.20285	77	26.7
	.56493	22	7.6
	.71033	1	.3
	1.14369	28	9.7
	1.50577	7	2.4
	1.86785	1	.3
	2.08452	8	2.8
	3.02536	7	2.4
	<i>Subtotal</i>	<i>151</i>	<i>52.4</i>
Total		275	95.5

Mean .028; SD 1.06

As the number of observations increased over the course of the study, one phenomenon shared amongst observations at all sites became increasingly more important. Youth manipulated environments to better afford play behavior. Permanent environmental manipulation occurred in 11% of coded observations in obvious ways, such as the installation (n=32 of 283 observations) of steel rails or concrete ramps to perform tricks on. Sometimes sites were manipulated with temporary modifications (n=81), 28%, such as the use of street signs to

make a temporary ramp out of stairs or waxing curbs. Finally, sites were subtly manipulated 59% of the time by the presence of youth (n=170), as expressed by the laying down of backpacks and clustering or ordering of people to create temporary barriers. Presence is the dynamic delineation of space with youth bodies and materials as props.

Appropriation was “dummy” coded into two dummy variables, temporary (APPR2) and permanent (APPR3) with the information not specific to either group defining the reference group presence (APPR1). Dummy coding is a useful strategy when dealing with categorical predictor variables in the analysis of relationships (Tabachnick and Fidell 2007:6).

Prior to running analysis, data was screened for missing variables, outliers, multivariate

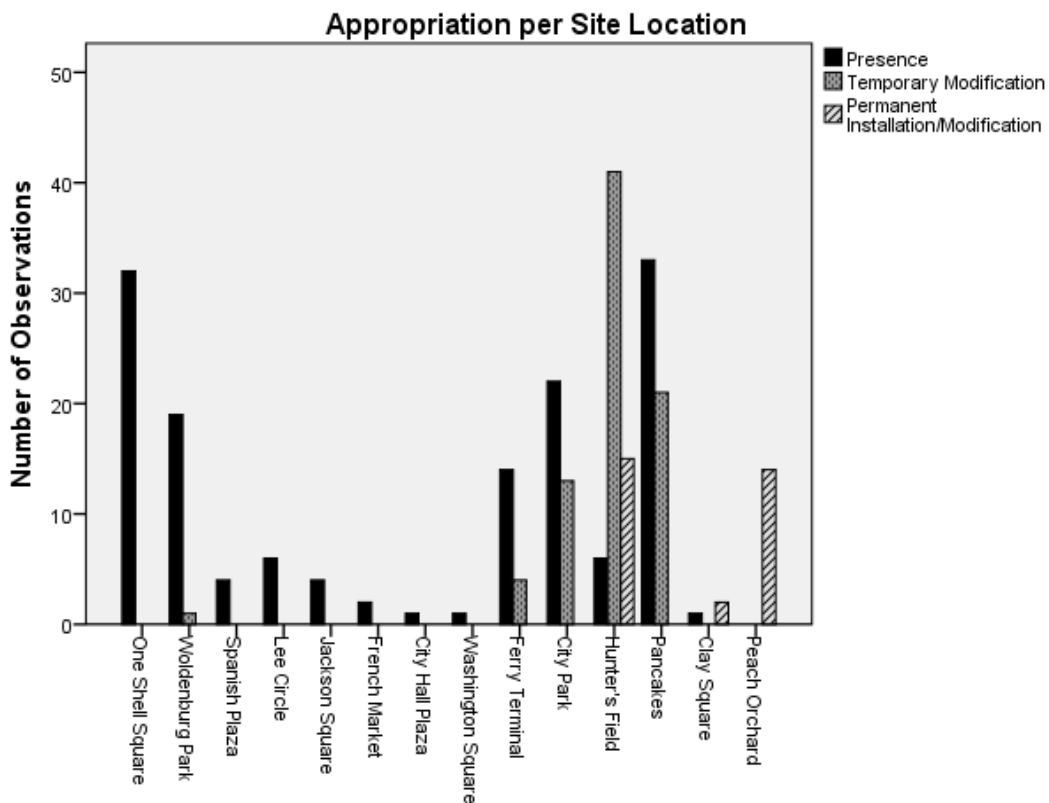


Figure 14. Observed intensity of appropriation in each site.

outliers, and correlation of predictors. Since multilevel modeling is designed to run tests independent of errors, the concern of homogeneity of variance across multiple sites can be suspended. The data was deemed sufficient for further analysis after meticulous effort by trained observers to verify that it was free of error and accurately reflected output generated through the study. No outliers or multivariate outliers were indicated. Spearman’s rho tested for multicollinearity and revealed significant correlations among predictors at the .05 level, but none higher than .49—suggesting correlations among predictors would not interfere with modeling.

Table 6. Distribution of Appropriation

Frequency of Appropriation			
	Variable	Frequency	Percent
Presence	1	171	59.4
Temporary Modification	2	81	28.1
Permanent Installation/Modification	3	32	11.1
Total		284	98.6

Mean 1.51; SD .69

MODELING THE DATA

Multilevel modeling (MLM) was used to see whether observed behaviors were similar between urban sites. I selected this strategy when designing the study because MLM permits site affordances to be nested within sites and observations can then be used to identify if there are any similarities in terms of play behavior. This is important for urban space because it demonstrates how the behaviors observed at each site are similar to each other, linking play to space through the affordances of place. Foremost, multilevel modeling is robust to violations of the assumption of independent observations, permitting a more real-world assessment since teens in a site are likely to influence each other. Unlike an ANCOVA, there is no homogeneity of

regression assumption⁹, and unlike ANOVA, the ecological fallacy is avoided by not applying group level results to the individual level. This is done by allowing intercepts (means) and slopes (CV–DV relationship) to vary between higher-level units, i.e. nesting (unlike regression where this is fixed). I have used the build-up strategy of multilevel modeling. Before analyzing predictors, a reliable variance structure is determined and the intraclass correlation is measured. This strategy permits a more reliable means of calculating the similarities of differences, residuals, within sites.

The multilevel modeling strategy employed the build-up method. As suggested by Hoffman (2007), the influence of each location per observation will model within-sites and between-sites using the build-up strategy where an unconditional model is followed by predictor models. An initial unconditional model, one free of predictors, was used to measure the amount of variation in behavior as a random function of all sites. This model is used to determine the best variance structure for further analyses, a base descriptive intraclass correlation (ICC)¹⁰, and a set point for -2 most likelihood deviance scores.¹¹ Variance structure is used to determine how well predictors explain residual variance within each site.

Comparison of the most parsimonious variance structure, compound symmetry, with the most precise model for random estimates given the number of levels (16), 1st order antedependence, was used to set the baseline for residual statistics, see Table 7. Models were compared using the chi-squared difference estimates from -2 Restricted Log Likelihood, AIC and BIC scores—lower scores are used to indicate a more reliable calculation and the best variance structure. After several iterations, the scaled-identity variance structure was identified as the most reliable method of calculating random within-site variance and was used for all remaining multilevel linear models.

Table 7. Variance Structure

Information Criteria	Variance	Scaled Identity	First Order Antedependence	Auto-Regressive	Compound Symmetry
-2 Restricted Log Likelihood	759.686	760.964	734.053	758.263	789.273
Akaike's Information Criterion (AIC)	765.686	764.964	798.053	764.263	795.273
Hurvich and Tsai's Criterion (AICC)	765.775	765.008	806.817	764.352	795.362
Bozdogan's Criterion (CAIC)	779.525	774.190	945.673	778.102	809.113
Schwarz's Bayesian Criterion (BIC)	776.525	772.190	913.673	775.102	806.113

The Intraclass Correlation

A key statistic to measure before proceeding with multilevel modeling is the intraclass correlation (ICC). The statistic is commonly used to evaluate similarities, correlations, for several “classes” in a school, or, in this case, urban sites in New Orleans. The intraclass correlation coefficient (ICC) was used to assess the degree of correlation within sites. The ICC measures how well residuals are correlated and can be used to indicate the degree to which observations taken at different locations are stable within each site. The ICC is a key statistic in determining the relative proportion of within and between site variance (see Figure 15). If the ICC is high, then there is a high average within site correlation that would remain unaccounted for by an aggregated means model; whereas, if it is low, then within-site variation can be modeled looking for fixed effects of changes between locations. The ICC is calculated on an empty, or null, random intercept model with no predictors. Since this is a two-level model design, the ICC is calculated by dividing the level 2 (between site variability) variance by the sum of the level 1 and level 2 variance. The calculation of the ICC indicates whether there is sufficient between site correlations to proceed with the analysis.

In an empty mixed model for risk-taking/pro-social behavior, RSK_PSC (dv), the within-site correlation ICC was .23 (p=.019), or 23% of percent total variance in behavior is due to similarities within sites and 77% of variation is due to individual differences between observations. This suggests that we can proceed with multilevel modeling of between-site variance and within-site correlation. The ICC is sufficient to reject the null that the all of the variation in adolescent behavior can be attributed to individual variation.

IntraClass Correlation (ICC):

$$ICC = \frac{\text{Intercept Variance}}{\text{Intercept Variance} + \text{Residual Variance}} = \frac{\tau_{U_{0i}}^2}{\tau_{U_{0i}}^2 + \sigma_e^2}$$

$$ICC = \frac{\text{Between Variance}}{\text{Between Variance} + \text{Within Variance}}$$

- ICC = Proportion of variance that is between-persons
- ICC = Average correlation among observations from same person

(Figure from Hoffman 2008)

Figure 15. Diagram of Intraclass Correlation

Appropriation as Criterion for Deep Play

Interdependence is modeled through the relationship between the observed behavior of youth (DV) and the extent to which teens are able to appropriate a location. The following table shows the estimated slopes for temporary appropriation (APPR2) and permanent appropriation (APPR3) as they relate to presence (intercept). The intercept parameter discloses the effect of presence on play, and the parameter estimates of temporary and permanent indicate the slope (β) of the effect of increasing levels of appropriation on play. As Table 8 shows, risky behavior is highest at sites where presence alone is permitted (β= .42 (.12), p<.05). The negative slope when temporary presence is observed (β= -.69 (.17), p<.001) suggests an increase in prosocial behavior, decrease in risk-taking behavior, and a switch towards a preponderance of prosocial

behavior. This is expressed even further in locations where permanent appropriation has been achieved ($\beta = -.92 (.24)$, $p < .001$). This initial model rejects the null that adolescent behavior is independent of the manner in which sites are appropriated by youth. As I will discuss further, in the discussion below, the extent to which sites are appropriated by youth predisposes them to more, not less, prosocial behavior.

Table 8. Table indicating DV values for level of appropriation.

Estimates of Fixed Effects^a

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	0.42	0.12	23.20	3.61	0.00	0.18	0.67
APPR2	-0.69	0.17	126.78	-4.07	0.00	-1.02	-0.35
APPR3	-0.92	0.24	98.45	-3.89	0.00	-1.39	-0.45

a. Dependent Variable: PCA for risk behavior, prosocial. High scores indicate preponderance of risk behavior. confrontation coded as highest amount of risk..

Error! Reference source not found. indicates the likelihood that teens will engage in risk-taking behavior (+) or prosocial behavior (-). The intercept (presence) is the mean estimate for risk-taking when no physical manipulation to the environment is recorded. APPR2 (temporary) and APPR3 (permanent) are coefficients indicating the effect of temporary and permanent modifications on observed behavior.

Urban Context Criteria and Appropriation

Urban context has been shown to be associated with increases in risk taking behavior among youth. Each urban contextual variable was initially entered as a main effect to see if it was a significant predictor of similarities in play between sites; and, then, entered as a random effect with appropriation entered as a fixed effect to see whether appropriation remained a robust predictor when controlling for urban context. This permits us to see whether urban context matters in how youth choose to play and if appropriation better explains their play behavior than

urban context. Urban context was measured in terms of type of area, observed level of non-youth, background activity level, walkability, and total crime within a 500-meter radius.

Walkability measures the success of urban space to serve pedestrians and has been linked to increases in conflicts over the use of space. When entered as a main effect, an increase in walkability suggests an overall decrease in risk-taking (.02 (.01) $p < .05$).¹² When controlling for walkability, presence is no longer a significant predictor of risk-taking behavior. However, both temporary ($\beta = -.66$) and permanent ($\beta = -.78$) levels of appropriation remain significant predictors at the $p < .05$ level. This suggests that while walkability is a significant predictor of how kids play, appropriation remains robust to the effect.

Table 9. Urban Context.

Criterion	r^2	Main Effect			Presence			Temporary			Permanent		
		β	SD	P	β	SD	P	β	SD	P	β	SD	P
Walkability	0.094	0.02	(0.01)	*	0.09 (0.12)			-0.66 (0.16)	*			-0.78 (0.25)	*
Residential	0.067	-0.82	(0.17)	*	0.42 (0.14)	*		-0.67 (0.16)	*			-0.78 (0.25)	*
CBD	0.001	0.18	(0.39)		0.39 (0.13)	*		-0.68 (0.16)	*			-0.92 (0.24)	*
Tourist	0.087	0.7	(0.30)	*	0.34 (0.13)	*		-0.68 (0.16)	*			-0.89 (0.24)	*
Urban Activity Level	0.003	0.15	(0.09)		0.32 (0.13)	*		-0.66 (0.16)	*			-0.85 (0.22)	*
Total Crime (500m)	0.141	0.39	(0.12)	*	0.36 (0.14)	*		-0.67 (0.16)	*			-0.9 (0.25)	*
Residential with Crime	0.145	1.06	(0.40)	*	0.41 (0.14)	**		-0.68 (0.16)	*			-0.91 (0.26)	*
Tourist with Walkability	0.133	0.03	(0.01)	**	0.25 (0.09)	*		-0.8 (0.14)	*			-0.86 (0.19)	*
Urban Activity with Crime	0.149	0.07	(0.02)	*	0.33 (0.13)	*		-0.68 (0.16)	*			-0.87 (0.22)	*
Urban Activity with Walkability	0.136	0.01	(0.00)	*	0.06 (0.12)			-0.64 (0.16)	*			-0.69 (0.21)	*

* Indicates significance, $p < .05$. ** Indicates highly related, single-tailed $p < .05$

Note: Table 9 illustrates the main effect (average) of each variable between sites and the effect of each variable when controlling for appropriation on the DV. For example, "Residential with Crime" has a high r -square, indicating it accounts for .145 variance across cases. The main effect describes the average case at 1.06 (risk-taking) with a standard deviation of .40. In residential areas with high crime, presence suggests that risk-taking behaviors are likely to occur .41. When temporary -.68 or permanent -.91 modifications of the urban environment are used (appropriation) behavior is more likely to be prosocial.

As discussed earlier, physical urban context has been divided into three categories based upon dominant land use types: (1) residential, (2) business or CBD, and (3) tourist. Residential areas are typically described as supportive environments and this has been supported with a main effect of $-.82(.17)$ $p < .05$. When controlling for residential sites, presence still suggests a preponderance towards risk taking behavior $(.42(.14)$ $p < .05$), and temporary ($\beta = -.67$) and permanent ($\beta = -.90$) levels of appropriation significantly indicate increases in prosocial behavior. The context of Central Business Districts (CBD) did not sufficiently account for similarities in play. When controlling for CBD, presence $(.39)$ again significantly increased the predilection for risk-taking, and temporary ($\beta = -.68$) and permanent ($\beta = -.92$) modifications suggest an increase in prosocial behavior. This suggests that the CBD context alone is insufficient to account for the propensity towards risky behavior among youth. Tourist areas seem to lend themselves towards an increase in risk-taking among youth $(.70(.30)$ $p < .05$). When controlling for tourist areas, this effect is repeated when accounting for presence $(.34(.13)$ $p < .05$) and increases in prosocial behavior when temporary ($\beta = -.68$) and permanent $\beta = -.89$) modifications are used. The observed level of activity did not account for a significant portion of site variance predicting youth play. When controlling for level of activity, presence remained a significant predictor of risk taking behavior $(.32(.13)$ $p < .05$) and temporary ($\beta = -.66$) and permanent ($\beta = -.85$) significant predictors of prosocial behavior. Residential and tourist areas have significant main effects in predicting youth behavior. Appropriation remains a robust predictor when controlling for each of these urban context factors.

Crime is often associated with the behavior of youth. An increase in total crime in a 500 meter radius of each site's perimeter was found to be a reliable predictor of an increase in the predisposition for risk-taking behavior $(.39 (.12)$ $p < .05$). When controlling for total crime,

presence (.36(.14) $p < .05$) remained a significant predictor of risk-taking behavior, and temporary ($\beta = -.67$) and permanent ($\beta = -.90$) modifications predictors of prosocial behavior. Total crime has significant main effect on predicting residual difference in behavior across settings, and appropriation remains robust to the effect.

Since urban context cannot be defined by any variable in a holistic manner, main effects were combined and several iterations of multilevel models were run testing for significant effects. The meaningful combinations of main effects are presented here.

The combination of these main effects accounts for the play behavior of youth across residential sites accounting for increases in total crime. Residential areas with an increase in total crime indicate a dramatic increase in risk-taking behavior (1.06(.40) $p < .05$). When appropriation is entered as a main effect, controlling for residential and crime, presence (.41(.14) $p < .05$) continues to account for increased risk-taking behavior and temporary ($\beta = -.68$) and permanent modifications ($\beta = -.91$) account for increase in prosocial behavior. The combination of the main effect suggests that residential areas with higher total crime are a reliable predictor of risk-taking behavior. Further, appropriation remains robust to the combination of these main effects, suggesting that play behavior is better explained by the relationship with appropriation.

This combined main effect account for those tourist areas such as the Woldenburg Park that are categorized as tourist areas with high walkability scores. The combined main effect of tourist areas with high walkability scores pushes risk-taking scores down (.03(.01) $p < .05$). When controlling for the combined main effect, presence (.25 (.09) $p < .05$) remained a significant predictor of risk-taking behavior, although lower than other effects. Temporary ($\beta = -.80$) and permanent ($\beta = -.86$) modifications even out as significant predictors of prosocial behavior. The

combined main effect of these predictors likely reflects a spurious relationship between increases in walkability scores and appropriation. When controlling for this combination, appropriation remains robust and an interesting increase in temporary slopes evens it out with what would be expected of sites with permanent modifications.

