PLAY
EXPLORATION
INTERACTION
CREATIVITY

Thesis Proposal by
Rye Crowen
Jesse Moore

May 2010
Academy of Art
In September, we started what wound up being a four week conversation and brainstorm about what the Bay Area would be like if people no longer had private cars, or at least, relied on them less. While brainstorming, we were also researching our different concepts, reading books, attending events and talking to professionals. Ultimately, we arrived at three different topics that seemed particularly interesting to us. Our resulting direction, working with play spaces, is an interesting and exciting opportunity to pursue a unique and fun topic, while engaging many of our own personal interests and addressing many of the concepts we’ve been discussing throughout the semester.

“Playgrounds no longer function as a hub of community activity and rarely attract a variety of participants over the course of a single day.”

- Susan Solomon, American Playgrounds
Landscape architects Garett Eckbo, Daniel Kiley and James Rose start writing about reconsidering playgrounds in the journal, ‘Architectural Record.’

First free-standing American playgrounds appear, characterized by sand pits and ‘gymnasi-ums,’ later known as jungle gyms. Play Mountain—Sculptor Isamu Noguchi begins experimenting with organic forms and

Late 1800s - Early 1940s- Playgrounds ubiquitous and widely defined by: swings, see-saws, slides and sandboxes. ‘Play leaders’ monitored the spaces and relied on extensive activity planning such as folk dancing and plays.

1900 1880s

1910

1930

1933

1943

1947

1951

1954

1959

1966

1971

1972

1981

1991

1993

1994

1995

1996

1999

2000

2009

2010

1950

1959

1964

1966

1968

1970

1972

1976

1980

1988

1991

1993

1995

1997

1999

2001

2002

2003

2004

History of American Playgrounds

Mid 1970s- Early 1990s- ‘Post and platform’ construction of playgrounds becomes the dominant style. Inexpensive and easily regulated, these structures are appealing to many American communities.

As America’s fear of injury and lawsuits escalates, so do playground guidelines and regulations—suffocating creativity and diversity.

Undisputed leader in playground design, Creative Playthings, is purchased by CBS. A bad sign for the playground industry.

Environmental Yard—Filled with streams, ponds, gardens, local plants and animals, this UC Berkeley project offered children a constantly evolving experience based on the wonders of nature.

By the mid-1990s, removed from nearly all public playgrounds are: see-saws, high slides, monkey bars/jungle gyms and sandboxes. Consumer Product Safety Commission (CPSC) targets playgrounds based on emergency room statistics. CPSC produces national guidelines for public playgrounds.


The Grand Boulevard Initiative will provide an anchor point for the neighboring communities; a welcome mat to the East Bay.

Market Street

There is a movement underway to remove private traffic from Market Street in San Francisco. The result will be a highly pedestrian-friendly environment and an opportunity for exciting design and development.

Gateway Park

In accord with the completion of the new Bay Bridge, the city of Oakland will be opening a new park at their end of the bridge. It will promote bicycling as well as pedestrian movements and will support the needs of the team of artists and architects who have been instrumental in creating a ‘play environment’ that will be a source of inspiration and enjoyment for all.

Grand Boulevard

A large scale project being undertaken by cities on the Peninsula. The Grand Boulevard Initiative will give El Camino Real a serious face lift. The new boulevard will define the town and provide a welcome mat to the neighboring communities; a business center.

2009 Prop A

In February of 2009, San Francisco passed this $185 million bond to repair its parks and playgrounds. $117 million will go directly to rebuilding community centers and replacing playground equipment. Repairs will be city-wide, but ten major playgrounds will receive substantial renovations.

2009 Prop A
These five examples identify an evolving approach to the meaning and value of play.

**The Exploratorium**  
A San Francisco institution, the Exploratorium is renowned for its exciting demonstrations of science, nature and technology. In 2013, it will be moving to a new location on the Embarcadero to expand and improve accessibility. Part of the renovations include the installation of a new science-based playground on premises.

**Skuut Bikes**  
Skuut bikes have neither pedals nor training wheels, kids just walk themselves along and glide when they feel like it. These little wooden bikes are a perfect example of design that pulls kids away from the screen and encourages outdoor play. Emphasizing balance and motor skills, the transition to traditional bike riding is now easier and more fun.

**Imagination Playground**  
A collaboration between playground designers, Kaboom and architect David Rockwell, this collection of giant foam blocks, sand, water, fabrics and wagons, allows children to create their own play environments, being as creative or pragmatic as they like. When they’re done, it all can be packed away.

