The Invented Toy_Gaming Architectural Play

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Questions, Clues and Answers:

The themes of "PLAY" instigated into the design studio, a desire for creative making. The first step broke down preconceptions of known design processes to establish an environment of creative play. This first phase sought to initiate the students' innate desire to create and make things as one did as a child where no overriding rules or adult supervision prevailed. They were asked to remember how they innocently played, created games and toys of their own making. Each student was asked to bring their favorite toy to class, the ones which still held significant memories of their childhood. These toys were often beat up yet beloved artifacts, saved as personal treasures. In discussing the toys, students related how they created play, the process of designing narratives or games around the toy.

The objectives sought a reflection on design motivation, contemplation on inventive play. Did the toy become an obsession, a desires game, which set an impetus to create for its own sake? Was this play a form of generative art, creating its own rules and environments? In essence, the students were asked to question preconceived pedagogy. How did they choose to design or solve design problems? Were they aware of their own processes? What were their desires as designers? What would be their signature design process? How would they confidently play and take ownership of their process and design?

CLUES THE RISE OF TOYS

> "What might be taken for a precocious genius is the genius of childhood. When the child grows up, it disappears without a trace. It may happen that this boy will become a real painter some day or even a great painter. But then he will have to begin everything again, from zero.
>
> It took me four years to paint like Raphael, but a lifetime to paint like a child."
>
> —Picasso

The design of toys provides an object for which to study and decipher. Toys represent numerous depictions of play. For children, they recreate the adult world in miniature, whereas for adults, they recall childhood memories and stories of play. They operate as avatars for the players, where projection into fantasy takes place. Toys become and are an extension of creative play and self.

During the Enlightenment period, children were provided greater opportunities for play. Children were integral in the daily operation of rural farm life, expected to participate in the working of the farm. Play could be seen as an anathema to real maturation of children, a pastime for the rich and elite. Children in cities, while having more opportunities for play, also had tasks and limited areas for designated play. With the Enlightenment, educational imperatives were extended to children as a logical promotion of knowledge for all. In the 19th century, toys were primarily educational or religious in nature, focused on childhood development within the perimeters of school and home life. With limited time and availability of toys, children also used to make their own. Creating games from common objects such a barrel hoops or building tree houses provided opportunity for making games created within their own objectives. Rather than prescribed games, which now predominates 20th century models, children's play could be devised from more relatable influences: the emulation of the adult world as well as fantasy play based on books, fables and fairytales.

Following World War I, children like adults had the luxury of free time to play until the depression, which set back this expanse of play. The hardships of daily life, reduced children to earlier roles in which they were expected to be contributing member of a working household and play time was limited to the more pressing matters of survival. With the Second World War, children became active agents in war causes in salvage drives, creating victory gardens and entering the workforce despite child labor laws, which were largely ignored for needs in war production. With victory came a renewal of the American pastime and prosperity. Prior to World War II, toys had been a stable industry but after 1940's with the expansion of American leisure, children and the making of toys became big business.

The mass marketing of toys is a relatively new phenomenon of the 20th century. By the beginning of the 20th century with increased wealth, the rise of the middleclass in the Western world and industrial manufacturing, toys could be produced in larger markets. Games, which could be shared between children, toys, were limited however to specific gender play. Toys helped in establishing identity, dolls for girls, miniature cars for boys. Dolls defined feminine role models for girls