As was suggested in the previous section, confrontations with youth were related to higher crime areas and increasing levels of walkability. In this case, instead of walkability, observed level of human activity combined with total crime revealed a significant main effect (.07(.02) $p < .05$). When controlling for the combined main effect, presence continues to suggest increase in risk-taking behavior (.33(.13) $p < .05$) and temporary ($\beta = -.68$) and permanent ($\beta = -.87$) modifications persist in increases in prosocial behavior. The combined main effect in total crime and urban activity pushes risk-taking behavior closer to the mean. Appropriation remains robust to these findings.

A logical argument can be made for urban areas with high activity levels and high walkability to be the most resistant to appropriation by teens. The main effect of these combined criterion variables .01(.002) $p < .05$ suggests that risk-taking behavior is average. When controlling for the combined main effect, presence is no longer a significant predictor of risk-taking behavior, and temporary -.64(.16) and permanent -.69 (.21) continue to suggest prosocial behavior. This effect is likely due to a significant correlation between walkability and appropriation (Spearman's $\rho = -.55$, $p < .001$) and between walkability and activity (Pearson's $r = .78$, $p < .001$) and will be decomposed further. An analysis of the residual variance attributed to walkability (the variance that does not overlap with appropriation) was entered into a model as a fixed effect along with appropriation. While the appropriation variables, presence (.47), temporary ($\beta = -.80$), and permanent ($\beta = -.86$), remained significant ($p < .005$), walkability scores

did not account for significant variance, suggesting that the relationship between more walkable areas and adolescent behavior is spurious. The results indicate that urban areas with high levels of activity do not match anticipated values of high, risk-taking behavior. The further implementation of more intense levels of appropriation persists in promoting prosocial behaviors.

The following graph (Figure 16) shows the base level of observed behavior change when appropriation alone is considered across sites (base model) and then how appropriation levels change when controlling for the identified measured effect. This method was selected to show that appropriation is robust against other known factors that have been shown to significantly measure behavioral change across sites. Regardless of how much crime there is in an area or how walkable the area is, presence is associated with risk-taking, temporary with prosocial, and permanent with even more prosocial behavior. The combined main effects of appropriation with urban context controlling for “walk + activity” and “context 2 (tourist) + walkability” both suggest that temporary appropriation in areas with high walk scores or a preponderance of tourists even further increases the amount of prosocial behavior than in other places. The study further included the additional criteria of total crime and walkability as predictors of youth behavior, because such factors are highly correlated with potential confrontations. When controlling for each of the significant main effects and combinations thereof, appropriation remained a robust predictor of adolescent play behavior. This suggests that while urban context matters, it only matters insofar as appropriation is constrained.

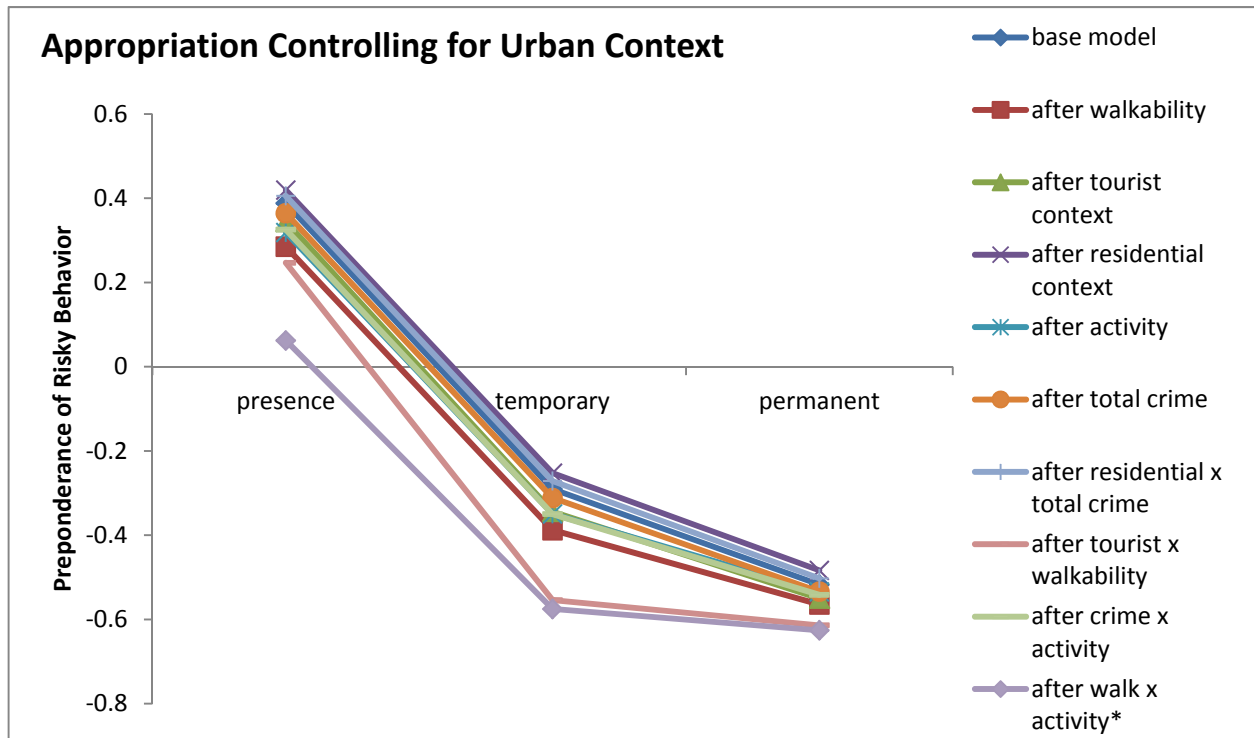


Figure 16. Graph of appropriation levels when controlling for urban context.

Figure 16. Graph of appropriation levels when controlling for urban context. Illustrates the average effect each urban context variable has on the DV when no modifications are present, then when temporary modifications are recorded, and finally when permanent modifications are recorded.

The findings from this study are in concert with similar studies on youth that have identified urban centrality, residential neighborhoods, and liminal spaces as having an influential role in adolescent play preferences. Tourist areas and residential areas with increased crime suggest a predilection for increased risk taking behavior. Residential areas are more likely to afford prosocial social interactions.

Peer Effects Criteria and Appropriation

Peer groups are often associated with both risk taking and prosocial behavior in the literature. Following the build-up strategy, peer effects were modeled in several iterations by first separately entering the fixed effects of group size, ethnicity, and gender. This intercept only model allows us to see how each predictor accounts for similarities across observation apart from

all other predictors. Then appropriation was entered in as the fixed effect and each group measure was entered in as a random effect to measure whether appropriation was robust when controlling for peer effects, see Table 10.¹³

Table 10. Social/peer context

Criterion	r ²	Social/Peer Context											
		Main Effect			Presence			Temporary			Permanent		
		β	SD	P	β	SD	P	β	SD	P	β	SD	P
Group Size	0.099	-0.17 (0.05)	*	0.43 (0.11)	*	-0.39 (0.19)	*	-0.86 (0.22)	*				
Group Gender	0.061	-0.31 (0.12)	*	0.43 (0.11)	*	-0.56 (0.17)	*	-0.89 (0.22)	*				
Group Ethnicity	0.029	-0.13 (0.80)	**	0.42 (0.12)	*	-0.69 (0.17)	*	-0.92 (0.24)	*				
Size with Gender	0.1	0.27 (0.09)	*	0.42 (0.09)	*	-0.38 (0.19)	**	-0.88 (0.20)	*				
Size with Ethnicity	0.102	0.31 (0.11)	*	0.44 (0.10)	*	-0.43 (0.22)	**	-0.84 (0.23)	*				
Ethnicity with Gender	0.077	-0.14 (0.04)	*	0.43 (0.11)	*	-0.6 (0.19)	*	-0.86 (0.23)	*				
Ethnicity with Gender with Size	0.103	-0.03 (0.01)	*	0.42 (0.09)	*	-.39 (0.23)	**	-0.84 (0.20)	*				

* Indicates significance, p<.05. ** Indicates highly related, single-tailed p<.05

Note: Table 10. **Social/peer context** illustrates the main effect (average) of each variable between sites and the effect of each variable when controlling for appropriation on the DV. For example, “Group Size” has a low r-square, indicating it accounts for .099 variance across cases. The overall main effect describes the average case at -.31 (prosocial) with a standard deviation of .12 indicating that the larger the group the more likely evidence or prosocial behavior was observed. If larger groups were present in areas with no modifications risk-taking was more likely to occur. If larger groups were present in cases with temporary -.39 or permanent -.86 modifications then prosocial behaviors were more likely and high levels of risk-taking less likely

From the table, the increase in size of the group of youth present suggests higher prosocial behavior, -.17(.05) p<.05, and that this increases even further, -.39(.19), p<.05 when temporary appropriation is observed and further -.86(.22), p<.05, when permanent appropriation is accounted for in the setting. However, risk-taking is the most likely observed behavior .43(.11) p<.05 when appropriation is limited to presence. The effect of appropriation remains significant, suggesting that the size of the group does not supersede the role of appropriation.

When we look at the presence of females in the group, prosocial behaviors are more likely to be observed -.31(.12) p<.05). When attendance of females is controlled for across sites,

appropriation limited to presence still indicates risk-taking, .43(.11), $p < .05$. When controlling for gender, increases in appropriation from temporary ($\beta = -.56 (.17)$, $p < .05$) to permanent ($\beta = -.89(.22)$) persist in suggesting increases in prosocial behavior. The presence of females accounts for increases in prosocial behaviors in temporary locations, compared to controlling for the size of the group, and a somewhat smaller increase in permanent locations.

As a main effect, an increase in ethnic diversity suggests an *insignificant* increase in prosocial behaviors, $-.13(.8)$, across all sites. Although the main effect was insignificant, when controlling for diversity, presence remained a significant predictor of risk-taking, $.42(.12)$ $p < .05$, and increases in prosocial behavior for both temporary ($\beta = -.69(.17)$ $p < .05$) and permanent ($\beta = -.92(.24)$ $p < .05$) remained consistent with other group predictors.

These effects were maintained at significant levels when the multiple main effects of ethnicity, size of group, and gender were entered into the model (see Table 10). This suggests, at a more holistic level, increases in appropriation reliably predict increases in prosocial behavior when controlling for size, gender, and ethnic diversity. Peer effects of group size, gender, size with gender, size with ethnicity, ethnicity with gender, and ethnicity with gender and size, all reported significant main effects for play. However, when each of these predictors was controlled for, appropriation remained a consistent and significant predictor of similarities in play across sites. This suggests while peer effects matter, appropriation is robust to peer effects.

Similar findings were found when appropriation was measured controlling for peer effects, with the exception of group size. When larger groups were observed in instances of temporary appropriation, risk-taking behavior diminished from when presence alone was accounted for, but not sufficiently enough to show a significant effect for prosocial behavior. When controlling for combined effects of “size + gender”, “size + ethnicity”, and “size + gender

+ ethnicity,” temporary appropriation was consistently associated with diminished risk-taking behavior. This suggests that when temporary appropriation is used to support the activity, the size of the group, even when controlling for the gender and ethnic diversity of the group, has lower risk taking scores but insignificant prosocial behavior.

The study supports findings from the literature suggesting the importance of peer effects in accounting for adolescent behavior in public urban open space. The number of peers present, presence of females in the group, and ethnic diversity of the group were all accounted for in each observed setting. However, when each of these social factors is controlled for, appropriation remains a robust predictor of observed play behavior.

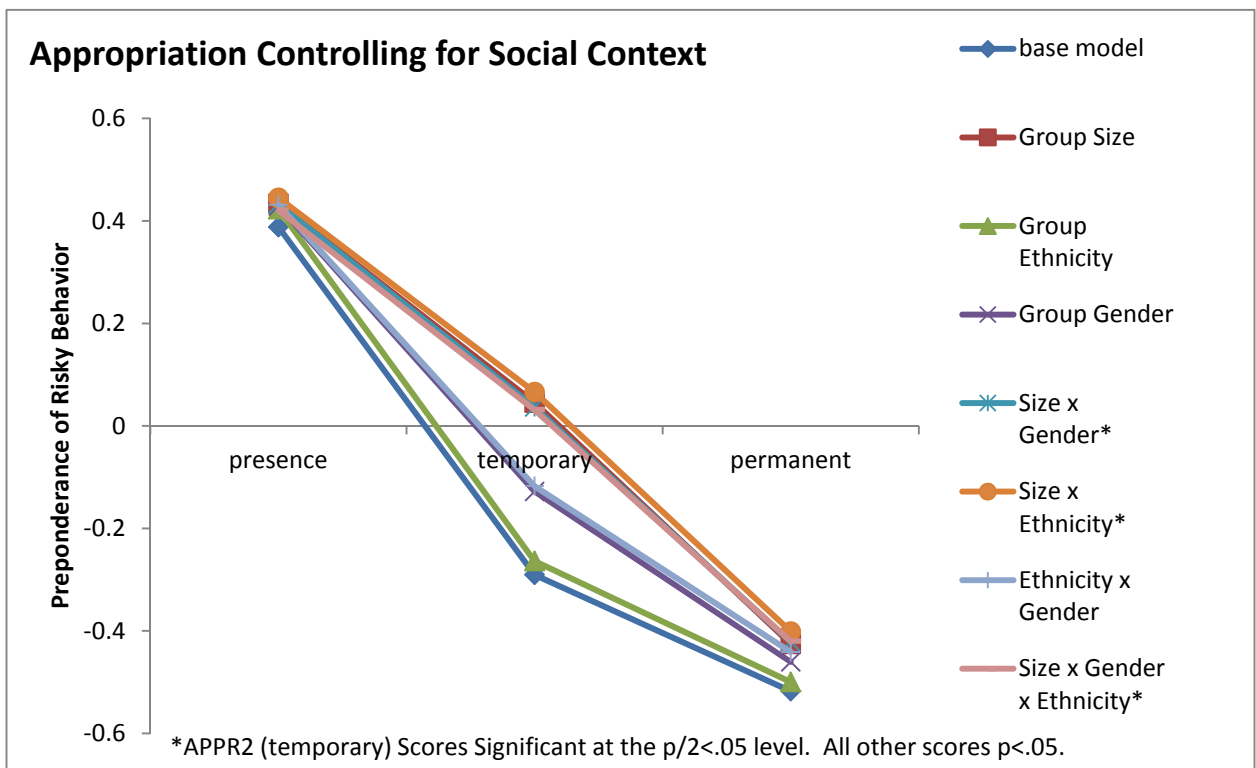


Figure 17. Graph of appropriation levels when controlling for social context.

Figure 17 illustrates the average effect each peer context variable has on the DV when no modifications are present, then when temporary modifications are recorded, and finally when permanent modifications are recorded.

Physical Features Criteria and Appropriation

The availability of physical features is often referenced as affording specific activities to youth and contributing to their behavior in certain spaces. The physical features of the separate sites were entered into a multilevel linear model following the same process used above: each feature was individually entered as a fixed effect to test whether it was a significant predictor, then each feature was entered as a random effect to test how it contributed to variance in behavior across sites (see Table 11). Of the physical features documented throughout the study, handrails, barriers, driveways, sidewalks, streets, gaps, ramps, poles, walls, playground equipment, and landings produced insignificant change in play behavior. I have labeled the tables “trickability” because they measure the ability of the site to support tricks, the kinds of tricks, and the success of completing a trick.

Urban designers seem to go out of their way these days to make furniture that is inhospitable to unintended, human use. Play on furniture, such as benches and temporary skate-benches, revealed an overall increase in prosocial behavior ($-.42(.20) p<.05$). When controlling for furniture, play in places where appropriation was limited to presence continue to predict risk-taking behavior $.41(.18) p<.05$. Nevertheless, when appropriation was allowed to increase, temporary $-.68(.17) p<.05$ and permanent $-.92(.23) p<.05$ both reflect the main effect of prosocial behavior. Furniture play is fun but more so when youth commit to further appropriating the place.

Table 11. Trickability

Criterion	r ²	Trickability											
		Main Effect			Presence			Temporary			Permanent		
		β	SD	P	β	SD	P	β	SD	P	β	SD	P
Furniture	0.035	-0.42	(0.20)	*	0.41	(0.18)	*	-0.68	(0.17)	*	-0.92	(0.23)	*
Steps	0.072	0.35	(0.14)	*	0.37	(0.12)	*	-0.64	(0.15)	*	-0.88	(0.24)	*
Feature	0.025	0.46	(0.24)	**	0.36	(0.19)	**	-0.59	(0.15)	*	-0.76	(0.26)	*
Trick: Slide/Grind	0.016	-0.24	(0.13)	**	0.5	(0.11)	*	-0.78	(0.16)	*	-0.89	(0.23)	*
Trick: Ollie	0.016	0.24	(0.13)	**	0.5	(0.12)	*	-0.84	(0.15)	*	-0.87	(0.23)	*
Completed Trick	0.047	-0.41	(0.13)	*	0.63	(0.13)	*	-0.77	(0.15)	*	-0.9	(0.24)	*
Incomplete Trick	0.047	0.41	(0.13)	*	0.48	(0.14)	*	-0.78	(0.15)	*	-0.91	(0.24)	*
Furniture with Completion	0.093	-0.53	(0.20)	*	0.53	(0.12)	*	-0.81	(0.16)	*	-0.92	(0.23)	*
Steps with Incomplete	0.134	0.54	(0.19)	*	0.5	(0.13)	*	-0.78	(0.15)	*	-0.89	(0.23)	*
Feature with Completion	0.093	0.67	(0.26)	*	0.52	(0.22)	*	-0.71	(0.15)	*	-0.82	(0.26)	*
Ollie with Incomplete	0.063	0.46	(0.14)	*	0.49	(0.14)	*	-0.77	(0.15)	*	-0.89	(0.24)	*
Slide/Grind with Completion	0.063	-0.28	(0.14)	**	0.53	(0.11)	*	-0.83	(0.16)	*	-0.94	(0.23)	*
Feature with Ollie with Completion	0.114	1.08	(0.31)	*	0.52	(0.22)	*	-0.71	(0.15)	*	-0.82	(0.26)	*
Steps with Ollie with Incomplete	0.139	0.54	(0.19)	*	0.49	(0.13)	*	-0.78	(0.15)	*	-0.89	(0.23)	*
Furniture with Slide with Completion	0.1	-0.62	(0.22)	*	0.53	(0.12)	*	-0.81	(0.16)	*	-0.92	(0.23)	*

* Indicates significance, p<.05. ** Indicates highly related, single-tailed p<.05

Note: Table 11 illustrates the main effect (average) of each variable between sites and the effect of each variable when controlling for appropriation on the DV. For example, “Steps with Incomplete” has a high r-square, indicating it accounts for .134 variance across cases. The overall main effect describes that the average skater is likely .54 to engage in higher risk-taking behavior when performing a trick on steps. If tricks are unsuccessfully attempted when no modifications are present risk-taking was more likely to occur. If tricks are unsuccessfully attempted when temporary -.78 or permanent -.89 modifications were used then prosocial behaviors were more likely and high levels of risk-taking less likely

Steps are one of the most treacherous features in designed urban environments. As would be expected, skaters attempting steps presented an increase in risk-taking behavior overall (.35(.12) p<.05). When controlling for steps, presence maintains this expected criterion (.37(.12) p<.05) but increased appropriation, temporary -.68(.10) and permanent -.88(.24) p<.05, suggest otherwise. This suggests that steps are not an inherent predictor of increases in risk-taking behavior.