**‘Flooded Chambers Maid’**  
Designed by Jessica Stockholder in 2009, this installation piece in New York City’s busy Madison Square Park doubles as a playground. Children are wildly attracted to the bright colors, textures and levels. Adults find it to be a perfect place to take their lunch break or evening strolls. The piece is a great example of how community spaces can be forged through play and a common appreciation of art.

**The Edible Schoolyard**  
Started by Alice Waters at MLK Jr. Middle School in Berkeley, this ‘playground’ teaches children about food and plantlife, how to work in gardens, and how to interact with nature. The interactive learning environment is highly engaging and empowering for students. A side benefit: lunch is taken care of.

“I think it is an adult idea, created by misunderstanding, that everything to do with children must be openly amusing and painted in bright colors.”  
-Helle Nebelong

“Going on Right Now: Play”  
These five examples identify an evolving approach to the meaning and value of play.
Meet Bobby
He's seven years old and lives in San Mateo. A typical second grader, he enjoys video games, television, dinosaurs, fire engines and sugary after school snacks.

With all his time in front of the screen, Bobby misses out on the rewards of playing outdoors such as:
- Improved creativity, and physical health,
- Problem solving skills,
- Reduced stress, and simply playing with other kids.

Like many of his friends, Bobby's limited options for outdoor play include: the yard, the street, and the park or playground.

Unfortunately, none of these options seem nearly as fun as Bobby's video games.

In 2004, 20% of children are obese, up from 4% in 1960s. That translates to 1 in 5 children is seriously overweight. - Centers for Disease Control

Another study determined that preschoolers’ risk for childhood obesity increases by 6% for every hour of TV they watch per day. - Linn, S. (2008). The case for make-believe: Saving play in a commercial world, NY: The New Press.

The Dangers of Childhood Obesity (From: playlsi.com)
1. Cardiovascular disease (CVD)
2. Type 2 diabetes
3. Bone and joint problems
4. Sleep apnea
5. Low self-esteem and depression
6. Increased likelihood of becoming obese adults

From “Play Matters: A Study of the Best Practices to Inform Local Policy and Process in Support of Children’s Play.” Playful City USA & KaBOOM! National Campaign for Play:
1. The CDC reports that 4.5 million children (ages 5-17) have been diagnosed with Attention Deficit/Hyperactivity Disorder. Many of them are being medicated.
2. Diagnoses of depression and anxiety disorders in children are also on the rise, with a corresponding increase in the use of psychoactive drugs to treat them.
3. Violence, emotional outbursts, and lack of social skills for dealing with peers and authority figures are growing issues for schools. Today’s teachers spend more and more time on classroom management and less time actually teaching.

1 in 5 children is seriously overweight

Two-thirds of infants and toddlers watch a screen an average of two hours a day
Kids under six watch an average of about two hours a day of screen media, primarily TV and videos or DVDs. - KidsHealth.org

According to the NY Times children between the ages of 8 and 18 spend 7.5 hours a day in front of a screen.

Kids these days

Kids these days
In 2004, 20% of children are obese, up from 4% in 1960s. That translates to 1 in 5 children is seriously overweight. - Centers for Disease Control

Another study determined that preschoolers’ risk for childhood obesity increases by 6% for every hour of TV they watch per day. - Linn, S. (2008). The case for make-believe: Saving play in a commercial world, NY: The New Press.

The Dangers of Childhood Obesity (From: playlsi.com)
1. Cardiovascular disease (CVD)
2. Type 2 diabetes
3. Bone and joint problems
4. Sleep apnea
5. Low self-esteem and depression
6. Increased likelihood of becoming obese adults

From “Play Matters: A Study of the Best Practices to Inform Local Policy and Process in Support of Children’s Play.” Playful City USA & KaBOOM! National Campaign for Play:
1. The CDC reports that 4.5 million children (ages 5-17) have been diagnosed with Attention Deficit/Hyperactivity Disorder. Many of them are being medicated.
2. Diagnoses of depression and anxiety disorders in children are also on the rise, with a corresponding increase in the use of psychoactive drugs to treat them.
3. Violence, emotional outbursts, and lack of social skills for dealing with peers and authority figures are growing issues for schools. Today’s teachers spend more and more time on classroom management and less time actually teaching.

Two-thirds of infants and toddlers watch a screen an average of two hours a day
Kids under six watch an average of about two hours a day of screen media, primarily TV and videos or DVDs. - KidsHealth.org

According to the NY Times children between the ages of 8 and 18 spend 7.5 hours a day in front of a screen.
Budgets for playgrounds vary—from next-to-nothing for a sand box and some plastic shovels, to upwards of $300,000. But where does that money go? Surfacing? Landscaping? Parking? Or the play equipment itself?