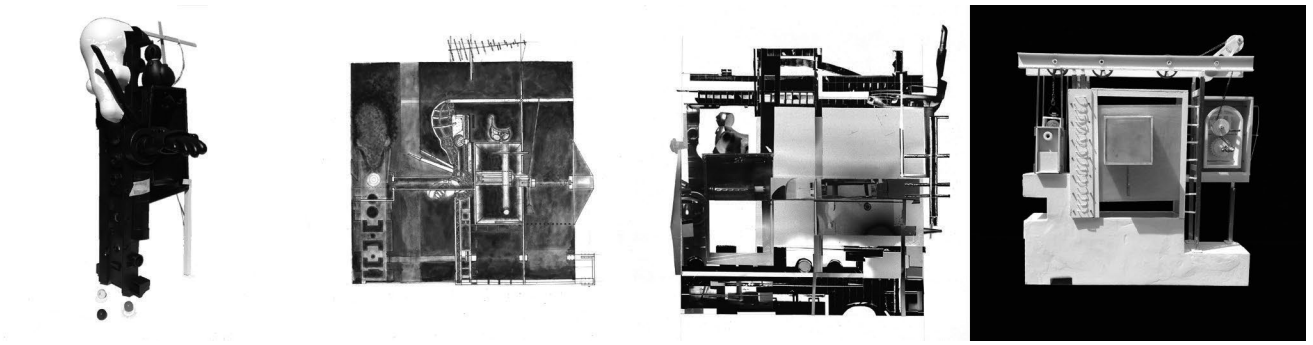

Figure 1: Toy Studies for "Spirited Away", Thuy Thanh Nguyen

while toys for boys focused on sports and machines as appropriate masculine play objects. According to the NPD Group, a marketing research company, which monitors industry worldwide, the U.S. toy industry is estimated to be a $21 billion business as of 2017, while the global market is estimated at $81 billion. In the first half of 2018, the domestic industry had already increased to $18.4 billion for the first half of the year showing an increase of 4 percent over 2017 [1].

Toy companies spent over $17 billion annually marketing to children. This figure has increased dramatically from the 1983 number of $100 million[2]. This over saturation of marketing to children has a profound and disturbing effect. While no longer gender specific, these toys limit creative play outside the bounds of an established environment. The toys create want for material entertainment and consequentially build an unsustainable desire for more gratuitous consumption. Dr. Juliet B. Schor, the Professor of Sociology at Boston College in her book, Born to Buy: The Commercialized Child and the New Consumer Cult, traces these adverse effects on a young, unprotected market. Today, toy marketing extends far beyond television commercials but now in the internet, social media, product placement and fast food industries. Schor argues that the development of insatiable want in children lead to similar conditions of dissatisfaction and depression in adults[3].

As disturbing as these trends are, what is equally important is the sacrifice of imaginative play, the ability to make something from limited resources such as natural materials such as rocks or sticks. Play as a creative learning mechanism involves higher thinking patterns, inventiveness derived from observation, gaming and developing unique results. Toys, as commodities rather than means for childhood development, suggest a limited and strictly defined way of playing.

When the first Star Wars movie premiered in May 1977, its producers did not foresee the tremendous demand for toys relating to the film. Considered to be one of the first blockbuster movies of the 1970's, the movie's paraphilia had to be delayed until manufacturers could catch up to a new consumer demand. Producer and director George Lucas took a pay cut from his salary as director to retain franchise-marketing rights, as he foresaw the potential in toy sales. Although the movie opened prior to Christmas, the filmmakers were still caught off guard and missed the market demands. The toy company, Kenner, initially produced a limited set of four action figures, which had to be ordered by mail. Currently, the Star Wars toy industry generated as of 2012 $20 billion to now a $32.2 billion business[4]. The collection of these toys, which provide connection as fetish objects to the movies, has likewise become a separate industry, which markets to fans both young and old. Recently, an unopened jawa action figure sold for $16,500. What spawned from this is the design of toys, which had very specific designations for play or not as in the case of collectors. Now all forms of entertainment could readily be tied with the sale of toys and these toys were not only artifacts of the movies or games but came with very defined ways of playing. Play could recreate action from the movies within an already defined perimeter stemming from the storyline. Even more so with video games and digital smart toys, play would be even further directed in defined role-playing. Imaginative play from limited resources had given way to a multiplicity of toys and games but with a very derivative and unimaginative activity. Whereas toys such a set of blocks which could be seen as abstractions and provide an infinity of possibilities, today toys have very specific market intentions.

RETHINKING THE RULES

In a survey of the design students, the identification of their favorite toys revealed a wide range of traditional types: toy cars, planes, dolls and action figures, puppets and clay, but also more recent digital devices: handheld game boxes, remote control miniature vehicles, etc. What were missing in their discussion about how they played were the making of unique toys and the disassembling of their existing toys. Part of creative play involves trying to understand things by taking them apart, to discover their secrets. The means of observable dissection teaches how mechanisms function, how parts go together and how they are connected. When toys become so precious as collectibles, are children readily prone to take them apart in acts of play or do they become so disposable, they are easily tossed without becoming valued artifacts.