Site features are typically unsuccessful attempts by urban designers to provide some sort of public benefit to utilitarian, urban environments by adding a nice site element. Features, such as public fountains or memorials, were associated with a heightened increase risk-taking behavior (.46(.24) single-tailed $p < .05$). When controlling for features, this was consistent in sites with presence, (.36(.19) single-tailed $p < .05$). Prosocial behavior also remained significant across sites with increasing levels of appropriation (β =temporary; β =permanent) when controlling for the use of furniture (β =-.68; β =-.92; $p < .05$). Site features alone do not present the whole picture as a criterion for play behavior.

Trickability is the ability of a site to support tricks. Since physical features are more interesting when they are played on, the type of skate trick (ollie, aerial, and slide/grind) and whether or not the trick was completed, were entered in as main effects to examine the “trickability” of the sites to contribute to changes in behavior. Slides and grinds tended to be associated with increases in prosocial behavior (-.24(.13) $p/2 < .05$), whereas ollies revealed a decrease in risk-taking behavior (.24(.13) $p/2 < .05$). When controlling for both types of tricks, the study found similar findings of heightened risk-taking in sites limited to presence alone (.50(.115+/- .5) $p < .05$). However, when appropriation was allowed to increase (β =temp.; β =perm.), slides/grind (β =-.78; -.89) and ollies (β =-.84; -.87) were both better related to instances of prosocial behavior. As would be expected of the nature of prosocial behavior, the successful completion of tricks was associated with an increase in prosocial behavior (-.41(.13) $p < .05$). However, when controlling for the completion of tricks, this overall effect varied when appropriation was limited to presence alone: higher risk taking was found for both successful (.63(.13) $p < .05$) and incomplete (.48(.14) $p < .05$) tricks. Increased levels of appropriation (β =temp.; β =perm.) for completed (β =-.77; β =-.87) and incomplete (-.78; -.91) reveal where the

prosocial behaviors were most likely to occur. This finding is interesting in departing from common sense notions that a successfully landed trick will win the appreciation of peers and onlookers regardless of the location.

To provide a more holistic image of the role of trickability on behavior within and across settings, several iterations of significant main effects were run as combined main effects. This permits a better perception of how different tricks attempted on physical elements account for play. All significant main effects were tested for compound effects. Seven of the following eight compound main effects were significant at the $p < .05$ level and only slides/grinds at the single-tailed $p < .05$ level.¹⁴

The compound main effects build off the previous findings. Play on furniture with completed tricks indicates an increase in prosocial behavior $-.53(.20)$, as does slides and grinds by completion $-.28(.14)$, and furniture by slides/grinds by completion $-.62(.22)$. On the other hand, the study found that unsuccessful attempts on steps $.50(.13)$ show increases in risk-taking behavior, as do unsuccessful ollies $.49(.14)$, and steps by ollies by incomplete $.54(.19)$. Urban play on features with successful ollies has the highest overall risk-taking fixed effect $1.08(.31)$.

When controlling for each of the compound effects, sites limited to affording presence scored $.51 \pm .02$ (see Table 11). Similarly, increase levels of appropriation continued to show ($p < .05$) increased levels of prosocial behavior when the compound effects were entered, see Table 11 (APPR2; APPR3): furniture by completed ($\beta = -.81$; $\beta = -.92$), steps by incomplete ($\beta = .78$; $\beta = -.89$), feature by completion ($\beta = -.71$; $\beta = -.82$), ollie by incomplete ($\beta = -.77$; $\beta = -.89$), slide/grinds by completion ($\beta = -.83$; $\beta = -.94$), feature by ollie by complete ($\beta = -.71$; $\beta = -.82$), steps by ollie by complete ($\beta = -.78$; $\beta = -.89$), and furniture by slides/grinds by complete ($\beta = -.81$; $\beta = -.92$).

Trickability is perhaps the most interesting and important set of findings to urban designers interested in promoting places that meet the needs of urban play by youth. However, the features themselves do not afford activity. Instead, when controlling for trickability, appropriation remains a more robust predictor of play behavior.

The third component of the urban environment controlled for was trickability. Since a number of effects were controlled for, trickability has been broken down into three graphs: Figure 18 shows the physical features with the base line; Figure 19 shows the type of trick and whether it was successful; Figure 20 shows the combined main effects. When looking at the role of physical features, only features such as fountains or monuments, steps, and furniture significantly loaded into the model. Base levels of appropriation changed very little when

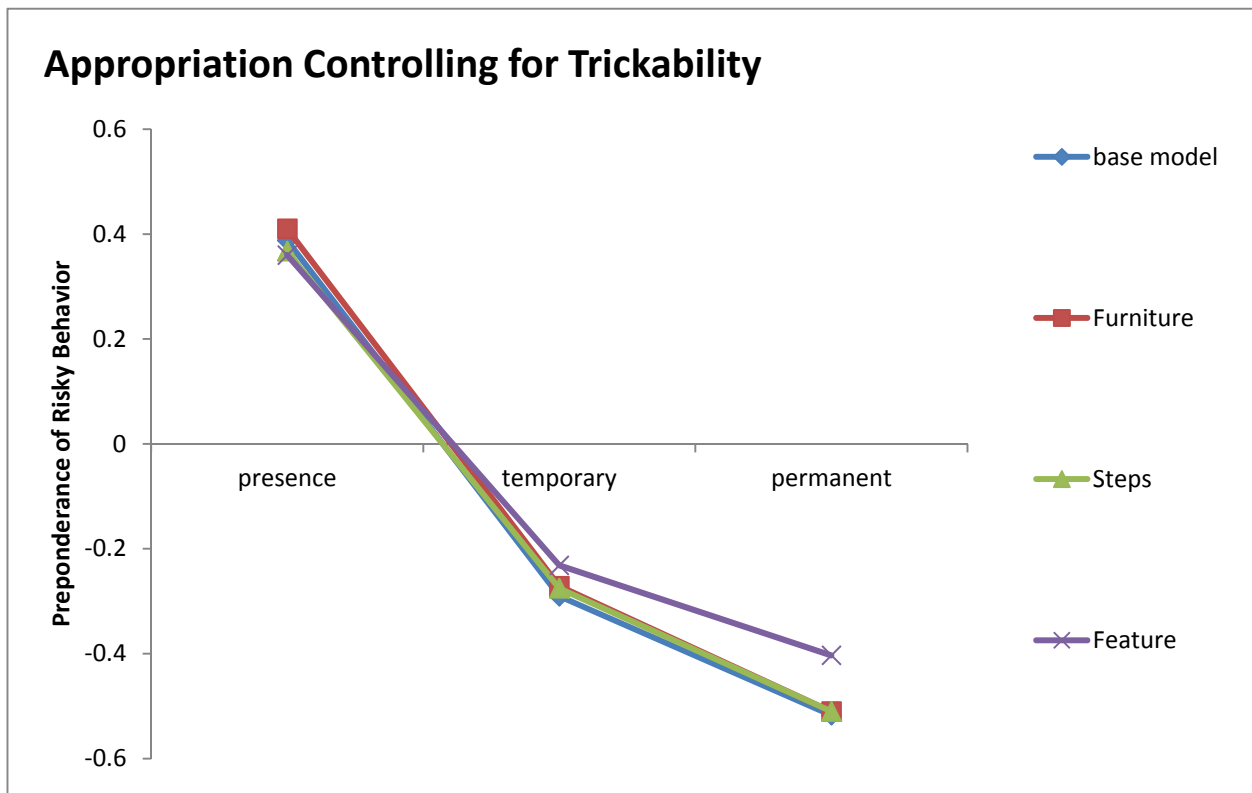


Figure 18. Graph of appropriation levels when controlling for trickability of site features.

Figure 18 illustrates the average effect each significant site feature variable has on the DV when no modifications are present, then when temporary modifications are recorded, and finally when permanent modifications are recorded.

controlling for these features with the exception of the use of features in setting with permanent appropriation. Prosocial levels decrease closer to base level temporary appropriation levels in this case, suggesting that the use of sites features for play is less associated with prosocial behavior, but this was not significant to suggest risk-taking.

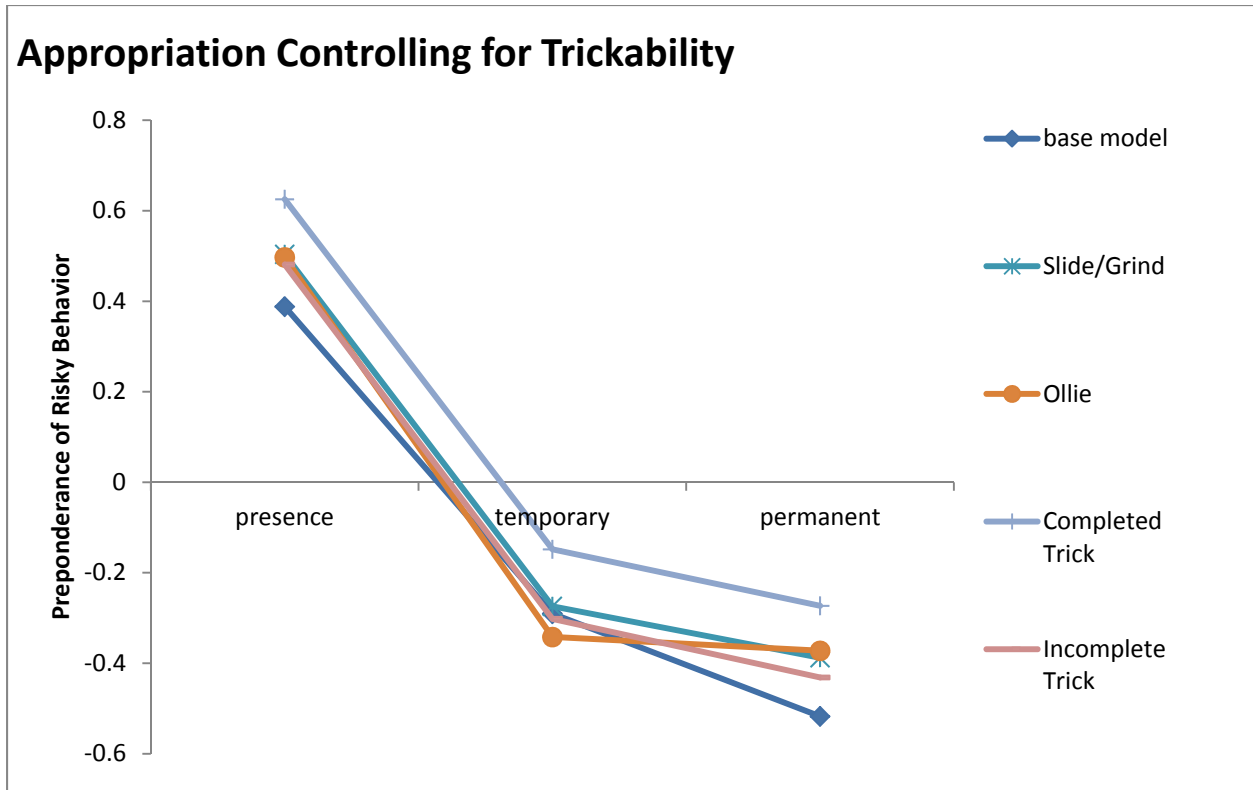


Figure 19. Graph of appropriation levels when controlling for trickability

Figure 19 illustrates the average effect each significant trick variable has on the DV when no modifications are present, then when temporary modifications are recorded, and finally when permanent modifications are recorded.

When controlling for the type of trick and whether or not it was completed successfully, the base level prediction overestimates the amount of prosocial behavior in settings with permanent appropriation. Completed tricks bring appropriation levels closest to mean behavior for temporary and permanent appropriation. The parallel of base levels with completed tricks, with

a higher intercept for completed tricks, is an example of a within-site correlated effect, similar to what we saw with walkability. This suggests that whether or not a trick was completed successfully accounts for quite a bit of observed prosocial behavior, but not a sufficient amount to negate the effect of levels of appropriation.

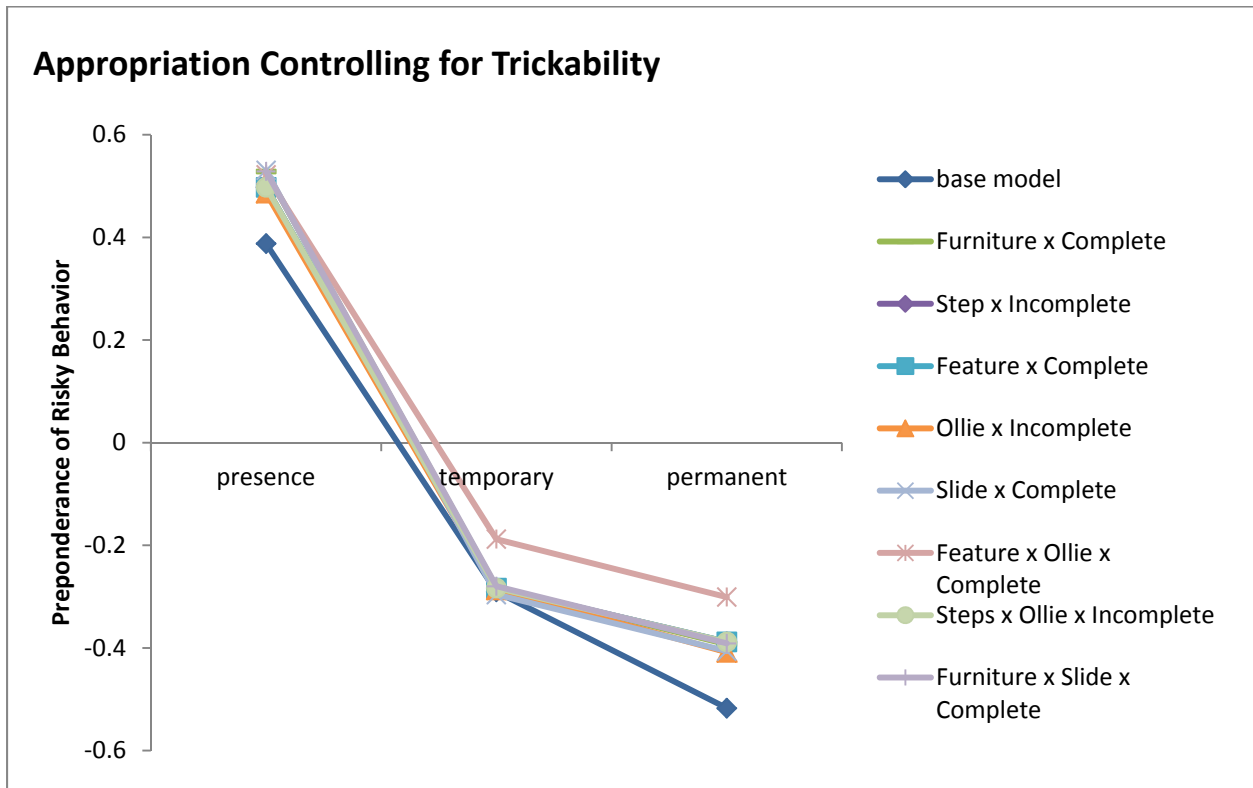


Figure 20. Graph of appropriation levels when controlling for trickability of combined significant effects.

Figure 20 illustrates the average effect each significant combined trickability variable has on the DV when no modifications are present, then when temporary modifications are recorded, and finally when permanent modifications are recorded.

When controlling for combined main effects, the base model prediction for appropriation is consistently lower for risk-taking behavior when presence alone is afforded, nearly perfect for temporary, and higher, again, on prosocial scores in setting with permanent appropriation. The interaction of features with completed ollies is parallel to base line values with an increase in risk-taking and lower prosocial scores.

Overall, the results suggest a consistent set of findings in support of increased levels of appropriation accounting for increased levels of prosocial behavior. In settings that only afford presence as appropriation, results consistently reveal increased levels of risk-taking behavior. While social context, urban context, and physical features all indicate significant effects in predicting risk-taking and prosocial behaviors, increases in appropriation consistently explain how these behaviors were divided across sites.

Table 12. Table of Regressions for Significant Effects on the DV: Risk/reward observations. This table does not distinguish between sites.

Regression Table: DV Prosocial(-) to Risk-Taking(+) Scale Factor*		
Parameter	Beta**	.Sig
Urban Sites		
Data Location	-.057	p<.001
Urban Context		
Total Crime	.001	p<.001
Walk Score	.015	p<.001
Residential	-.544	p<.001
Tourist	.811	p<.001
CBD	.077	-----
Intensity of Appropriation		
Appropriation (all)	-.41	p<.001
Appropriation : Presence (APPR1)	.938	p<.001
Appropriation : Temporary (APPR2)	-.747	p<.001
Appropriation : Permanent (APPR3)	-.728	p<.001
Type of Activity		
Play Type	.867	p=.022
Slide/Grinds	-.296	p=.046
Ollies	.296	p=.042
Completed	-.514	p<.001
Social Context		
Peer Group Size	-.253	p<.001
Peer Group Gender	-.535	p<.001
Peer Group Ethnic Composition	-.167	p=.005
Peer Group Ethnic Homogeneity	.372	p=.018
Physical Features		
Feature ID (all)	.04	p=.01
ID Furniture	-.655	p=.002
ID Gap	-.439	p=.013
ID Steps	.623	p<.001
ID Wall	.681	p=.015
ID Feature	.67	p=.009
ID Landing	-.469	p=.031
Confrontation		
Confrontation	3.049	p<.001
<p>*Regression Table identifies those variables that successfully loaded onto the DV. Positive Betas indicate an increase in risk-taking behaviors. Negative Betas indicate an increase in Prosocial behavior. The larger the Beta, the more severe the slope from the intercept. **Betas are reported Unstandardized Coefficients</p>		

Chapter 5. Sk8 or Die: What Does Watching Teens Skate Teach Designers about Youth and Cities?

