

A Functional Escape

PRELIMINARY CAPSTONE PROPOSAL

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Over the past two decades, the tree house has outgrown its more recent traditional role as a child's place to play and has served many new functions. I intend to conduct research that questions how the tree house has evolved over the last twenty years based upon changes in program, technology, and relation to the tree itself. As a result of this research, I will deliver a clear understanding of tree house design best practices in the form of a manual.

Natives of New Guinea once defined a tree house to be for security against enemies, however, this definition has become more general and is now considered to be a structure built among the branches of a tree. Though this research is not concerned with the tree house's use by primitive peoples as a reaction of necessity in terms of protection, it is important to note the deliberate evolution of the tree house over time. Evolving from its original use as a place of security in New Guinean culture, the tree house has become a child's place to play. The traditional "childhood" tree house is defined as a structure that is built on an elevated platform in a tree. The structure can also be described as a tree fort or shed often as the result of a family "do-it-yourself" (DIY) project. In more modern times, the tree house can be many things, including a teahouse, hotel, playhouse, or even a personal retreat to reflect on one's life among many other things.

Tree house builders, designers, and construction specialists now serve a new adult audience who want tree houses.¹ These adults have set the new definition for the modern tree house which goes beyond a place of play to serve as a place for recreation, work, observation, and habitation. Even with this example of the change of function of the tree house over time, the inherent definition of the tree house has still tested time as the tree house still serves the purpose of security against enemies. However, the security no longer protects against thieves and disaster, but instead offers personal and emotional security against the pressures and ideas of a more modern era.

When one builds in a tree, no matter who they are, they do so to escape the earth, the people, and its cares². This escape relates to the "prospect and refuge" theory which seeks to describe why certain environments (such as the tree house) feel secure. To prove this, three specific areas will be studied: the tree house program, the tree itself, and tree house technologies.

While the tree house program and technology have moved forward, the underlying concept of prospect and refuge that can be found in the trees has lasted the test of time. The structures employed in the tree, tree itself, and program all relate to one another other.

¹ "Why We Live in Trees." New Statesman. Accessed March 15, 2018.

<https://www.newstatesman.com/culture/art-and-design/2013/01/why-we-live-trees>.

² Green Tiger Press. "Tree Houses: An Illustrated Essay on the Aesthetic & Practical Aspects of Arboreal Architecture". La Jolla, CA: Press, 1975.

Tree house building is a global activity. A worldwide movement is coming as the United States is leading the charge with several tree house dependent companies and contractors offering build and design services. Europe, meanwhile, seems to be in a sort of tree house renaissance as tree houses are slowly beginning to gain popularity and be built in the region. Even still, tree hotels by Tham & Videgård Arkitekter test the levels of imagination in Sweden. Five independent tree houses stand in the trees (a birds nest, flying saucer, and mirrored cube can be found waiting for guests). Ricardo Brunelli's tree house building company in Brazil (Casa na Arvore) is thriving. Finca Bellevista in Costa Rica is a 600 acre tree house community committed to sustainable design and living.³ Takashi Kobayashi in Japan has countless works on record in the trees.⁴



Mirrorcube Tree Hotel, designed by Tham & Videgard Arkitekter

"Tree Hotel Sweden, Harads Building." E-architect. February 11, 2016. Accessed May 11, 2018. <https://www.e-architect.co.uk/sweden/tree-hotel-sweden>.



Finca Bellevista, designed by Matt Hogan and Erica Elise Andrews

"Finca Bellavista." The Telegraph. August 11, 2016. Accessed May 11, 2018. <https://www.telegraph.co.uk/travel/destinations/central-america/costa-rica/hotels/finca-bellavista-hotel/>.

³ "Living the High Life in a Luxury Treehouse." CNN. December 02, 2016. Accessed May 03, 2018. <https://www.cnn.com/style/article/eco-solutions-sustainable-treehouses/index.html>.

⁴ Nelson, Pete. "Be in a Treehouse", Design / Construction / Inspiration - Design / Construct. Abrams, 2014.