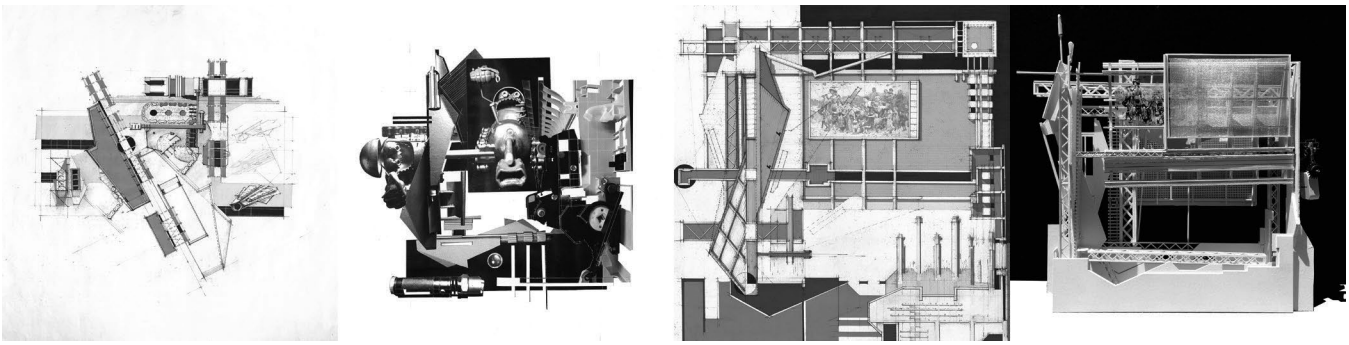

Figure 2: Toy Studies for “The Pipe Piper”, Carlos Allen Tudela Cutting

In a second survey of students, very few had created toy of their own. One of the most popular toy was the Gameboy console, a form of prescriptive play which dictates play rather than allow spontaneity and invention. Thus the question emerged as how to teach design students to play. And in this new form of play, reject or accept previous design tactics, which they had readily accepted. Four new objectives were established in the studio culture: Intrinsic motivation, encouragement of self-investigations, forgoing craft for ideas and challenging the expectations of innovation. While these might at first seem to water down the design education as a kind of compromise, the methodology developed into a stronger sense of designer ownership. Students were responsible for their own outcomes. They could set the rules but ultimately they had to define and prove their theories and processes.

INTRINSIC MOTIVATION

Intrinsic motivation suggests taking ownership of a studio project to provide an environment for which a student can investigate the multiple possibilities for their work. What drives a designer? What do you want to spend your time on? What motivates you? Understanding what processes one might undertake towards a design solution is inherently how a designer comes to understand the fundamental design problem. By understanding the problem, defining a set of objectives towards a design solution clarifies the design’s intention. A set of objectives, which are linked to a set of intrinsic motivations provides the student to address and provide multiple design solutions. The solutions are then each tested against the objectives in terms of measures of success or failure. While a series of control phases can be implemented in the studio projects as well as a series of standards relative to craft and drawings, the faculty can encourage the students to be aware of their own design intentions as one goal toward intrinsic self-motivation. How does the design critic motivate a driving obsession in the studio work?

SELF-INVESTIGATIONS

By providing positive reinforcement and encouraging self-investigation, a student and the studio environment ideally can be more creative. By taking ownership of their projects, the students establish a set of criteria for which their designs should operate. This motivation develops in the students’ confidence for which to develop the designs. While this sounds sincere in its intention, the realities are more difficult to achieve. Students have grown up in learning environments, which expects and awards definite and correct outcomes. Students strive for the correct answer and ambiguity and failure are usually not options in the learning process. Allowance for creating experiments and other methods for seeking solutions places both a positive but sometimes also a detrimental burden on students. Guidance in how their experiments can achieve their objectives is critical.

FORGOING CRAFT FOR IDEAS

By making, students learn about design. By making things from limited resources, students can be inventive. The white museum board model is a useful tool in conveying clear spatial intentions. Study models operate in a unique manner by nature of their process being apparent in the final series of models and their various stages of construction and destruction. The fast and quick model in lieu of the controlled and static model is another dying tradition The role of study models is critically more important in the design process because it, like the sketch, is disappearing in the digital landscape. Similar to a sketch, a study model allows for a certain amount of ambiguity, focusing on primary design objectives and leaving others unresolved. The study model can operate as a means to define the essence of the project without having everything worked out. The problem of the digital model is its definitive resolution. Clarity in the digital craft with its precise measurements and details can create an allusion of a solved design problem. The obsession with the digital processes and the representation of a finished product leads to a perception that focuses on commodity production or design process. Hesitation to tear a model apart and make quick changes impairs the student designer in seeking alternative design possibilities.