In this dissertation, I have employed a methodological strategy that delivered empirically testable and meaningful findings, namely that (a) adolescents consistently adapt play behavior due to settings and (b) that adolescents adapt settings to support play behavior. These two major findings appear contradictory but actually present an unseen complimentary perspective into how youth play in the City of New Orleans. In the following discussion section, I review the findings, how the study made the findings, and what the findings mean to the broader literature on youth. I also consider the limitations of the current study and offer suggestions for future research, as well as broader implications towards policy. The discussion begins by reviewing the findings of the study and then applies these to ongoing academic discussions. Amongst unsupervised adolescents (youth, ages 12—19) observed playing in urban, public open spaces in New Orleans, the study found evidence of consistent play behavior directly related to the environment.

FINDINGS

Finding 1. Adolescents Consistently Adapt Play Behavior to Settings

First, a finding of the dissertation shows that adolescents consistently adapt play behavior to settings. A sophisticated statistical modeling strategy supports this finding by extracting a highly significant intra-class correlation (ICC). The ICC addresses this research question as it

simultaneously takes into account between-site factors (level 2) that are always present at a particular site, as well as within-site factors that change at each site depending on when play behavior is observed (level 1). The ICC is found by dividing the level 2 variance by the total variance. This statistic is able to indirectly point to the overall contribution of site specific factors such as urban context, total crime, physical features, and walkability—factors that change across sites but not within sites as opposed to features which change within sites, such as appropriation, peers, and demographic of the group (Figure 15, p.114). The results show that 23% of observed youth risk-taking/prosocial behavior is due to differences between sites. Thus, the ICC illustrates two important features of the observed sites. It illustrates that a significant amount of observed risk-taking or prosocial play can be attributed to the setting because the observed behavior within that setting are somewhat stable or consistent at that site. Settings tend to support risk-taking and prosocial behavior in a similar fashion across observations. Put another way, the observation that 23% of the variance in youth behavior is due to differences between sites also illustrates that youth behavior differs consistently from site to site based upon some stable component of that site and not just the momentary vagaries of youth preferences.

The key finding rejects the study's null hypothesis, that all of the variation in documented play is due to individual differences. Settings matter. In particular, anonymously posted, online videos of youth playing within each site provide a rich source of information regarding youth play. The utility of these observations of play behavior nested within the sites in New Orleans achieves the study's primary purpose: to identify how a site can afford opportunities for play in a nonprogrammed setting, and how such "deep play" can shift or change as those affordances are altered by the adolescents or other extraneous variables in that site at that time. The finding supports similar studies that have identified that youth play behavior is (1) supported by the

affordances of the place (Clark and Uzzell 2002) and other studies that (2) indicate behavior is subjected to social and environmental constraints (Robinson 2000). The finding also represents a deviation from the normative theory that adolescents behave independent of the places they use for play (Valentine 1996).

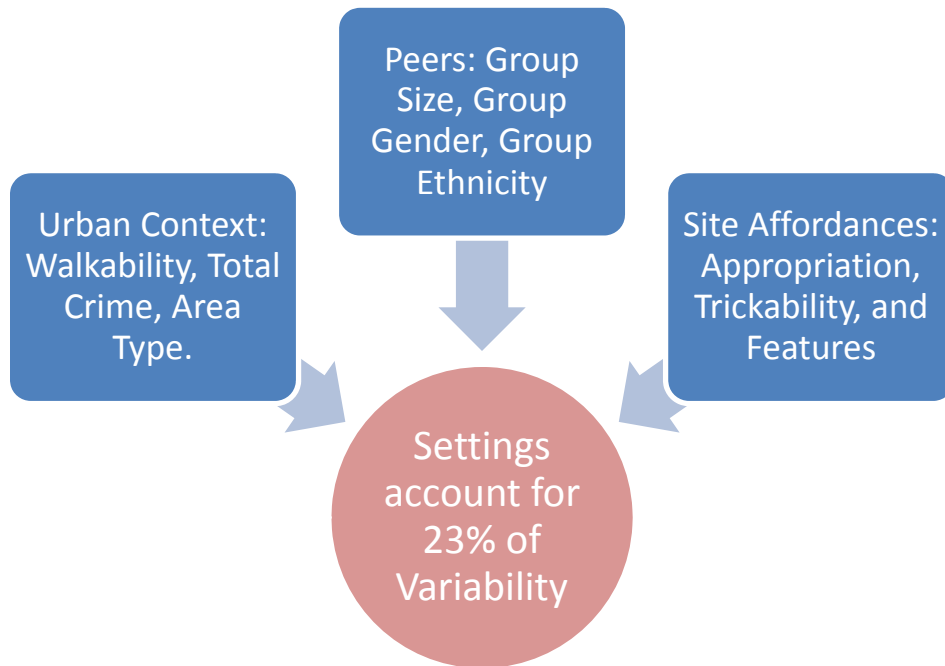


Figure 21. Finding 1: The ICC and Importance of Settings

Setting characteristics served as the criteria evaluating whether adolescents were more likely to engage in risk-taking or prosocial behaviors. Urban context, peers, and site affordances all play an active role in shaping the activity of youth. Table 13 illustrates that several components of the urban context helped to explain risk-taking behavior amongst youth. Teens playing in tourist environments, walkable areas, and high crime areas are more likely to engage in risk taking behavior. This finding is consistent with the literature that adolescents playing in

centralized, urban areas with lots of activity are typically seen as engaging in inappropriate behavior (Rogers and Coaffee 2005).

Table 13. Risk Taking Behavior related to Urban Context

1. Tourist settings	($\beta=.70$, $p<.05$),
2. High crime areas	($\beta=.36$, $p<.05$),
3. Walkable areas	($\beta =.02$, $p<.05$),
4. Residential areas with crime	($\beta =1.06$, $p<.05$),
5. Urban activity areas with crime	($\beta=.07$, $p<.05$),
6. Urban activity areas with walkability	($\beta=.01$, $p<.05$)

The finding demonstrates that teens ramp-up their risk-taking maneuvers and suppress their prosocial behaviors when playing in such places. On the other hand, teens playing in residential areas ($\beta= -.82$, $p<.05$) were more likely to engage in prosocial behavior. This is consistent with studies suggesting that places in the neighborhood support adolescent identity formation and development (Robinson 2009 and others). The finding is conducive to other studies showing that risk-taking diminishes amongst teens playing in residential environments (McCray and Mora 2011).

Peers also influence the risk/reward outcome of tricks in settings. Whereas urban context is a stable influence on play behavior within each site, the following components of the setting changed within the site. Increases in group size ($\beta= -.17$, $p<.05$), increased variation in group gender ($\beta=-.03$, $p<.05$), increased diversity ($\beta= -.13$, $p=.1$), and the combined main effect of each support decreases in risk-taking and a critical shift towards prosocial behavior. The finding is consistent with the literature identifying the importance of being with friends when playing in

urban environments (Travlou et al. 2008; Travlou 2004). The finding suggests that when teens play in urban spaces with larger and more diverse groups, they are more likely to engage in prosocial behavior than when playing in smaller, more homogenous groups. The main effect for increase in diversity was not significant at the $p < .05$ level in the multi-level model. This is counter to the regression analyses (see Table 12, p.133), that proposed an increased ethnic diversity of the group ($\beta = -.17, p < .05$) would predict increased prosocial behavior while a more homogenous group ($\beta = .37, p < .05$) predicted increased risk-taking behavior.^{15,16}

Site affordances also affect how teens adapt their play behavior to the features and trickability within the separate locations. Table 14 illustrates that some stable features of the site as well as features of the site which change from observation to observation are associated with increased risk-taking behavior.

Table 14. Level 2 and Level 1 Affordances on Risk-Taking Behavior

Level 2: Stable Features of the Site	
Steps	$\beta = .35, p < .05$
Features	$\beta = .46, p < .10$
Level 1: Features of the Site which can change	
Ollies	$\beta = .24, p < .10$
Incomplete Tricks	$\beta = .41, p < .05$
Steps with Incomplete	$\beta = .54, p < .05$
Feature with Completion	$\beta = .67, p < .05$
Ollie with Incomplete	$\beta = .46, p < .05$
Feature with Ollie with Completion	$\beta = 1.08, p < .05$
Steps with Ollie with Incomplete	$\beta = .54, p < .05$

The findings for site affordances become more complicated when we also look at how settings promote prosocial behaviors in adolescents. Table 15 illustrates that features of the site which changes from observation to observation were associated with increased prosocial behaviors.

Table 15. Level One Affordance on Prosocial Behavior

Level 1: Features of the Site which can change	
Furniture	$\beta = -.42, p < .05$
Slides/Grinds	$\beta = -.24, p < .10$
Completed Tricks	$\beta = -.41, p < .05$
Furniture with Completion	$\beta = -.53, p < .05$
Slides/Grinds with Completion	$\beta = -.28, p < .10$
Furniture with Completed Slides/grinds	$\beta = -.62, p < .05$

Site affordances significantly influence observed behavior amongst youth. At this point, I will admit that it is somewhat weird to suggest that steps support risk-taking behaviors. Unlike urban context or peer groups, where crime or support from friends clearly matter, a set of concrete steps is always a solid, unforgiving structure. The finding suggests the value of trickability as a measure of site affordances for skateboarding. Trickability includes the stable and changing features of a site to afford behavior as well as the skill level of the skater. A young skater failing to land an ollie down a large flight of steps is evidence of high risk-taking behavior. A smaller ollie used by a skater to grind or slide on a piece of furniture like a bench, however, is less risk-taking and more prosocial. Skill level comes with practice. Furniture tends to be closer to the ground, so an unskilled skater is less likely to get hurt. On the other hand, steps are more imposing and increase the risk factor. The finding also suggests that skateboarding is risky business, regardless of whether or not the trick is completed and on what it was

completed. Skating involves an inherent risk. Such risk is part of the fun of skateboarding. This finding is consistent with others that have examined the activity of skateboarders who describe the thrill of taking a risk and the excitement of finally getting a trick right (Bradley 2010; Fredericksen 2002). During the course of observations, I witnessed young skateboarders continuously repeating the same trick, often slightly injuring themselves, until they finally master it. Skateboarding, accordingly, is not a typical youth resistance movement (Atkinson 2009). Rather, it is a fun activity that requires a lot of practice and support from peers (Bradley 2010). Skateboarding is an example of deep play. Regardless of whether a site affordance is stable or changing across sites, the interaction with the affordance through deep play requires persistent access to the feature. Tricks require practice and practice requires places to practice. Steps and features in the study area tend to be in locations where teens were likely to have temporary access. Youth increase the risk-taking factor in these locations. Furniture, on the other hand, is found in locations that are more discreet and was often brought with them to sites where they would be left alone. Furniture supported more prosocial behavior because it could be located in a place where youth were less likely to encounter interference. Youth increase prosocial behavior in response to settings where they are more likely to repeat tricks and less likely to be confronted.

The finding that adolescents consistently adapt play behavior due to settings suggests that site affordances, peer support, and urban context influence the level of risk involved with a trick and whether the trick elicits a prosocial response. The finding is in concert with previous studies on youth activity in urban space (Rankin and Quane 2002). However, the finding identifies a weakness of the primary theoretical model supported by the literature. Studies (Travlou et al. 2008; Owens 1997; Owens 1994b) on adolescent values of urban space suggest that urban

context, peer support, and physical features influence how teens feel about a space, affects their behavior in that space (Kraftl and Adey 2008; Horton and Kraftl 2006), as well as tending to marginalize them to certain spaces and exclude them from others (Travlou et al. 2008). The first finding supports this assertion by showing that 23% of variation in youth play behavior is due to settings (Figure 21, p.136). Teens are not just behaving independently of place. However, site affordances—the use of physical features to support activity—are really only useful for deep play insofar as teens are able to make repeated attempts. The adaptation of sites to support continued play activity (repeated attempts) indicates that the principle theoretical model—settings influence behavior—is misleading and potentially inaccurate (Figure 22). Instead, I propose that the context of adolescent behavior is more complicated and better represented when interdependence is considered.

Figure 22. The Independence Model of Behavior in Settings



Finding 2: Adolescents Adapt Settings to Support Play Behavior

In addition to finding that adolescents adapt to settings, I also found that they adapted settings to support deep play. “Appropriation” describes the intensity by which youth adapted settings. Appropriation is the temporary claim to public space that everyone engages in every day in the city. The appropriated urban site becomes a setting of social activity. The act of appropriation represents a fundamental condition of urban life: people adapt places to fit the

setting. Youth appropriate public space by simply engaging in activities in public, urban space. The inclusion of appropriation in this study initiates a turn from the normative theory of independent youth influenced by settings to interdependent youth influenced by settings and influencers of them.

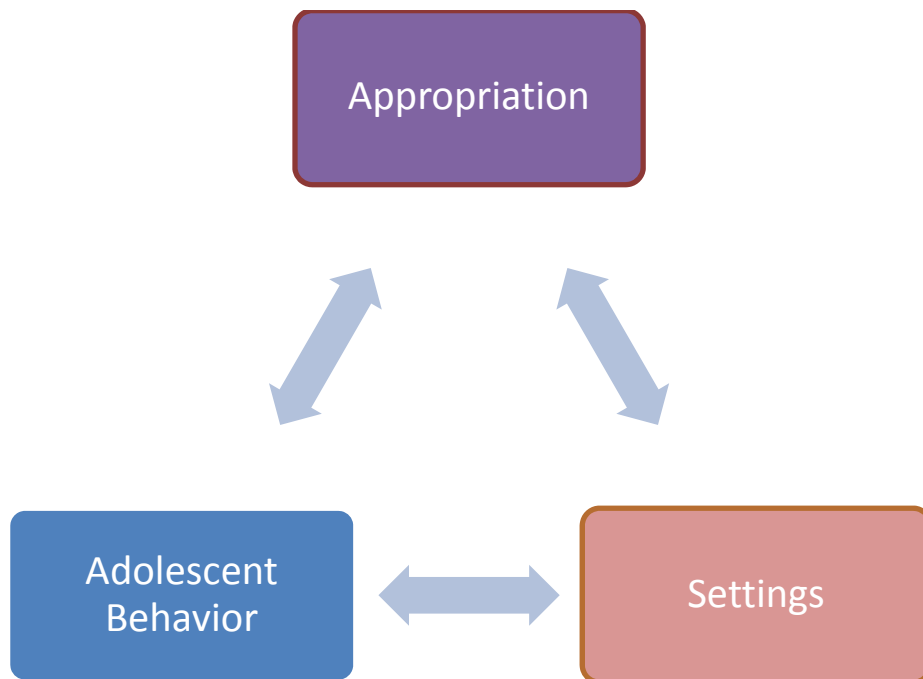


Figure 23. The Interdependence Model of Adolescent Behavior in Settings

Appropriation became a meaningful variable for analysis because adolescents were observed to use different tactics to support deep play. Overall, an increase in the level of appropriation was found to be a significant predictor of the shift from risk-taking to prosocial behaviors ($\beta = -.41 (.09) p < .05$). Adolescents engaging in settings with increased levels of appropriation are more likely to display prosocial behavior and less likely to engage in high risk-taking behavior. Appropriation was divided into three categories: (1) presence was observed in 60% ($n=170$) of the cases; (2) temporary modifications were shown in 28.6% ($n=81$) of the

cases; and (3) permanent installation or modifications were documented in 11.3% ($n=32$) of the cases.

“Presence,” the use of human bodies and props like backpacks and skateboards, reliably indicates the predisposition of risk-taking behavior across sites. Youth playing in sites limited to presence are more likely to engage in risky maneuvers and less likely to show peer support. Teens playing in sites with temporary modifications engage in lower risk-taking behaviors and are more likely to display signs of support for one another. I found that this effect was even greater in sites with permanent modifications. These findings are consistent with the literature that explains that teens value places they believe they can identify with (Travlou et al. 2008; Owens 1988) and consider as part of their territory (Childress 2004).

The most intriguing aspect of this finding that adolescents adapt settings to suit their needs is that I did not anticipate it. As Figure 22 illustrates, I approached settings for how they influenced youth behavior. The main effects of urban context, peers, and site affordances all support this finding across sites. However, activities like skateboarding are neither one-off events nor a banal matter of “hanging-out.” Deep play requires the practice and motivation necessary to take a risk and enjoy the moment of success. Such play necessitates settings that afford repeated attempts to practice in until the trick is mastered. Youth modify settings to support play and they are most likely to modify settings where there is little risk of confrontations over space. “Presence”—regardless of whether it occurs in a residential, business, or tourist context—always indicates a predisposition to risk-taking behavior (see Table 9, p.116). The inverse is true of temporary and permanent levels of appropriation in the same urban contexts. The same pattern is true for peer effects (Table 10, p.122) and trickability (see Table 11, p.126). The finding represents a significant shift from the direction most studies take

in observing the relationship of youth to the urban environment (see Table 1, p. 67). Regardless of urban centrality, liminality, peer support, or site affordances, if adolescents are limited in adapting settings for play to presence, their play behavior is likely to be more risk-taking. The finding and methodological approach to discovering the role of appropriation has important implications for future research on adolescent use of urban space and for improving place of teens in cities.

RELEVANCE OF FINDINGS TO RELATED RESEARCH

The amount of similarity in youth behavior in different settings—the 23% from the ICC—was best explained by appropriation. The strength of the concept of appropriation is that it is consistent with earlier studies conducted by anthropologist Edward Hall (1963) on the human relationship with the environment. Hall found this relationship by observing interactions with fixed, semi-fixed, and dynamic boundaries. Hall’s research on proxemics identified that individuals have different relationships with boundaries based upon their individual experience. According to Hall (1963), walls and boundaries are fixed; furniture is semi-fixed; the distance between individuals is informal and dynamic. The present study has found that the observable relation of youth to fixed (permanent modification), semi-fixed (temporary modifications), and dynamic (presence) space is a significant indicator of the predisposition towards risk-taking or prosocial behaviors.

Appropriation describes observable, human interactions with the environment. The slight difference between Hall’s work and the current study is that appropriation includes the adaptation of settings to complete the scene. This aspect of appropriation is further strengthened by the work of another important anthropologist, Miles Richardson. Similar to the current study,

Richardson used comparative analysis to explore interdependence. Richardson found that observed human behavior could be divided between people who are “being-there” and others who are “being-in-the-world.” Adolescents adapting settings to support play are participating in something which Richardson called being-in-the-world. The concept supports the argument of adolescent interdependence.