History

People are building in trees. People are designing in trees. The world is drawn to the trees. The history of tree houses used for habitation can be cast back thousands of years. Early tree houses were used as ways to live above the inhospitable ground. Flooding, protection from wild animals, or to raise oneself from a floodplain were typical reasons for building above ground. Tree houses have since progressed to four distinctly fashionable periods where pleasure was the driving factor to the evolution of program through history. These periods include the Roman Era, Renaissance Period, the late eighteenth century Romantic Period, and the twenty first century period of change.⁵ It is essential to understand where tree houses have been in terms of history to understand n what ways they have changed, especially in relation to the twenty first century.

During the Roman Era, Pliny the Elder outlined a tree house (raised platform in the trees) as well as carved spaces enclosed in the trunks of trees for Caligula in a Plane tree at Velitrae.⁶ Renaissance Italy saw Francesco Colonna's book *Hyperotomachia Poliphili* (1499). This led to a great rise in construction of tree houses. The Medici Family also had treehouses in their gardens near Fiesole and Pratolino. Queen Elizabeth I (reigned 1558–1603) banqueted in the Cobham tree house. The Formal Gardens of England had treehouses. Celia Fiennes describes a visit to the Duke of Bedford's Gardens at Woburn in 1697: "The Gardens are fine, there is a large bowling-green with 8 arbours kept cut neatly, and seats in each, there is a seat up in a high tree that ascends from the green 50 steps, that commands the whole park round to see the Deer hunted".⁷ In 1902 the architect Harold Peto designed and built a treehouse for Daisy, Countess of Warwick at Easton Lodge, Essex. This was restored in 2009.⁸ It is clear that throughout history, people have been in trees. People still want to be in trees as before, but can now do so in a new way in relation to the tree, thanks to progressions in tree house program and technology.

Program

It is essential to understand the progression of tree houses through history in order to analyze how much the program of the tree house has changed. Today there is a resurgence of interest in tree houses as shown by the prescribed influx in building around the globe of the twenty first century. However, the people of today are mostly building small retreats in the trees. The timeless want of escape everyday life and attain a new

⁵ Paula Henderson & Adam Mornement. "Treehouses", 2005, p.12

⁶ Pliny, Natural History, Book XII, Ch.V

⁷Celia Fiennes. "The Journeys of Celia Fiennes",(1685 – 1703), 1983. p.140

⁸ David Leviatin. "On the up: countess Daisy's lofty gem reborn", Cornerstone, Vol. 30, No. 2, 2009 p.70 – 71

perspective on nature by viewing it in a new way is still maintained as it was throughout history.

Tree house programs come in a wide variety that include tree house kitchens, classrooms, social tree houses, offices or studios, media centers, yoga retreats, music studios, and adventure playgrounds. The most common purpose of a tree house today is as a retreat. Today's tree house retreats are 80-200 square feet on average. These retreats range from around 10-15 feet off the ground and typically have stairway access. Desks, electricity, chairs, decks and places to sleep are usually found in these retreats. Second in popularity to the tree house retreat is the home office, art studio, or writing room. The fully equipped home in the tree is even harder to come by, but is still requested by clients. The fully independent turnkey treehouse on its own land is the pinnacle of treehouse program as it is independent entirely. With that being said, this is where the industry is moving.⁴

The before discussed discussion of the tree renders correlation to both a practical and mythological totem. "The treehouse tells a story as old as architecture, or perhaps more clearly, as old as human shelters. To be protected, to escape, and today to know that the ideal architectural form embodies what is natural and intrinsic. With its roots in the earth and branches in the sky, the tree is the model of Gothic architecture. Without trees in the forest there would be no columns and perhaps no temples. From vertical heights, a man could look down on daily existence like a bird in flight, a step to breaking the boundaries of the ordinary, a hint of immortality (Philip Jodidio)." ⁹

This discussion employed by Jodidio can be further explored when referencing history further. The Primitive Hut is a concept that explores the origins of architecture and its practice. The concept explores the anthropological relationship between man and the natural environment as the fundamental basis for the creation of architecture. In the *Origins of The Primitive Hut: Essai sur L'Architecture* (Essay on Architecture) (1755), Laugier's essay proposed that the idea of noble and formal architecture was found in what was necessary for architecture, not in its ornamentation but in its true underlying fundamentals. Laugier argued for the simplicity of architecture stating that architecture must return to its origins, the simple rustic hut.¹⁰ Jodidio's writings in tandem with Laugier's prove that nature is the lynch pin for architecture as architecture is one with nature.