BEYOND GREAT EXPECTATIONS

If craft can be set aside temporarily for conceptual development, the stakes towards in depth spatial ideas set a higher

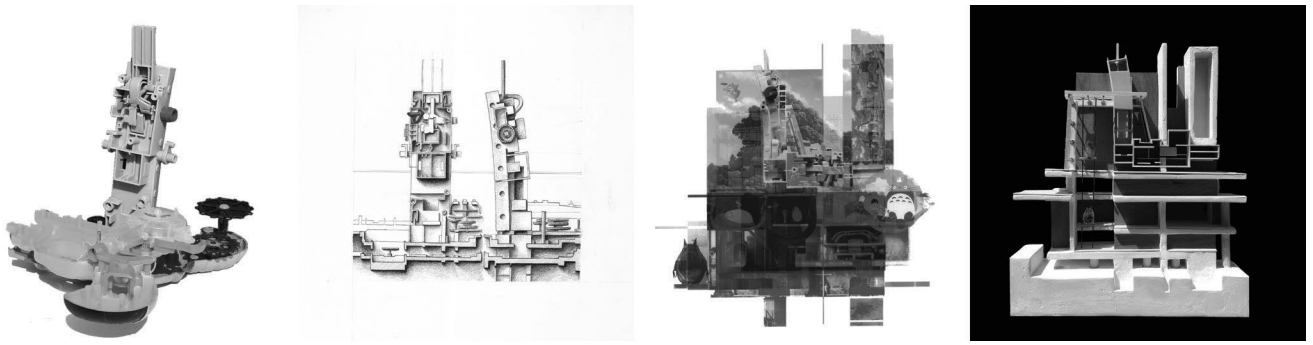

Figure 3: Toy Studies for "The Neighbor", Hector Arenas

standard for which a student's project can be furthered. What is an architectural idea? How can it be developed and strengthened? Set against a defined set of criteria as well as those established by the student, greater expectations between the design critic and student create a mutual environment for the exchange of ideas.

Too often, a design critic can become incensed with their students' work because it fails to live up to a certain predetermined conception. Yet why? When you raise a child in a positive environment, their first drawings are not critically reviewed in a negative manner, hopefully. The child is encouraged to draw more and reinforced with supportive comments. A parent pushes their children to refine their drawings but also asks questions about why they did a drawing or what were they thinking about at the time they did that drawing. Somehow as design instructors we forget this, expecting great drawings, clear sketches, strong ideas and resolved buildings. How many times has a design professor asked for fifty parti sketches for the next period and been sorely disappointed? The task intended to get a student to draw more and generate multiple ideas has actually established an impediment in the process. Students become concerned with generating multiple ideas and numerous sketches rather than maybe a few good ideas and stronger sketches which explore those possibilities. A bad sketch might have the very essence of a good idea just a beautifully rendered sketch may be devoid of any ideas. Partis do not appear overnight just as thesis statements for a paper do not magically appear. They require time to develop. Students must refine their ideas. They must challenge their preconceptions and make changes. These ideas need to be edited, tested and clarifies. In this respect, the role between critic and student moves from an authoritarian situation to one of a dialogue between mentor and mentee.

They must respond to critique while at the same time the design critic must act as a motivator in deriving those ideas out of the student and pushing them to refinement in complexity or simplicity. Rather than establishing a series of finite or infinite possibilities, the students can set for themselves and limited set of goals. These goals can operate at two levels. First, they can explore as many possibilities as they wish and allow various solutions to be representative of experimentation, for which the process is more important than perhaps a final result. Second, they must learn to edit and self-critique their work. Here is the game. Here are the rules. How does the design play within and by the rules? This is one of the more difficult aspects of learning for a design student: the ability to be objective and self-critical. The ability can go in one direction or another. Students can be so self-critical that nothing is worthwhile and suffocate their work. Or everything is good and can be rationalized while no clear thesis emerges.

TOWARDS ANSWERS: GAMING ARCHITECTURAL PLAY

GAME 001, the Discarded Toy, involved the design of a toy within a limited time frame of 2 days. The students had to improvise a toy, derivative of their favorite object using relics, found pieces and recycled parts of old toys. Three considerations had to address the following: First, the toy would be the first iteration of a narrative, fairytale, movie or play. Second, the toy had to be kinetic, transformative so to activate the storylines. Finally, the toy had to display spontaneity, an inventive play of space and form making, in essence a 3-dimension collage. With this first iteration, the toy was conceived as an object, but clues were to be established into the implied spatial possibilities.