In the current study, I looked at urban sites that varied widely in terms of settings. The study found that appropriation was the criteria best associated with observed risk/reward behaviors of youth within a setting. Appropriation describes the degree to which youth adapt a site and successfully create an image to complete the setting. The finding is consistent with Richardson’s model that the “creation of a setting ... impinges directly upon the social responses to that setting” (1982:434). Increasing levels of appropriation are the means by which youth actively participate in being-in-the-world when playing in urban public spaces. This act of being-in-the-world is characterized by Richardson and the current study as interdependence. Reading the literature presented earlier against the grain, what can be gained when we consider urban context, peer support, and trickability in light of interdependence?

Urban context is the abstract value of space as measured through dominant land use, walk scores, activity levels, and total crime. Urban context is frequently referenced in the literature as supporting youth engagements with place through urban centrality or liminality(Kato 2009; Thomas 2005). The current study found significant main effects consistent with the literature. The study also made the novel finding that youth adapt settings through appropriation.

Landscape architects, architects, and urban designers take into account the constraint of context as an opportunity to make a successful design (Dobbins 2009). An examination of the urban play behavior of youth suggests that context matters. The study found that areas with

decreased visible vacancy, higher crime, higher walkability, and tourism were all associated with an increased proclivity towards risk-taking behavior. This supports the literature that when popular, urban spaces are infiltrated by youth activity, their risk-taking behavior can be used to generalize youth as delinquents and appropriation as resistance (Nolan 2003). Play activity remains constrained as exclusionary tactics are employed to marginalize youth activity to homogenous spatial practice. This is also consistent with observations in the field as to why young play seekers had to shift locations continuously. Insofar as risk taking remains the primary observed behavior, this observation supports the continued response to treat youth problems or as problems and remove or limit their access and presence in social space. Research conducted by Janssen (2009) and Robinson (2000) supports the notion that risk-taking youth's transgression of spatial limitations continues to result in perceptions of resistance, subversive meanings of place, and the ongoing reconstruction of space (Robinson 2009). The normalizing gaze of society simply cannot recognize that through these transgressions and by more intensely appropriating urban space, urban youth are participating in-place. Yet, such arguments present only a partial explanation of a complex phenomenon.

Areas with increased visible vacancy, lower walkability, less reported crime, and with a residential or business land use support prosocial behaviors. This supports many of the arguments made in the literature describing youth as intentionally seeking liminal spaces for nonhomogenous (play) behavior. For example, Robinson's (2009) study of youth in street and park spaces examined the qualities of space as a starting point to understand youth. Robinson found a polarized relationship between two kinds of space, free space and consumerized space. Robinson found that free space was an important factor in the creation and organization of local knowledge for youth, and she used liminality as a tool to explain these decisions (Robinson

2009). The liminal areas of this study were primarily found within or adjacent to residential areas. Such places are more likely to be in the neighborhood. Neighborhoods support the creation and organization of local knowledge. Neighborhoods are places to be off-stage. The current study supports these general theories regarding the role of liminal space in the lives of youth. However, it contributes to these ongoing discussions by acknowledging that it is not only because of its liminality that the place is successful. These sites also afford an increased flexibility to support appropriation. This is an important contribution given the tendency in literature to criticize planners for pushing such adolescent activity towards the edge of cities. The location matters only insofar as it affords increased appropriation.

Liminal places and skate parks on the “edge” of urban centrality simultaneously marginalize adolescent activity and provide them with access to free space that helps them to build local knowledge. Such places continue to reflect the transgressive behavior of youth, perpetuating the culture of mistrust, and encourage prosocial behaviors and promote individual development. The Peach Orchard reflects both transgressive behavior (trespassing and vandalizing public property) and peer support (the concrete ramps represent group effort). Amid these contradictions, the explanation of youth preferences for liminal spaces, for prosocial or transgressive behavior, is insufficient. Rather, these places are simply more likely to afford opportunities to intensify appropriation and avoid confrontations. This finding suggests that researchers should stop reducing such behavior to being merely transgressive or resistant. Instead, increased appropriation of sites is a concrete example of how youth build, literally, interdependence with settings.

If urban context in terms of centrality and liminality was the only factor taken in to account, this study would be unable to make a unique contribution to the literature. The literature documents this polarization of youth and transgressional activity between popular urban destination and lesser-known urban locations (Robinson 2000). Central, urban locations with lots of activity reveal how youth do not fit in to these locations because of their alternative forms of activity and continuous “processual” processes of biological and social development (Horton and Kraftl 2006; Valentine 1996, 2003). This study has found these indicators of youth independence of place to be misleading. Rather, appropriation is a better measure than urban context of the nuances of the spatial practice of youth. Regardless of context, presence indicates an increased proclivity for risk-taking behavior. On the other hand, temporary and permanent appropriation always indicates a decrease in risk-taking behavior and most often indicates



Photo by Author

Figure 24. Photo of Graffiti at Hunter's Field.

increasing levels of prosocial behavior. The findings overwhelmingly support the interpretation of adolescent engagement in an interdependent model over an independent model.

So, what is it about gluing a long steel corner to a curbed edge that makes skaters more willing to pat each other on the back? What does this have to do with context? The study found that regardless of context, increased appropriation resulted in increased prosocial behavior and decreased risk-taking. Appropriation is contextual insofar as it is not an artifact but a mechanism by which youth create settings in urban space. Play activity varies depending upon the intensity at which they are able to successfully deploy strategies of appropriation. Presence is the default and is the most discussed strategy in the literature on street skating—because risk-taking is sexy, cf., Flusty, 2000, *Thrashing Downtown*. Between the behavioral observations and the thorough review of urban contextual factors, there is no question that youth deploy this strategy in settings



Photo by Author

Figure 25. Photo of researcher talking with DIY Skate park Creator about the idea of the skate park while standing over graffiti.

where they are most likely to receive resistance. Since presence was not isolated to busy urban hot spots, but was permitted to vary across sites, the potential for confrontations inadequately describes this behavior. The more parsimonious explanation is that what matters is the intensity by which youth are able to successfully appropriate an urban environment.

The sublation of urban context as an indicator of youth behavior does not counter the concept of interdependence. “Sublation” is the raising up and negation of homogenous, urban space. Adolescents’ creative appropriation of settings reflects the struggle to challenge the material conditions in the least resistant manner. Recount that design considers context when conceiving space that meets perceived ideals. Appropriation, as an act of adapting space to meet an unforeseen necessity is only successful insofar as the youth observe context. This means that appropriation is not context but is *contextual*. This supports the theory of interdependence. The act of appropriation reflects an underlying understanding of how activity means one thing in one context and something else in another. This is in line with Simpson’s (2000) study of a record store and adjacent plaza of why it attracted particular groups of people and how public life is generated by the way people appropriated public space. The urban environment can only afford so much in popular destinations where there is increased demand for space and space is under constant maintenance. At the other end of the spectrum, the Peach Orchard’s claim to abandoned property in a residential neighborhood is an example of this tactic at the other extreme of appropriation. The unique contribution of this study is to show that youth exercise interdependence across all urban contexts when the primary criterion of observed youth behavior is appropriation.

The study found that larger, heterogeneous groups were more likely to engage in prosocial behavior. This finding, however, was not consistently supported in settings where appropriation was limited to presence. In such situations, adolescents continue to display little or no prosocial behaviors and increased risk-taking behavior. The normative theory of adolescent



Photo by Author

Figure 26. Image of The Peach Orchard, a DIY Skate park and example of permanent appropriation

engagement in urban environments is primarily influenced by the work of Irving Goffman. In 1963, Goffman proposed a metaphor from his studies on human behavior in public space that the city is a place for youth to show off and be on stage. This metaphor has been consistently supported in studies on youth, place preferences, and their own interpretation of environments beyond home and school to afford social interaction or retreat (Clark et al. 2002; Goffman 1963; Owens 1997; Owens 1994b, 1994a, 2002). Peer groups and “being on stage” is a guiding theory

explaining youth behavior in urban environments. In such a model, youth are portrayed as independent of and outside of their social context.

Group size, gender, and ethnic make-up changed across settings and produced significant main effects. Consistent with current theory, the increase in-group size, increase in female peers, and increase in diversity of ethnicities all predicted an increase in prosocial behavior. The only time in which social context predicted an increase in risk-taking behavior is when it was limited to peers of the same ethnicity. This suggests a proclivity among observed youth to engage in higher degrees of risk-taking in more homogenous groups. The inclination of peer context to support prosocial behavior has been supported by Bradley (2010) who found that skating amongst peers aids youth in improving social interactions, acceptance, and support by others. However, this finding is in direct contrast to Fusco (2007) who argued that the liminal spaces used for skating are found to be subject to the same normative power relations because they are also divided along gender, racial, and heterosexist lines (Fusco 2007). Observations and analysis of liminal spaces around New Orleans revealed that it was when these “power relations” break

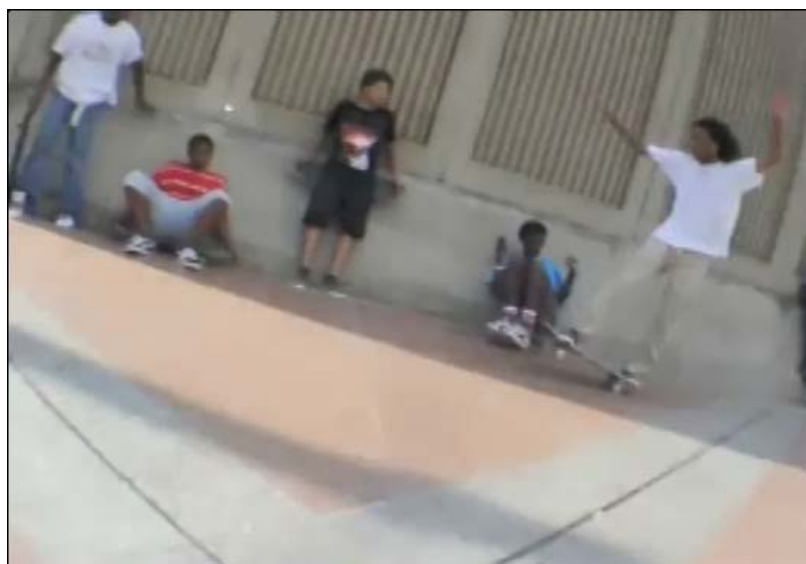


Image Capture: (t382 June 26, 2011)

Figure 27. Cities are for being-on-stage

down amongst youth that the proclivity towards prosocial behavior occurs. Fusco's study and others like it overemphasize how young transgressors use public space to differentiate themselves as an independent group driven to establish a unique cultural identity (Borden 2001b; Hitchings 2001; Pomerantz et al. 2004). Such researchers explain that youth maintain marginalization and use urban space as a site of resistance through their group dynamics. However, this study found that when controlling for social context, appropriation contradicts the notion that groups of youth behave independent of place. This suggests that while social context does a great job of accounting for variations in behavior, one's group of peers cannot be considered apart from the simultaneous appropriation of urban space. Regardless of group size, ethnic makeup, or gender, when appropriation of space for an activity was limited to presence, there was a propensity to risk-taking.

Peer groups matter and the larger the group, the more likely the New Orleans Police Department will give you an unplanned, personal escort down North Claiborne Avenue on "Go



Image Capture: (agent382 June 22, 2011)

Figure 28. Police escort down N. Claiborne Ave, New Orleans

Skate Day!.” On “Go Skate Day!,” with a stifling 104.4 heat index, hundreds of skaters left the Pancakes for a 1.8-mile ride down N. Claiborne Avenue to Hunter’s Field. Their safety down the listed 35mph corridor, where speeds often exceed 50mph, was unexpectedly delivered by the NOPD. The current study is consistent with findings in literature on the importance of peer groups in supporting youth’s independent claim to urban space. However, peer groups did not account for a significant change across settings when accounting for appropriation. Presence remained a significant predictor of risk-taking behavior. Settings limiting social interactions to presence support most of the arguments from the literature essentializing thrill-seeking youth as a rebellious group with a singular cultural identity. But, peer effects are not consistent with current theory when appropriation is considered. As appropriation intensifies, regardless of the make-up of the group, risk-taking behavior decreased and prosocial behavior became more likely. Appropriation, then, is a more parsimonious indicator of variations in behavior across settings than complex social terms like marginalization or resistance.

Appropriation identifies the interdependent nature by which peers engage urban environments. Settings are most often appropriated through the sheer presence of a group of peers engaged in a similar activity. The act of giving meaning to a space and the space giving meaning to the activity is in the setting. This finding is supported in the literature by researchers who have found that youth socially structure place and whose social structure is informed by their engagement in shared, public places (Nolan 2003; Simpson 2000; Horton and Kraftl 2006; Veitch et al. 2007; de Vos 2005; Robinson 2009). Isolating such activity to a definable, cultural identity also isolates the experience to being independent of place. Rather, as I have shown, the settings in which youth find themselves behaving in the most prosocial and least risk-taking manner are those where they are the least independent of place. Highly appropriated spaces

reveal an explicit connection to the dependence of the activity on the physical environment. I shall now address how the findings relate to the physical environment.

When I started this project, I honestly thought that the physical environment—those features unique to one space and not another—would best account for the 23% remaining variation of behavior. Even as I noted in the earlier section, changes in elevation seemed above all the most important factor distinguishing one space from another. What architect or landscape architect does not believe and often advertise that these details create meaningful experience? A further paradox is that the theory of interdependence appears to be centered on the affordances (those specific features supporting activity) of the urban environment. Affordance, a term provided by Gibson (1979), suggests that experience is dependent upon or limited to the environment in which it occurs. Skaters, for example, are dependent on the affordances of a setting to perform a trick. The theory of interdependence, on the other hand, suggests that the



Image Capture: (emericachill3 March 26, 2010)

Figure 29. Example of prosocial behavior following trick in area of high appropriation.

urban environment provides as much meaning to the setting as does the user. The activity of skateboarding is risky and necessitates practice or repeated attempts to master a trick. Increases in appropriation represent a stable relationship between adolescents and the urban environment, thus permitting repeated attempts. Appropriation indicates that teens adapt the affordances of the physical environment to make places more fun. Such creative interpretation of a setting reflects the critical convergence of affordances with interdependence.

The notion of the interdependence of youth and physical features was generated by my reading of de Visscher's (2008) finding that, "children tend to accept most boundaries imposed upon them and to elaborate strategies to maximize their social and cultural opportunities within these boundaries, rather than consent to them" (p. 612). Adolescents are frequently described as even more resistant to containerization (Fredericksen 2002). Interdependence suggests that the physical environment affords meaning to adolescents and that their participation in a setting gives meaning to the place. The concrete planter wall with a waxed edge may have lost some of its initial macabre charm as skaters appropriate it. However, it is a much more meaningful participant in urban life than the cracked and chipped marble seat-wall adorning another urban plaza with its evenly spaced skate stoppers. The fragile marble tiles facing the hidden concrete forms show excessive signs of urban wear throughout, even beyond the skaters reach. The poor selection of material reflects the intent of the space to display a wealth detached from the urban fabric but susceptible to the necessity of existing in urban space.

When appropriation was measured—controlling for physical features, significant features, tricks, and the accomplishment or failure thereof—affordances could not account for enough of the change in behavior to render appropriation meaningless. What is appropriation if it is not the conception of space to meet a perceived value? This is true and design finds its

place. It is just not the intended design anymore. The appropriation of space at Hunter's Field illustrates such an engagement. Walls typically meet the ground plane at a ninety-degree angle. The smooth vertical plane eagerly awaits engagement beyond graffiti. Such a meaningful engagement with urban play becomes possible as two emerging adults arrive with buckets, water, and concrete mix. With their bare hands, elbow deep in gray sludge, they hand-mixed this most utilitarian and ubiquitous urban material. Their intent was clear: to bring the wall into the playing field. Crude and simple as it is, the makeshift concrete ramp represents permanent appropriation with urban space to create a meaningful setting. Such an addition is evidence of the meaning of the location and youth participation with place. This example illustrates the adaptation of site affordances through the appropriation of physical features.



Image Capture: (emericachill3 June 27, 2010)

Figure 31. Nose-slide on concrete planter in CBD.



Photo by Author

Figure 31. Skate stops on broken marble adorning office plaza.



Image Capture: (emericachill3 March 26, 2010)

Figure 33. Hand mixed concrete.



Photo by Author

Figure 33. Handmade concrete ramp.

Appropriation reflects the increased adaptation of physical features to support deep play. Insofar as appropriation can be delimited to a thing, there is no question that physical features matter. However, when appropriation is limited to presence, the only “thing” present is a human. One could take this one-step further and suggest that the presence of youth was also not intended in the design of urban space. When appropriation increases to temporary or permanent modifications in sites, then a setting has been created to meet a new use of space. Physical features are important predictors of risk-taking behavior; however, physical features alone do not afford risk-taking activity. This follows the logic of interdependence: a site only has meaning insofar as it affords a meaningful setting.

Popp's Fountain, for example, can only afford an "intended" setting if the adjacent Interstate 610 becomes unused. Popp's Fountain was also the place where I found the only "No Skateboarding" sign in the study area. The dilapidated and forgotten fountain suffers from



Photo by Author

Figure 34. Only no skateboarding sign found in study area.



Photo by Author

Figure 35. I-610 in the background of Popp's Fountain

disuse and ill repair due to its context. The best explanation for disuse of the well-enclosed feature is that it is within sight and sound of the I-610 Bridge over Marconi Boulevard. The constant white noise and pounding sounds of cars and trucks hitting the seam between the road and the bridge is discomforting and in absolute conflict with the concept of the fountain, which pre-dates the highway bisecting the park. Urban context, too, limits the success of an otherwise remarkable feature. Here, I found a forgotten fountain well loved with wax and blackened copings by skaters and the only "No Skateboarding" sign in New Orleans. The ill context for the fountain is well suited for the temporary appropriation by youth to play. Hunter's Field, the concrete park also at the mercy of an interstate, always had permanent and often temporary modifications in it. The mounting of steel rails to planter walls and the use of concrete to create

new drops render explicit the meaning of the space for skaters. However, the level of appropriation here extends well beyond those materials that relate to skaters. The walls, columns, and steps are each part of a complex composition representing the permanent appropriation of this space by a community seeking to represent itself (see Figure 24, p.148).