⁹ Jodidio, Philip. *Tree Houses - Fairy-tale Castles in the Air*. Taschen GmbH, 2017.

¹⁰ Craven, Jackie. "What Basic Components Are Necessary to Create Architecture?" ThoughtCo. Accessed May 03, 2018. <https://www.thoughtco.com/primitive-hut-essentials-of-architecture-178084>.

Tree

In terms of nature and architecture, neither can be found in tree houses if there is not a tree. When uniting the built and natural environments, the architecture of the tree must be considered. Renowned botanists, Francis Hallé (Professor emeritus at the University of Montpellier II, where he studies tropical rainforests) and Peter Del Tredici (Botanist and research scientist at Harvard's Arnold Arboretum and professor at Harvard's Graduate School of Design) have taught on the architecture of trees. "Wood is plastic" says Hallé; Plasticity can be found when looking at the adaptability of trees. Meristems (the tissue in plants enabling regenerative growth) and the fluid dynamics of trees informed Del Tredici's examples of tree adaptability. Examples of plasticity include trees growing through chain link fences, massive tropical tree buttresses, or trees converting dead internal cambium into soil for new growth.¹¹ All examples demonstrate the ability of trees to change and succeed within taxing environments. When considering erecting a structure in a tree, the biological functions in architectural models of trees must be considered. "Trees have fluid dynamics," says Del Tredici. Hallé developed concepts of reiteration and tree adaptability, explaining how these capabilities formed out of tree evolution. Certain logic plays out in the growth of a tree. The diagrammatic quality of Hallé's drawings demonstrate growth habits and the potential for reiteration. Reiteration refers to a tree's response to damage with the redirection of nutrients. This is exactly what you do not want to happen when putting a structure in the tree. Therefore, the cultural implications of cutting a tree, as well as pollarding, hedging, or training trees must be considered. This applies directly to the tree in tree house design.

Trees possess a truly transformative power, but must be selected and used in the correct manner. In order to be held up in the trunk and branches of a tree, one must select and maintain the correct tree. A tree's growth habit or architecture is influenced by three factors. First is genetic information: a plant's predisposed growth for height, diameter, stem form, crown form, angle of branch attachments, tolerance to insects and diseases, among others. Second is site conditions: shady, sunny, crowded, open, slope, waterlogged, soil composition and depth, proximity of bedrock, etc. Third is environmental influences: storm, lightning, fire, heavy snow, drought, insect infestation, disease, human interaction, etc. The tree must be properly examined to ensure a lasting relationship between structure and host.¹²

Treehouses can be built in either single tree or multi tree layouts. The trees will determine what you can build. Spanning multiple trees with beams is easier than

¹¹ Contributor, The Dirt. "The Architecture of Trees." THE DIRT. April 24, 2014. Accessed May 03, 2018. <https://dirt.asla.org/2014/04/24/the-architecture-of-trees/>.

¹² "Arnold Arboretum." Arnold Arboretum. Accessed May 03, 2018. https://www.arboretum.harvard.edu/.Examining_Tree_Architecture

attempting to build a single structure in one. The points where you fix supports will need to be strong enough to hold the weight of the part of the house they are supporting. It is simpler building with a few long supports than. Limbs grow naturally in all sorts of sizes, shapes and angles and the strongest limbs are those growing at 90-degree angles.⁸

The suitability of the site must include consideration of the health of the trees and the impact the environment and the treehouse will have on each other. Almost any mature, healthy deciduous or coniferous tree can be used to support a treehouse. Connection technology to fasten structure to trees are so strong that they don't bend or break under normal circumstances, but under high loads, connections can still compress the wood tissue of the tree. Because the crushing strength of the wood is the limiting factor, a hardwood tree like an oak, hickory, walnut, cherry, beech, maple, ash, cedar, hemlock or Douglas-fir will support more than a pine, spruce, yellow poplar, cedar, or redwood. Basic signs that might indicate poor health upon tree selection include several dead branch groupings, patchy leaves on branch extremities, leaf discoloration, and liquid oozing from the bark. Building work near a tree can damage the root structure by breaking/damaging parts of the root network, and compacting the earth (which reduces drainage and air permeability). Re-grading of the land around a tree can be particularly damaging as the roots as soil may be compacted, reducing drainage.