“Some 30% - 50% of a conventional playground’s budget is spent on safety surfacing and fencing. There are few if any grounds for believing that this percentage of overall spend represents best value.”

- Bernard Spiegel
‘Post and platform’ style structures have dominated playground design for the past forty years. Perhaps because of their sheer ubiquity, nobody has taken a moment to question them. Here, we used a SWOT analysis to do exactly that.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Easily manufactured/shipped</td>
<td>• Dull, familiar aesthetic</td>
<td>• Wider range of forms, abstraction, distinction</td>
<td>• Playgrounds are strictly governed by regulations and safety standards, limiting aesthetic choices.</td>
</tr>
<tr>
<td>• Modular, ‘a-la-carte’ design</td>
<td>• Limited forms, language</td>
<td>• Greater interaction with structure</td>
<td>• Alternatives to the post and platform design could potentially be unfamiliar and thus appear dangerous and untested.</td>
</tr>
<tr>
<td>• Colorful</td>
<td>• Non-interactive (mostly)</td>
<td>• More interesting play surface</td>
<td>• Competing with technology for children’s attention is a challenging and complex.</td>
</tr>
<tr>
<td>• Open ground space provides good visibility for parents</td>
<td>• Limited range of appropriate use</td>
<td>• Places for adults</td>
<td>• Promotions of socialization</td>
</tr>
<tr>
<td></td>
<td>• Based on climbing, crawling and sliding, that’s it.</td>
<td>• Promotion of teamwork</td>
<td>• Innovative use of materials</td>
</tr>
<tr>
<td></td>
<td>• Non-engaging/challenging environments and structures lead to misuse and injury.</td>
<td>• Promotion of socialization</td>
<td>• Plants integrated</td>
</tr>
<tr>
<td></td>
<td>• Materials and surfaces get dangerously hot in the sun.</td>
<td>• Opportunities to involve math, science, culture, art</td>
<td>• Opportunities to involve math, science, culture, art</td>
</tr>
<tr>
<td></td>
<td>• Lack of shade</td>
<td></td>
<td>• Competing with technology for children’s attention is a challenging and complex.</td>
</tr>
<tr>
<td></td>
<td>• Often separated from surroundings by a high chain-link fence.</td>
<td></td>
<td>• Promotions of socialization</td>
</tr>
</tbody>
</table>

We looked at their strengths and weaknesses, and then posited what opportunities we may have, as well as potential threats we may encounter in pursuing these opportunities.
Video games have replaced outdoor play as many children’s preferred means of engagement and recreation. Arguably pernicious to the health and development of children, video games have positive qualities as well.

We used a SWOT analysis to evaluate this type of play environment.

**Strengths**
- Safe, kids are indoors, and the parents can monitor them.
- A way to learn problem solving skills.
- Can be used to teach math, science, and even remind kids to take their pills or eat their vegetables.
- Can teach networking skills.

**Weaknesses**
- Can keep children from experiencing the outdoors.
- Can be addicting for kids, limiting their social interaction and inhibiting performance in school.
- Video games lead to a sedentary lifestyle.
- Staring at the screen is tough on young eyes.
- Limited opportunities for physical involvement.

**Opportunities**
- Learning from games in order to create more engaging outdoor activities that perhaps have other familiar computer and video game hardware (and software).
- Integrate physical play and exercise with an online, or mobile interface.
- Apply video game problem solving scenarios to physical situations.

**Threats**
- Creating a video game, although outdoors, doesn’t engage the child with the outdoor environment.

**S.W.O.T Video Games**

**Strengths**
- Safe, kids are indoors, and the parents can monitor them.
- A way to learn problem solving skills.
- Can be used to teach math, science, and even remind kids to take their pills or eat their vegetables.
- Can teach networking skills.

**Weaknesses**
- Can keep children from experiencing the outdoors.
- Can be addicting for kids, limiting their social interaction and inhibiting performance in school.
- Video games lead to a sedentary lifestyle.
- Staring at the screen is tough on young eyes.
- Limited opportunities for physical involvement.

**Opportunities**
- Learning from games in order to create more engaging outdoor activities that perhaps have other familiar computer and video game hardware (and software).
- Integrate physical play and exercise with an online, or mobile interface.
- Apply video game problem solving scenarios to physical situations.

**Threats**
- Creating a video game, although outdoors, doesn’t engage the child with the outdoor environment.
Hypothesis

Play is children’s work. It is critical in personal, physical, and emotional growth. Play is also the anchor of children’s friendships, which consequently brings adults together as well. If we can design a way to facilitate outdoor play that entices, inspires and challenges children on a daily basis, then we can fully harness the value of playing.