The materiality of the features, along with the color and condition in which they are found and interpreted, suggest that physical features matter insofar as they are appropriated. This is consistent with findings from de Vos (2005), who found that youth appropriate public spaces based on the design and layout to favor or exclude some activity. Site affordances are potential opportunities of appropriation. As such, the less intensely these features can be appropriated, the more likely they will encourage risk-taking behavior; and, the more intensely appropriated, the more supportive of prosocial behavior. In regards to interdependence, appropriation seems to be highly subject to opportunity, and physical features are only meaningful if they possess an opportunity to be appropriated to support the activity. The manner in which they are appropriated suggests that physical features and the act of playing are constrained by context. In terms of interdependence, this section has focused on the concept that the physical features in the urban environment afford positive play activity through increased appropriation.

The literature consistently identifies urban context, social context, and physical features of urban spaces as limiting or extending play by youth. Urban context is often in conflict with the perceived use of urban places and the transgressional behavior of youth to violate normative practice. Current theory suggests that the social context and peer relation of youth involved in playful behavior in urban areas leads youth to acquire a transgressive, cultural identity and become marginalized. Physical features afford intended experience, however the limitation of

affordances to intended experience negates the role of context and the alternative conception of such features for play. Across all three areas (urban context, peer effects, and physical features) this study has found that when appropriation is limited to presence it predicts traditionally perceived notions of risk-taking youth as transgressional, marginalized, and subject to the context in which features are located. Such a scene is typical of the Canal Street Ferry Terminal, where—under the constant supervision of security cameras, police on the street, and police in the adjacent plazas—youth engage in risky behaviors while maintaining a cool, passive persona. However, youth do not exercise behavior in such a limited manner. Accordingly, this dissertation departs from the literature limiting youth to transgressional, identity-driven, self-marginalizers who behave independent of social, contextual and physical factors.

The findings from this study on adolescent behavior in public space support and contribute to the extant literature on urban design and youth. Urban context, peer effects, and physical features actively support the deep play of youth in urban settings. Adolescents, accordingly, do not behave completely independent of the setting in which the activity occurs. The risk/reward outcome of each trick is interdependent upon the setting. Amongst criteria, the intensity by which youth appropriate a site to create a setting is the best measure for the differentiation between risk-taking and prosocial behaviors.

LIMITATIONS AND FUTURE DIRECTIONS

This study is limited by the fact that it takes place in one metropolitan area and was conducted by a primary researcher over a continuous period not spanning an entire year. The study filters youth activity to public urban outdoor environments. It is limited to only those youth who choose to participate in such spaces. The study is on the relationship of urban space

and deep play and focuses on activity requiring a degree of risk and reward. The researcher does not intend the study to be representative of all urban youth activity. Only the activity of urban youth found in known public spaces of differing scales of public investment and accessibility were of interest. A study of multiple cities over an extended period with multiple researchers, each familiar with the urban environment, would permit a more robust exploration of the relations between deep play, youth and the physical structure of the city.

This study largely relied on data collected from anonymously posted online videos of youth playing in the selected sites in New Orleans. In-field observations that were conducted using a random sampling grid, revealed useful information. Fieldwork largely illustrated that these sites were often unused by youth as 90% of site visits were cut short because no youth were present. Nonetheless, combining the methods of video coding, in-field observations, and physical traces created a robust sampling of play behavior. Adolescents are a difficult subject on whom to conduct research in an unobtrusive manner due to ethical constraints. The use of anonymously posted videos works around this known limitation because it is not technically human-subjects research. The study located five hours of recorded video documenting youth play in urban sites in New Orleans. Such documentation far exceeds what could have been observed in as many sites given the research period necessitated by the dissertation. The approach is innovative and revealed unique findings that otherwise may not have been available. For example, in one video an emerging-adult skater in a site adjacent to City Hall Plaza jumps off a loading ramp and hits a bicyclist going through the plaza. The bicycle and rider remained unharmed while the skater, trying to avoid a collision, conducted some unusual in-air acrobatics and was injured when landing. In another video, the study coded a young skater in Hunter's Field as he jumped a concrete planter and ledge to receive the overwhelming applause and

support of the other skaters present. This approach to study activity of youth-play in the city reveals unique findings because of this innovative strategy. YouTube videos and other anonymously posted videos represent an ever-growing amount of data recording human experience. The videos have fundamental limitations in term of control and scientific value. Nevertheless, such videos are free to post and access. The growing presence of videos on the internet suggests that this has become a stable social practice in society. As such, the videos represent a window into documented human behavior. These videos are ripe for interpretation of human behavior and benefit by documenting experience removed from the mediating presence of a researcher. Such spontaneous acts of play are often inaccessible to researchers. Participant observation of youth requires parental consent and influences their behavior. Studies pursuing this research direction are always limited to very few individuals or groups. The findings of the current study were only possible given a broad perspective of youth, sites, and play behavior accessible through their anonymously posted videos. A future study could easily employ a similar method to study urban sites in other cities and documentation of play activity posted by youth. Such a study would build upon the findings presently limited to adolescent activity in the singular, urban context of New Orleans. Another future direction using this method would be to conduct a cross-comparison analysis of skate parks and other urban sites to examine the relationship between risk/reward outcomes in park skating compared to street skating.

The multi-sited nature of the study tests the separate factors of peer groups, urban context, and physical features against observed youth play behavior. The study is consistent with similar studies on youth behavior that rely on such factors to explain shifts in youth behavior. To date, very few studies have conducted multi-site comparisons of youth play in urban settings and no studies to date have tested observations of play behavior against more than two locations.

The reason for this gap in the literature is due to the detailed in-depth analysis researchers are able to attain when isolating studies on youth activity to very few sites or a known group of youth. The inclusion of so many sites limits the current study from conducting an in-depth portrayal of the relationship of youth within a site. I compensated for this limitation, exchanging depth for breadth, with a robust statistical modeling strategy designed specifically for a study such as this. I designed the research strategy in this manner because of strength of multilevel modeling to examine patterns in behavior between multiple sites. As this study has shown, multilevel models provide an excellent means to examine the effects of environmental variables on human behavior. Multi-level modeling is a robust statistical tool useful for pursuing questions examining individual differences and looking for broader patterns of human behavior too complex for aggregated means models. In the current study, multi-level models justified that settings do consistently influence the behavior of adolescents in urban space. The modeling strategy also revealed that most of the change in behavior is explained by appropriation. Only a statistical method that examined within-site variables and between-site variables across multiple sites could have made this important and significant contribution to studies on youth. Future research interested in preserving the unique contributions of urban sites as unique settings for human activity would benefit from employing the nesting strategy available in multilevel modeling. People influence one another in urban settings—making the fact that MLM is robust to the assumption of independence of cases an essential tool in studies on environment and behavior in cities.

The current study is explorative in looking for those urban factors most likely to influence the urban play of youth. I found appropriation to support youth play but appropriation was not part of the original study design. Another study, looking in more detail for examples of

appropriation and the relationship of appropriation with social activity and urban design may uncover further insights into why some urban environments fail, others become more interesting, and others stabilize.

IMPLICATIONS

Youth exercise interdependence when appropriating urban space for play. This finding has huge implications for urban planners and designers, youth advocates, and cities struggling to improve the urban conditions affecting urban youth in the United States. When we restrict the places youth identify with—the places that support their social relations as rendered visible through the intensity of appropriation—we risk limiting the identity of the place to the extremeness of the behavior and the behavior to the extreme limits of urban space. However, if planners assume that this risk is not beneficial to the healthy development of urban youth, then cities would do well to be riskier with urban environments and permit more intense levels of appropriation. The perception of risk is not an inherent truth maintained by the unchanging state of urban environments. Rather, normalizing behavior to exclude the chance of risk undermines the quality of urban life by attempting to limit urban space to homogenous, social relations. Such social relations are not always meaningful to youth; and, they must struggle for interdependence by appropriating the materials necessary to support meaningful, social relations. The decision to permit or even encourage appropriation occurs at the level of policy-makers, architects, and in everyday life. Policies directed at skateboarding, for example, take one of three approaches: ignore it, condone it, or prevent it. The City of New Orleans ignores it, leaving adolescents to find their own places to skate and citizens to decide how much to tolerate before confronting them. Policies preventing skateboarding are likely to backfire as increased

levels of urban control encourage increased risk-taking behavior amongst youth. Policies condoning skating will need to plan for places supportive of the activity. Designated skate places seem to work best in central urban areas but, as this study has shown, they are also supportive of play in more liminal places. The key point to take from the current study is that such places set aside for youth should permit a more creative engagement in settings.

The inclusion of multiple settings of play has rendered visible strategies of appropriation and supported the theory of interdependence. The criterion of limited appropriation results in higher risk-taking behavior when controlling for variables related to urban context, peer effects, and physical features. The opposite is true when sites afford more intense appropriation. The violation of spatial norms by youth versus the violation of social norms are two separate concepts with very different outcomes. Socially, as the City of New Orleans struggles to maintain civilization amongst this demographic, the violation of spatial norms appears like a welcome risk. Regardless of urban centrality, peer conformity, and site affordances, youth appropriate locations for urban play in an interdependent manner.

In this current study, I have shown that the currently accepted theory of youth resistance, maintenance of marginalization, and independence from social norms clouds researcher's ability to judge whether youth behavior reflects strategies of interdependence. By focusing on the dynamics of the group in popular public destinations or in liminal places, researchers are giving social context too much predictive power in normalizing behaviors of youth. Youth adapt to settings and such adaptation explains 23% of the variance in youth behavior. The study also found that the most parsimonious explanation for changes in youth behavior between sites was due to appropriation. As a technique to sequester space from all of the other urban users, appropriation is a socially expressive and spatially creative act. This finding indicates that

previous findings suggesting youth behave independent of urban, social, or physical form are misleading and based on spurious findings. Youth exercise interdependence through the adaptation of settings to support their play behavior. This pattern of behavior was only discoverable given the unique research strategy and statistical methods used in this study.

The policy implications of these findings argue that cities could directly improve urban environments supporting positive adolescent behavior by making available sites for creative appropriation. Potential benefits from creating these sites include centralized places improving opportunities for positive social engagement, acquisition of individual expertise, and increased visibility of youth for neighborhood and police surveillance. The implementation of such sites reduces adolescent dependence on more popular urban locations, diminishing potential harmful conflicts. Adolescent activity in such creative sites also results in the successful activation of underused urban areas.

CONCLUSION

At the time of writing this dissertation the City of New Orleans City Council unanimously passed an ordinance preventing youth ages 16 and younger, referred to as children, from being in the French Quarter or neighboring Marigny after 8:00pm without being accompanied by an adult (Carr 2012). The council praised the ordinance as a necessity to protect the children from an area of the city catering to explicit adult behaviors. Upon the successful resolution of the proposal, another proposal was immediately put forward extending the curfew to become citywide. That proposal has since been tabled but remains on the docket. Increased urbanization and relative increase in criminal behavior attributed to youth has led to similar proposals around the world. The planners and policymakers of cities face a fundamental paradox

through continued use of mechanisms to control youth behavior. As this dissertation has found, increased restriction to public space results in increased risk-taking behavior. The desire to arrest “children” for their own protection will only push a known factor to a new extreme. Risk-taking youth will pursue new limits and appropriated spaces will become further removed from the watchful eye of the state. This trajectory is antithetical to protecting youth and empowering youth to become better citizens.

The current study sought to discover how youth use space in the city for deep play. Deep play is an active form of play behavior requiring some risk and some reward. Adolescents access self-confidence and self-esteem through this play behavior that they might not find in the traditional places of home and school. Across multiple settings of public, urban open space in New Orleans, teens exhibit interdependence with space by adapting settings to support play and adapting play behavior to settings. The limitation of appropriation of urban space to presence significantly promotes risk-taking behaviors amongst youth. Policies like curfews have two effects that increase the likelihood for risk-taking behavior. The first is that risk-taking behaviors in settings where appropriation is limited to presence are likely to intensify as presence becomes a criminal act. The second is that locations supporting prosocial behaviors through temporary and permanent appropriation will likely become more sparse as teens adapt their play behavior to avoid conflicts with authorities. Both circumstances result in decreased opportunities for prosocial interactions with peers and other citizens in the city. Such prosocial encounters encourage the development of adolescents into socially competent adults. As the current study and nearly every study on teens has found, youth resist containerization. The current study shows that 23% of the variance in youth behavior comes from settings. This dissertation shows that the availability of urban spaces in the city for youth appropriation and

play increases the likelihood of prosocial behavior and decreases the tendency towards extreme risk-taking behaviors. Designers, planners, and policy-makers possess the necessary tools to help adolescents create successful settings.

Operationalized Definitions

- Aerial:** a skate trick where the skater holds onto the board with their hand while conducting an aerial maneuver.
- Affordance:** a term provided by Gibson (1979), suggests that experience is dependent upon or limited to the environment in which it occurs. Affordances account for urban context, social interactions, and the built environment.
- Agonism:** a persistent tension between people, a reciprocal incitation and struggle: less of a face-to-face confrontation, which paralyzes both sides than a permanent provocation
- Appropriation:** appropriation suggests that we all make temporary claims to publically, accessible space. It does not imply ownership. Public land is always owned by someone with the right to evict or nullify the appropriation.
- Deep Play:** a form of play that goes beyond preconceived boundaries of human activity and involves a certain amount of risk, reward, mastery, and creativity.
- Interdependence:** is a term derived from economics that means mutual-dependence upon others for some needs. Interdependence is an inherent quality of living in society. The current study references interdependence as a mutual-dependence on space for activity.
- Ollie:** a skate trick necessary for nearly all street skating maneuvers where the front of the board is kicked up and the back is hopped on to lift the entire board in the air.

Pancakes: the Pancakes are a set of circular concrete stairs lying under the Claiborne overpass at Canal Street in New Orleans's Central Business District.

Phenomenology: phenomenology is the study of human activity as observed through the interactions of individuals with the life-world of objects people interact with every day.

Presence: the appropriation or use of urban space without the additional manipulation of the space by temporary or permanent modifications.

Prosocial Behavior: prosocial behavior is a concept describing social or peer support. The phrase is used in this study to describe visible or audible signs of support for an individual trick by a group of peers.

Risk-taking behavior: risk-taking behavior generally describes the degree of risk associated with an activity accounting for the urban context, personal safety, safety of others, safety of property of others, and apparent level of skill.

Risk/reward: is a scale reflecting the outcome of observed adolescent activity. The extreme limits of the scale are defined by high risk and low reward on one side and low risk and high reward on the other. Cases of moderate risk and moderate reward would be found closer to the center.

Sites and Settings: Sites are urban location, designed and placed in an urban context, free of human activity. Settings are sites with the active presence of people.

Slide/Grind: a skate trick where the board is used to slide (perpendicular) or grind (in-line) on a feature such as a handrail or seat-wall.

Trickability: is used here to characterize the ability of a site to support a trick.

Trickability includes site features, types of tricks, and the success rate of completed tricks.

Unstructured Activity: unstructured activity is play behavior without supervision or an explicit set of rules guiding the activity.

Youth: unaccompanied individuals found playing in outdoor, urban locations in New Orleans who fit one of the following age groups: young adolescents (9–12), mid-adolescents (13–15), late adolescents (16–18), and emerging adults (19+). Youth are also referred to in this study as: minors, juveniles, protoadults, non-adults, not-adults, not-children, teens, youngsters, and adolescents.

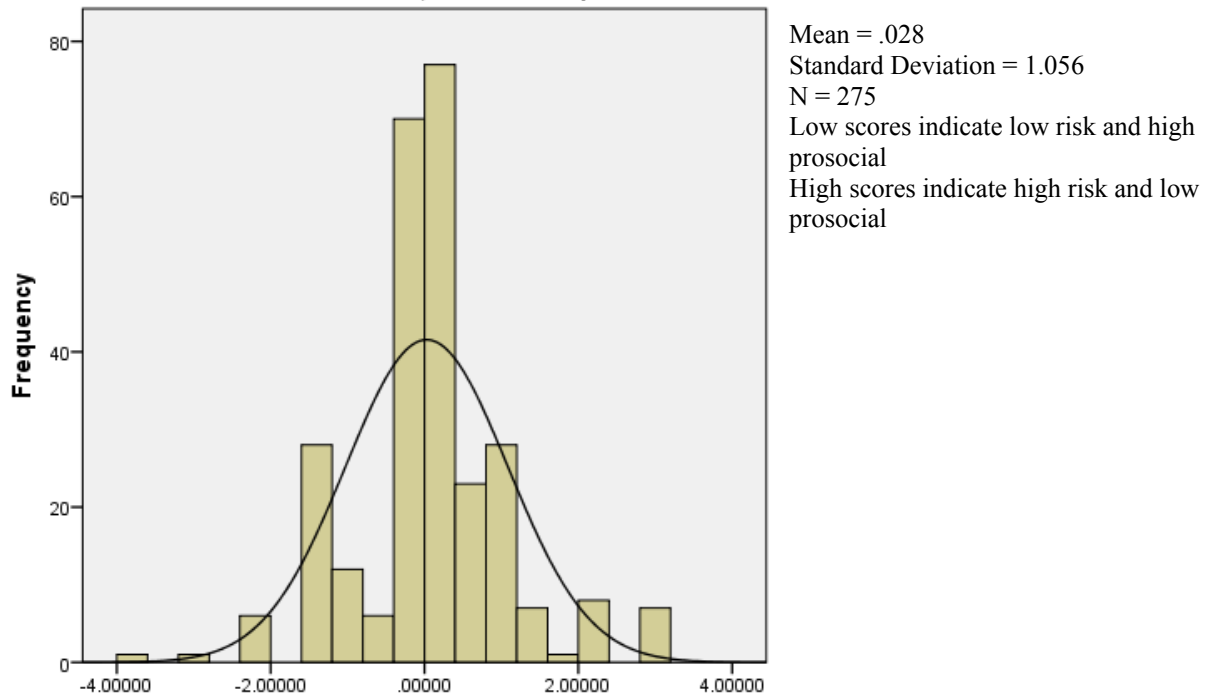
End Notes

1. The specific scene was coded as a level 4 reckless maneuver because individuals were hurt and the potential for someone to be seriously injured by the busy traffic on Canal Street was very high. The scene was also coded as level 4 prosocial because the peers gathered there displayed enthusiasm at the trick and also jumped in to make sure no one would be seriously injured. The outcome score, Principal Component Axes of Risk-taking and Prosocial Behavior, was -0.23. The outcome places the scene within the average range. The negative indicates that this particular scene amongst the other 283 is tending towards prosocial. A positive integer would indicate a propensity towards risk-taking. The scene was 5 seconds long and was retrieved from a YouTube video posted anonymously on the internet. The researcher archived all reviewed videos, which are available from the author upon request.
2. The subtle change of terms from sites to settings is important in reference to interdependence. The study is foremost about sites. The guiding theory is that sites and youth have an interdependent relationship. This suggests that there is a relationship of mutual dependence between sites and youth. In the current study, I use the word site to reference the location and use setting when I am describing the relationship of the site and youth. In reference to the title, a site is urban space and a setting is adolescent place.
3. I will use these same basic treatments later when I discuss how youth appropriate space using permanent (fixed), temporary (semi-fixed), and presence (the distance between individuals).
4. Settings are the preferred method to analyze the behaviors of youth in the separate sites.
5. Since MLM does not rely on mean scores to determine significance, this information is provided for comparison purposes only.
6. Multi-level modeling is robust against missing data, so cases not fully coded can still be entered into the analysis.
7. The correlation between increase in crime and increase in walkability and increase in maintenance is just that, a correlation describing a relationship of urban contextual factors.
8. A description of how these variables were coded has been provided in the methods section under measures.
9. The homogeneity of regression assumption assumes that the relationship between the DV and the CV is the same for all treatment groups. MLM is used here as an alternative to ANCOVA (Tabachnick and Fidell 2007, 781).
10. The ICC, intra-class correlation, “is the ratio of variance between groups at the second level of the hierarchy to variance within those groups. High values imply that the assumption of independence of errors is violated and that errors are correlated—that is, that the grouping level matters” (Tabachnick and Fidell 2007, 822).
11. Since variance scores typically change in SPSS multi-level modeling as variables are entered into the analyses, regardless of whether or not they are entered as fixed or random effects, all considered variables were entered in at the beginning of modeling.
12. This is a correlated effect and is decomposed at the end of the section when multiple main effects are discussed.
13. Paired measures have been omitted from the table for simplification of findings.
14. Since HLM is used here as a single-tailed test, considering the $p/2$ score is suggested (Hoffman, 2008).