Trees can move a lot in the wind and when adding a tree house, it greatly increases the wind catchment area. This effect heightens in a storm. Usually trees can deal with excessive wind speed by losing leaves or branches. It is important to note that the treehouse attachment bolt in combination with an uplift arrestor once again allows lateral movement from the linking element from structure to tree that addresses wind speed increases. This allows the tree to move independent of the tree so the tree is not strained in a harmful way. Tree houses in high wind areas should be in the lower third of the tree, where wind speeds are lower and the leverage of the force on the tree is reduced. If the wind poses a serious danger, keep size to a minimum and try to build a more curving, or circular, house. It is essential to respect the tree and understand how to build responsibly. The process of selecting the right tree to be the host of a structure is of the utmost importance.

Technology

The assembly and fitting together of supports in a mutually responsible way in a tree is a must. Specifically, the focus on techniques of designing treehouse platforms is the main concern of the structure.¹³ It is important to note the construction that takes place above the trees is associated with the building program and function as previously discussed. It is also important to narrow down any structural design to its simplest form.

¹³ Ching, Francis D. K., Barry Onouye, and Douglas Zuberbuhler. *Building Structures Illustrated*. Hoboken, NJ: John Wiley & Sons, 2009.

Doing as much work as possible on the ground is critical in treehouse construction as it keeps exposure to a minimum in terms of wall and roof construction. It is the responsibility of the designer to connect to living trees with artificial technology.¹⁴

The key to keeping a tree healthy when constructing a treehouse is to make every connection count. Larger and fewer fasteners are necessary as sending too many nails through a tree creates weak connections and can stress the tree while it heals multiple wounds (reiteration). The use of nails, screws or bolts can cause health problems for a tree if not fitted correctly. Any damage to the bark of the tree, whether by nail, screw or bolt, is a potential entry point for infections and bacteria, so it is necessary to keep the overall penetration number to a minimum.¹⁵

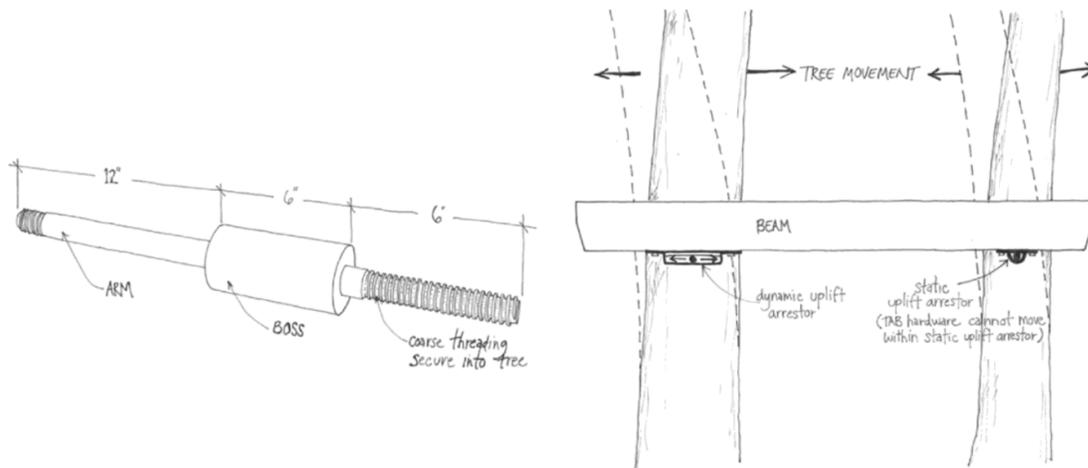
A major advancement in tree fastening technology occurred in 1997 with the introduction of a fastening device. Jonathan Fair Oaks created a three inch diameter stainless steel pin that, when sunk into the heartwood of a tree, was able to support more weight than anything that had been attempted thus far. Fair Oaks presented this device at the annual World Treehouse Association Conference in Takilma, Oregon. This device caught the attention of Michael Garnier. Garnier had been searching for a measurable fastening solution that would satisfy local building codes on his builds and thus developed Fair Oaks design. Over the next year, with the help of engineer Charley Greenwood, the duo refined a tree bolt design that came to be known as the Garnier Limb, or GL. Today, the GL is a turned steel device with a wide collar starting six inches off a coarsely threaded end. Various variations now stem from the original GL. In various combinations these GL's can hold loads as heavy as a 2700 square foot house. Treehouse Attachment Bolts (TABS) are extra-large bolts specifically designed for use in treehouse construction developed by Nelson Treehouse Supply that are a new edition of the Garnier Limb (GL) that are now highly employed.¹⁴