“Playgrounds for children are an essential part of modern city planning, and the quality of their play equipment is of vital importance. However, the cement-floored, wire-fenced patches of recreational areas set aside in city parks and schoolyards, and fitted with monotonously identical metal constructions for physical exercise, are cogent proof of how inadequately we have estimated their importance in our communal life.”

- Susan Solomon, American Playgrounds
### Key Partners
1. Parents
2. Kids
3. Community Leaders
4. Parks & Recreation
5. Landscape Architects
6. Childhood Psychologists
7. Special Needs Kids
8. Occupational Therapists
9. Playground designers
10. Regulatory Institutions
11. Cities
12. Hospitals, doctors
13. Museums

### Key Activities
1. What Key Activities do our Value Propositions require?
2. Our Distribution Channels?
3. Customer Relationships?
4. Revenue Streams?

### Value Proposition
1. What value do we deliver to the customer?
2. Which one of our customer’s problems are we helping to solve?
3. Which customer needs are we satisfying?

1. More creative, imaginative play
2. Emotional coping & stress reduction
3. Improved physical health & motor coordination
4. Cognitive, social & sensory development
5. Concentration, self-control & self-discipline
6. Creative problem-solving skills
7. An appreciation for the environment

### Customer Relations
1. Who are our Key Partners?
2. Who are our key suppliers?
3. Which Key Resources are we acquiring from partners?
4. Which Key Activities do partners perform?

### Customer Segments
1. For whom are we creating value?
2. Who are our most important customers?

### Key Resources
1. What Key Resources do our Value Propositions require?
2. Our Distribution Channels?
3. Customer Relationships?
4. Revenue Streams?

### Key Activities
1. What Key Activities do our Value Propositions require?
2. Our Distribution Channels?
3. Customer Relationships?
4. Revenue Streams?

### Value Proposition
1. What value do we deliver to the customer?
2. Which one of our customer’s problems are we helping to solve?
3. Which customer needs are we satisfying?

### Customer Relations
1. Who are our Key Partners?
2. Who are our key suppliers?
3. Which Key Resources are we acquiring from partners?
4. Which Key Activities do partners perform?

### Customer Segments
1. Communities, Cities
2. Schools
3. Parents
4. Kids (indirectly)

### Channels
1. Through which Channels do our Customer Segments want to be reached?
2. How are they being reached now?

### Cost Structure
1. What are the most important costs inherent in our business model?
2. Which Key Resources are most expensive?
3. Which Key Activities are most expensive?

### Revenue Stream
1. For what value are our customers really willing to pay?

---

To give ourselves a more comprehensive view of the project, we used this business planning framework as a way of isolating important concepts such as Customer Segments, Value Proposition and Key Partners.

Found in Osterwalder & Pigneur’s book, Business Model Generation, this chart is an excellent way to organize a lot of the factors and ideas we are dealing with, while helping to identify others we may have overlooked.

---

To get familiar with our target users, we’ve been asking children to draw what they like about playgrounds and what they would have in their ideal play space. We’ve also been visiting playgrounds and public parks to ask parents about what they want and need in a playground. These exercises will continue throughout the next semester as well, gathering information about what our key stakeholders (kids and parents) need in play spaces.

Other research concepts we have include giving kids cameras to document their play experiences, working with teen-age siblings of younger kids who can provide an intermediate voice between children and adults while also providing their own insights, and visiting parks and playgrounds in other regions of the country and the world to see how cultural influences differ.
Design creativity has been ousted, replaced by confusion and complacency in the quest to meet the minimum accessibility guidelines. Herein lies the problem. When the planning team only shoots to meet the minimum requirements, play value is ignored and our children lose out in the process.

- Jennifer K. Skulski
Possible Directions

Turning Play On Its Head

Last semester, we asked children to draw their ideal playground. What they returned were charming renderings of swings and slides. We realized then, that the concept of a playground, much less a play environment, is defined by a handful of easily recognized structures. We are going to approach the playground from a completely new direction, with a completely different set of expectations.