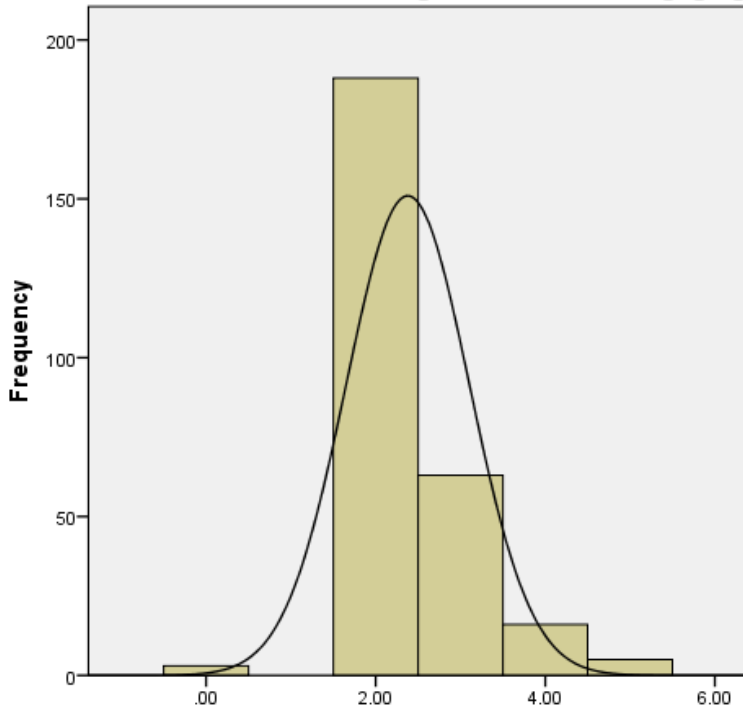
15. What differs across these two analytic strategies is that the regression method groups peers regardless of site. General linear models assume that each observation is just as likely to occur at one site as another. The multi-level model accounts for the dependency in the data across sites (that is, that some behaviors are more likely to occur at one site than another). The difference in observation across methods therefore suggests that the role of diversity indicated by the regression analysis is spuriously driven by site-specific factors. Certain sites simply tend to favor larger, heterogeneous peer groupings while others smaller, more homogenous groups. The sites that favor large, heterogeneous peer groupings are likely to support prosocial behavior. Indirectly, this apparent disagreement further strengthens the study's goal to understand site affordances.

16. Histograms

PCA for risk behavior, prosocial. High scores indicate preponderance of risk behavior; low scores prosocial.

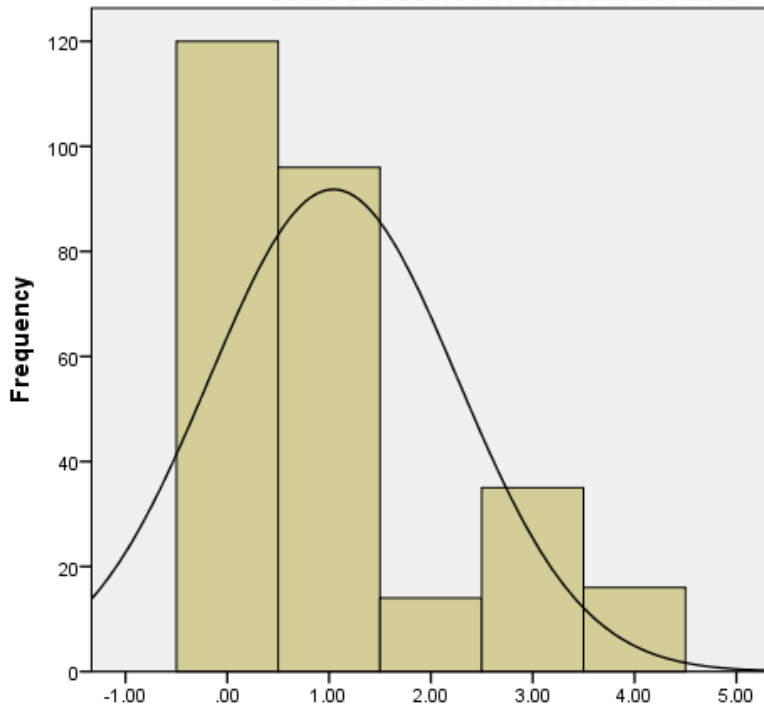


Scale of Observed Risk-taking Behavior while engaging in play activity



Mean = 2.38
 Standard Deviation = .727
 N = 275
 0 = No Behavior
 1 = Cautious
 2 = Restraint
 3 = Risky
 4 = Reckless
 5 = Destructive/Injurious

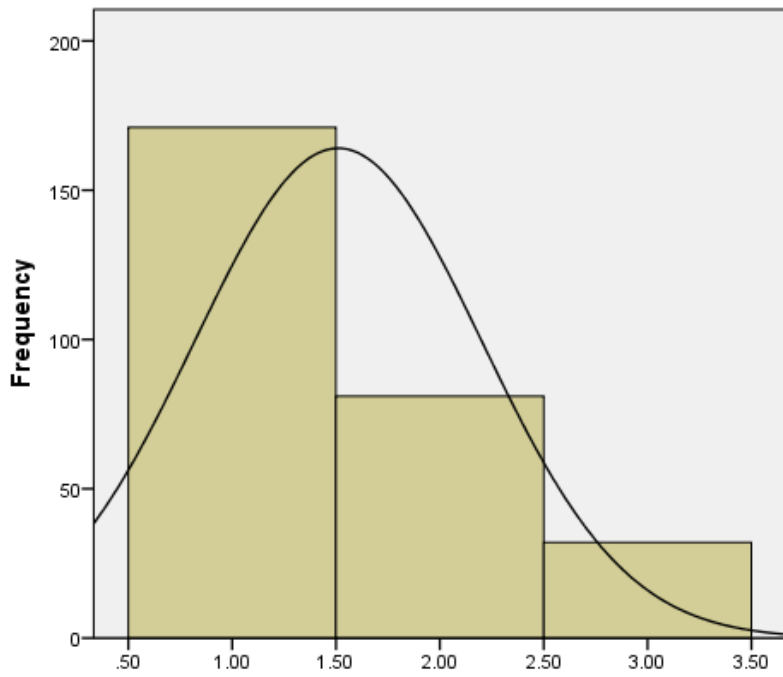
Scale of Observed Prosocial Behavior



Mean = 1.04
 Standard Deviation = 1.221
 N = 281
 0 = Passive, No Behavior Observed
 1 = Some but barely detectable
 2 = Detectable but limited
 3 = More Detectable
 4 = Most Detectable

Scale of prosocial interactions during and immediately after activity.

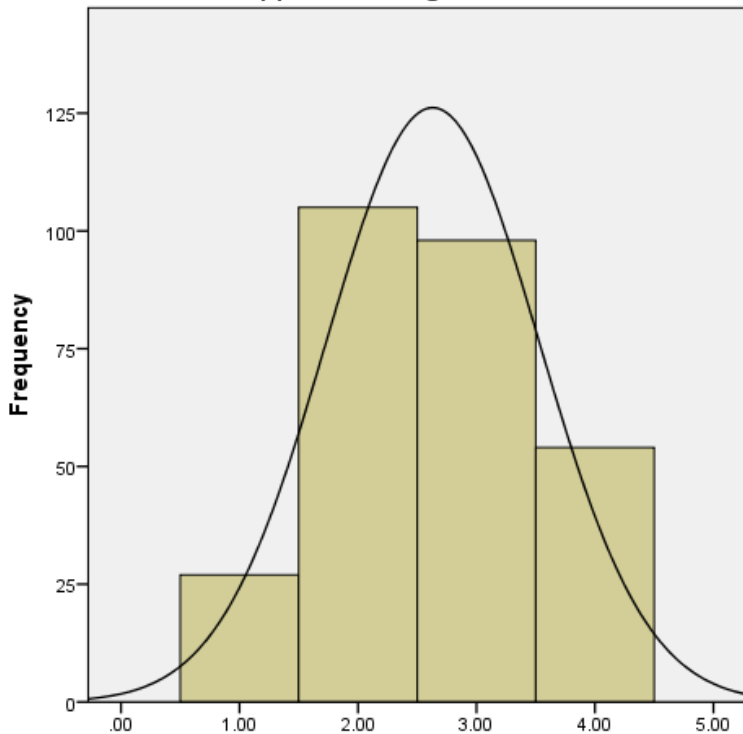
Appropriation of location.



Mean = 1.51
 Standard Deviation = .691
 N = 284
 1 = Presence
 2 = Temporary Modifications
 3 = Permanent Modifications

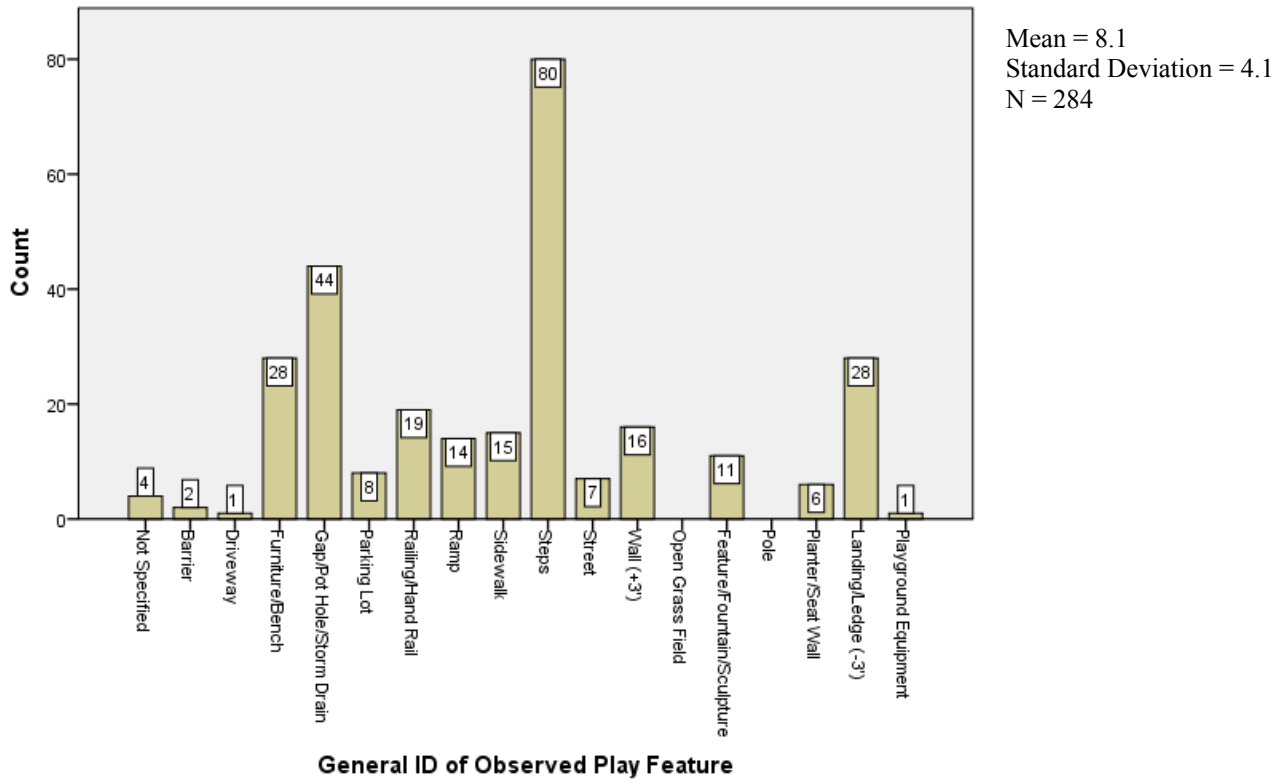
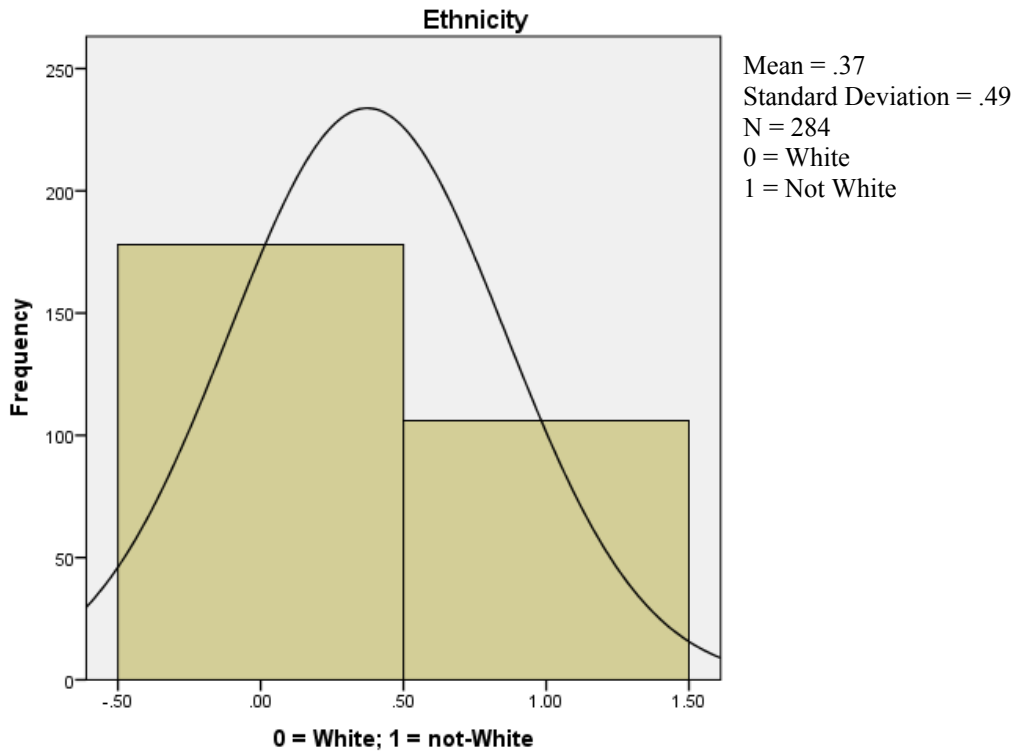
1: Presence alone. 2: Temporary modifications used to enhance play activity. 3: Permanent modifications used to enhance play activity.