In the second game, GAME 002_The Toy Re-invented or the Didactic Toy, the toy developed into an architectural artifact foreshadowing a parti model for a toy museum and later as a stage set for their narratives. The transformation of the toy through digital and analog hybrid drawings and models had to imply interior spaces, section and sequence of spaces. For the museum, the toy established a construct for which the spatial experience and display of a toy collection might be established. Surprise and wonder as well as the making of toy rooms developed a richer spatial variance in section and sequence within the museums. As a stage set, the events of the narrative operated to establish architectural analogies with the stage's transformation, again by creating a folly, which conveyed wonder, conflict and whimsical reiterations.

Figure 4: Toy Studies for “Echo and Narcissus”, Maria Angeles Cruz

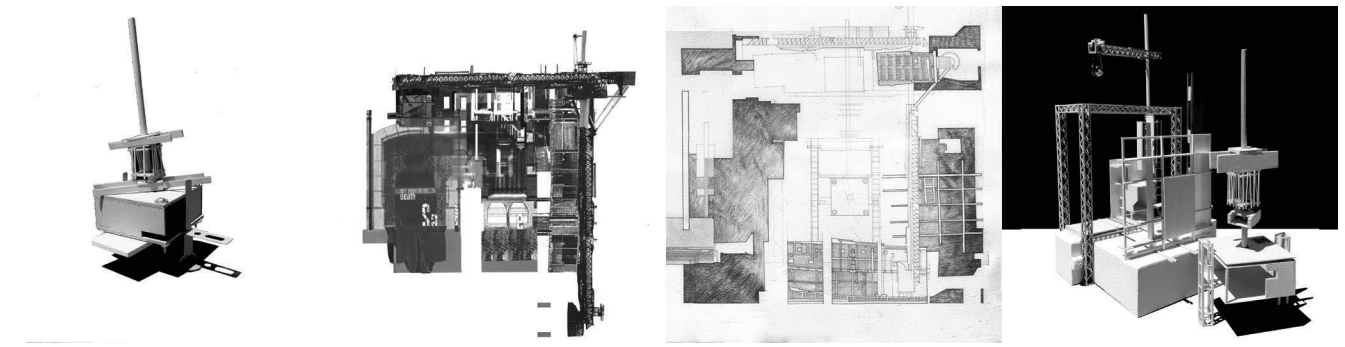

Figure 5: Toy Studies for “Death of a Salesman”, Miguel Angel Mendez-Peradon

The toys, which are developed in the studio, involved some of the following narratives: The Neighbor, Echo and Narcissus, The Pipe Piper, Death of a Salesman, The Tales of Aladdin, Spirited Away, The Golem, The Tale of Pinocchio and Pandora’s Box.

DRAWING TOYS

In Game 3, following the childhood toy identification and the invented toy, students purchased an inexpensive toy from a retailer or a second-hand thrift store. They had to take the toy apart and recreate something new with it. They were free to add, subtract, mutilate and reassemble the toy into their creation. The new toy had to embody a main character from their narratives and would subsequently be incorporated into their first study models for the stage set toy. The first drawing assignment required that they depict the toy in conventional orthographic projections, documenting the toy in architectural representations of plan, section and elevation.

For the design of the Re-Invented Toy, two design methods worked simultaneously in their creation. First they students had to take original photographs of the toys as well as other fragments, which could be used for structure, spaces with light and dark, objects and other devices. They then assembled a photo collage using the fragments to create the mise-en scene.

A quick study model required they use a fragment from the toy or a new found object, a digitally fabricated object but for the most part, the study model had to be hand made. The toy had to depict by kinetic movement sequences from the narratives, by unfolding, sliding, pulling, suspending, moving, rotating, turning or bending. These movable elements required details, which had to be articulated and in some sense exaggerated in their mechanisms. They were didactic through exposition and critical parts of the architecture of the toys.

ENDNOTES

1. PYMNTS, “How The Toy Industry Is Growing Around the World”, https://www.pymnts.com/news/retail/2018/toy-industry-party-city-toysrus-collectibles/
2. James McNeil quoted in Horovitz, B. (2006, November 22). “Six Strategies Marketers use to Make Kids Want Things Bad”, *USA Today*, p. 1B, March 2, 2008.
3. Juliet B. Schor, *Born to Buy: The Commercialized Child and the New Consumer Culture*. New York: Scribner, 2004, p. 21.
4. “The Real Force Behind ‘Star Wars’: How George Lucas Built an Empire”. *The Hollywood Reporter*, February 9, 2012.