Children deserve exciting, stimulating, challenging and educational environments in which to play, no matter where they live. It’s time for playgrounds to be seen in a larger, community context, and not just as a pre-requisite for schools and parks. On the following pages, we’ll present our favorite concepts for breathing new life into this precious element of community design.
Humans gain mechanical advantage through the use of five basic machines: the lever, the screw, the wedge, the incline plane and the pulley. What if there were an entire play environment built around these principles? Simple mechanical structures and features in the playground could empower children to manipulate their environment and play interactively. This approach could also emphasize teamwork and cooperation through tasks that for success, require the efforts of more than one kid. There would be lots of opportunity for problem solving and children may begin to develop interests in engineering, math and science, well before they realize what they’re getting themselves into. Despite the functional nature of the environment, the structures would still be fun, attractive and entertaining; making it just as much fun to be a spectating parent or passerby as it is to be a kid hard at play.
When was the last time you looked closely at the little park you walk by on your way to the store? You probably can’t even remember because that place hasn’t changed since the day you moved in. What if we could animate that little park? Small landscapes could slowly inflate and deflate according to the time of day. Structures could erect themselves like a pop-up book, or a flower blossoming in the morning. A climbing structure that is exciting and proud on a sunny day could sag and look tired in the rain, regaining its strength and energy when the sun comes back out. Fountains that spout more water as more kids play in them. With this concept, it’s all about the changing environment and drawing attention to the space as something fun, exciting, and worthy of frequent visits.

Possible Directions
Growing Environments
When you consider sensory exploration, don’t think Kesey or Ginsberg, think out-of-this-world environments of texture, sound, light and color, populated by the most excited kids you can imagine. Think large lenses that magnify and distort light, prisms and funny-house mirrors, mulch pits filled with rubber and chairs lined with grass. And even more, with moving parts that let kids create sounds, manipulate light, alter their environments and dazzle their peers.

Different areas invite different types of play and interaction, all areas encourage exploration and curiosity. Of course the practical things like shade and a good vantage point for the parents, but let’s not forget that they want to join in the fun, too.
It can take a long time for a new playground to pop-up in a neighborhood because they are expensive, and generally require schools or new parks to be established first. But who says playgrounds have to be static, permanent structures? What if we designed a series of structures intended for abandoned lots and neglected spaces, that could be easily packed up and moved to a new location? Suppose ten cities each installed a different set up and then every six months, they rotated. Such a concept could be an exciting element in a community; neighborhood ‘builds’ could be arranged each time a new structure showed up and it would be an opportunity for block parties and renewed interest in neglected spaces. Similarly, mobile play environments could be leased or rented to communities looking for a face-lift on a budget.

Possible Directions
Portable Play
**Possible Directions**

**Grand Boulevard Initiative**

The Grand Boulevard Initiative would be a great opportunity on which to base our work. The goals of the initiative align closely with ours, and it would provide a specific area for research and potential organizations for collaboration.

Currently in its formative stages, the Grand Boulevard Initiative intends to transform nearly 45 miles of California’s longest street, El Camino Real, into a passage for multi-modal transportation, favoring pedestrians and bicyclists. The section El Camino, stretching from northern Daly City to central San Jose, passes through nineteen cities in two counties.

“El Camino will achieve its full potential as a place for residents to work, live, shop and play, creating links between communities that promote walking and transit and an improved and meaningful quality of life.”

- grandboulevard.net

The initiative will also bring identity to the different cities involved. Certain areas will be re-zoned to promote community centers, and specific design and aesthetic guidelines will be issued throughout the region.

**Next Steps**

**Short Term (Next 6 Months):**
- Contact more professionals
- One on one advisor(s)
- Stakeholder research & interviews
- Further ‘alternative’ playground research
- Kid research, such as cameras, etc.
- Preliminary PRD development
- Further regulations and guideline research
- Catalog appropriate materials
- Travel for research

**Long Term (Duration of Project):**
- Work with KaBoom or similar organization to implement designs
- Prototypes
- User testing
- Relevant classes at AAU
- Continue to develop business case
Conclusion

Beyond games and exercise, play educates and unites us. For children, it’s work, for adults, it’s recreation. For everyone, it’s crucial to our well being. With this thesis project, we want to emphasize the role of play in the community and bring the excitement and wonder of playing outdoors back to children. While kids today may spend much of their formative years in front of a screen, children tomorrow will be back outside playing.
Bibliography
Books & People

BOOKS

INTERVIEWS

WORKSHOPS
ARTICLES


WEBSITES

http://www.lappset.co.uk/
http://www.edibleschoolyard.org/
http://www.ptoday.com/
http://www.pdplay.com/
http://www.imaginationplayground.org/
http://adventureplaygrounds.hampshire.edu
http://www.rossrec.com/
http://www.sfgov.org/sites/reports
http://www.voiceofplay.org/
http://www.sfstreetsblog.org/
http://www.planetizen.org/
http://carbusters.org/
http://www.mtc.ca.gov
http://urbanhabitat.org/uh/newfront
http://www.sustainablecities.org.uk
http://www.communitiesinmotion.org.uk
http://www.grandboulevard.net/initiative.html
http://www.spur.org