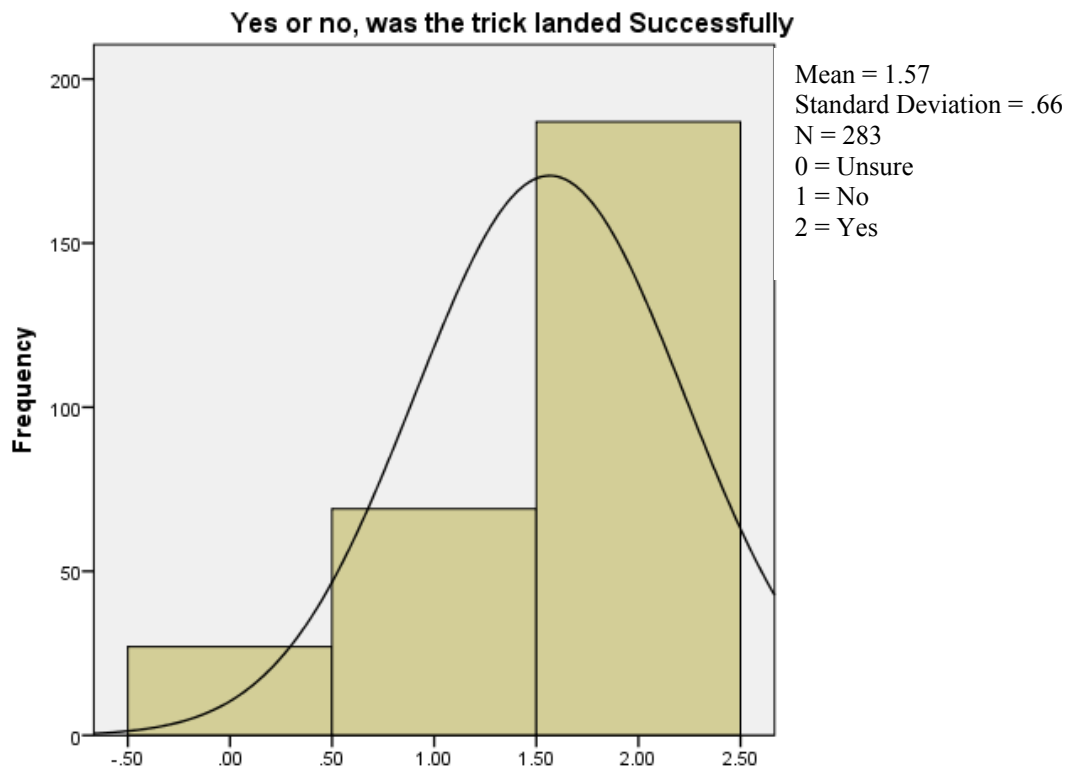
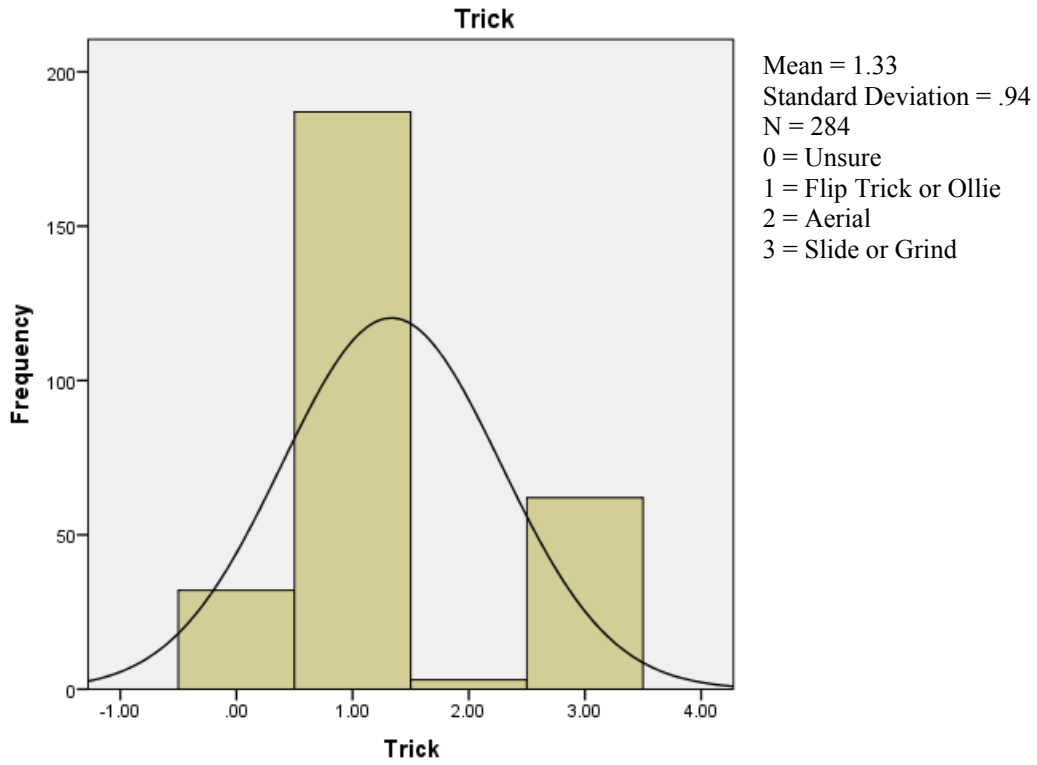
Approximate Age of Individual of Interest

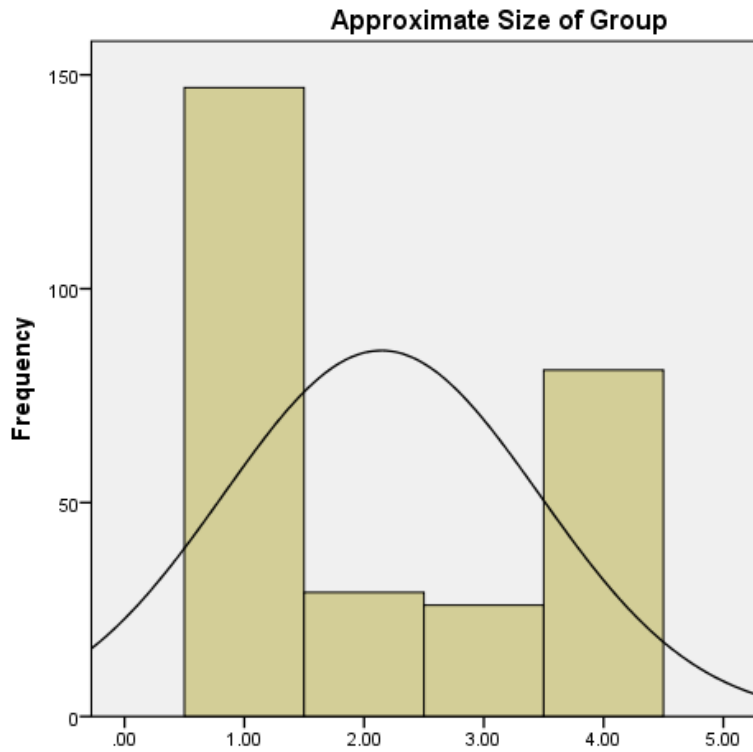


Mean = 2.63
 Standard Deviation = .90
 N = 284
 0 = Undetermined
 1 = Young Adolescent (9 – 12)
 2 = Mid-Adolescent (13–15)
 3 = Late Adolescent (16 – 18)
 4 = Emerging Adult (19+)

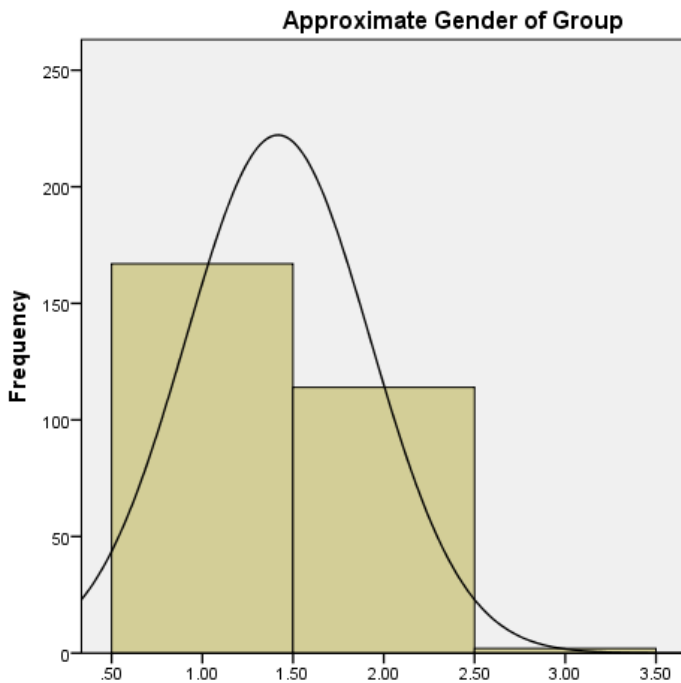
Approximate Age of Individual of Interest



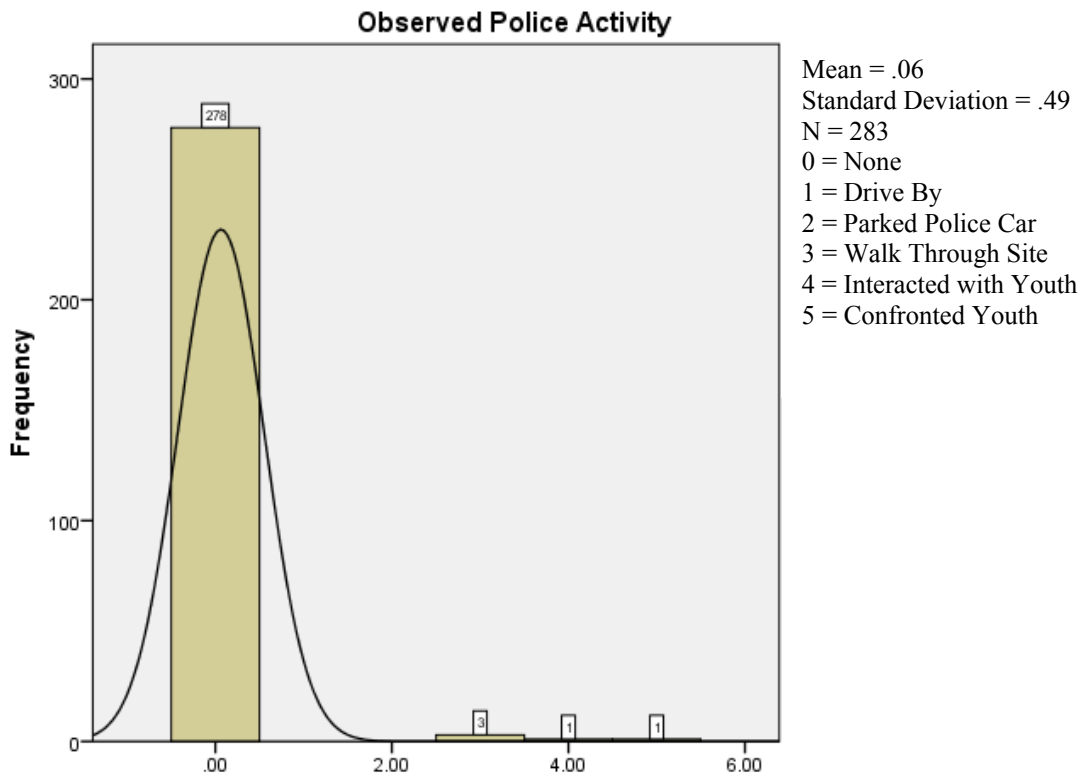
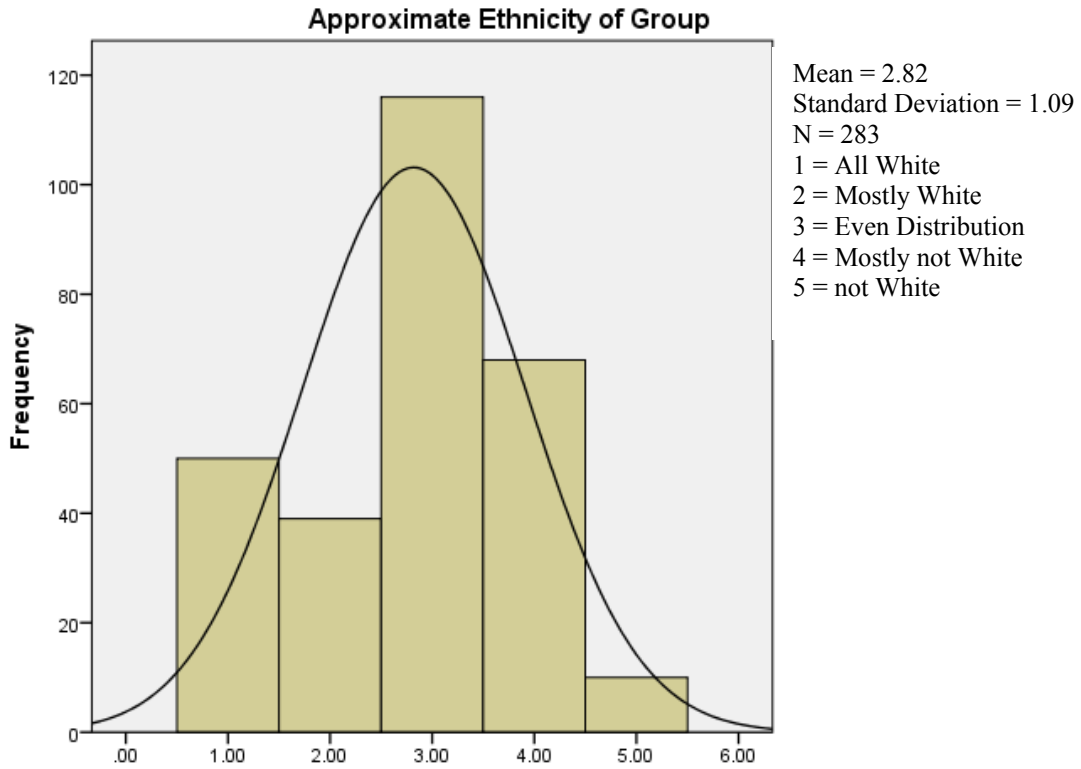


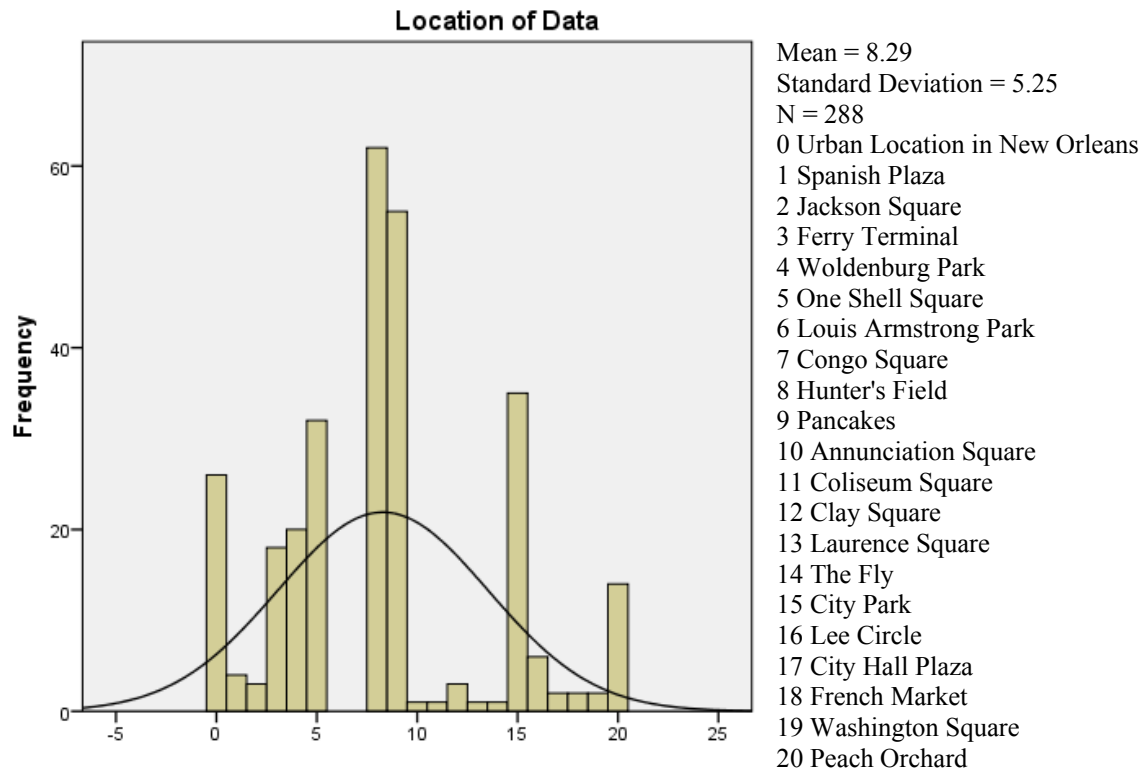
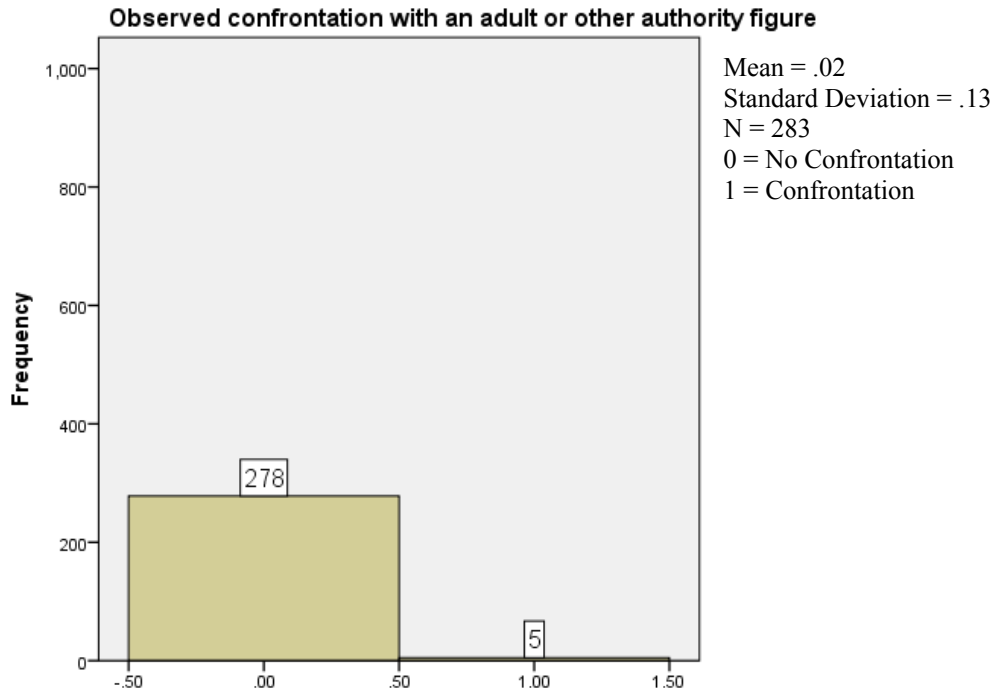


Mean = 2.14
 Standard Deviation = 1.32
 N = 283
 1 = Small (1-5)
 2 = Moderate (6-10)
 3 = Large (10-19)
 4 = Very Large (20+)



Mean = 1.42
 Standard Deviation = .51
 N = 283
 1 = All Male
 2 = Mostly Male (1 or more female)
 3 = Mostly/All Female





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Vita

Ben Shirtcliff has been studying the relationship between youth and the built environment for over 13 years. His terminal project, directed by Professor John T. Lysaker at the University of Oregon where Ben received a degree in Philosophy in 1999, explored social responses to the local high school shooting in Thurston, Oregon, prior to the better-known Columbine massacre. This project led to an art installation on the Penn State University park campus under the direction of Sally McCorkle. The installation comprised of two functional seesaws with one fenced in so tight that it was inaccessible. The concept was to question if security could effectively replace trust. The installation led to an interest in landscape architecture from which Ben received a Bachelor's and Master's degree in from Penn State University in 2004. While at PSU, Ben received an award for first place in undergraduate research from the American Society of Landscape Architects for his work *Landscape/order*—a project examining the institutional setting of public schools. A condensed version of his master's thesis, *When the Placeless Landscape is Home: Design Patterns to Improve Suburban Adolescent Dwelling*, was recently published in the international journal *Enfances, Familles, Générations*. As a practicing landscape architect, Ben had the opportunity to work with high school students at West High under the direction of Ken Saiki to redesign the front entrance to the building. The final design was a hit amongst the students and received honors from the Mayor of Madison and Director of the School Board. This project incited his return to academia, in 2008, to pursue a doctorate in Urban Studies at the University of New Orleans.