One can safely put a TAB in a healthy tree as small as 10 inches in diameter, but larger trees are more ideal because they tend to move less. A tree house spans multiple trees, choose trees that are within 16-18 feet of one another. TABs have a wide, coarsely threaded core that bolts into the tree. A wide flange attached to the threaded core then spreads the load over a wider area of the tree's surface. TABs can sustain loads of 2000lb or more, so they are often used in a cantilever method to 'perch' beams away from the surface of the tree. This allows the tree to continue growing outwards without being restricted by the beam, ideally for the life of the treehouse. There is a large range of accessories to compliment TABs such as cable eyes, knee brace brackets (connected with

¹⁴ "We Design Simple, Complete Tree House Plans." Treehouse Guides - Plans to Build a Tree House. Accessed May 03, 2018. <http://www.treehouseguides.com/>.

¹⁵ Nelson, Pete. New treehouses of the world. New York: Abrams, 2009.

the paddle tab) and floating (connected with yokes).¹⁶ The beams that support the treehouse platform normally rest on the arm portion of the tab. An uplift arrestor is a hardware piece that is attached to the bottom of the beam. This prevents the beam from lifting or pulling away from the tab while still allowing lateral movement from the beam. Tabs and uplift arrestors work as a team to provide a dynamic support system that allows for tree growth and movement while ensuring the health of the tree is preserved. Bolts and washers can also be used to fasten structure to trees, but as stated before, are not the most ideal method.



Tree House Attachment Bolt,
Nelson Tree House Supply

Nelson, Pete. "Be in a Treehouse", Design / Construction / Inspiration - Design / Construct. Abrams, 2014.

Uplift Arrestor, Nelson Tree House Supply

Nelson, Pete. "Be in a Treehouse", Design / Construction / Inspiration - Design / Construct. Abrams, 2014.

In preparation for a platform build that attaches to the bolts now secured into the tree(s), it is wise to take the time to erect scaffolding, set rigging, and run safety lines in the trees. Good rigging is often the solution to maneuver large materials in the trees as trucks or forklifts cannot always make it to a site location. If rigging is done incorrectly, it could hurt or stress the tree. Cables and ropes slung over branches are very damaging, as they cut through the bark as the structure moves.

When selecting a tree, height is an incredibly important factor to consider. The higher you go in a tree the greater the sense of freedom and greater the views. However,

¹⁶ "Hardware Highlight: The TAB (Treehouse Attachment Bolt)." Nelson Treehouse. Accessed May 03, 2018. <https://www.nelsontreehouse.com/blog/2017/2/21/hardware-highlight-tab>

you must also think practically in terms of safety in the case of a fall as well as effect of the wind and quality of support tied back into the tree.

Safety and Comfort

Children's treehouses are usually more suited near the ground up to 10 feet to reduce the danger from a fall. In a total population survey of the entire USA over the past 17 years (1990-2006), 351 patients (0-19 years) attended the hospital for treehouse related injuries. Falls accounted for 79% of injuries with upper limb fractures (38.8%) being the most common.¹⁷ Ironically, the tree house concept, as a private place of both sanctuary and happiness, has been developed in several modern children's hospitals. Several hospital planners and architects have developed this concept in their design of outpatient waiting areas and on-site respite accommodation homes for the families of long-term inpatients. However, tree houses are relatively safe places for children to be in. All trauma admissions at the Royal Children's Hospital in Brisbane serves around 1 million children under the age of 14 years. A review of all admissions revealed an annual rate of 400 admissions for trauma of all forms of which 140 were due to falls. None were from tree houses.¹⁴ By following the correct procedures of connecting to a tree, one is now able to accommodate the variety of functions that are a direct result of the newly developed tree house technology in a safe way.

A treehouse can be a physical place of adventure for a child, as has been a theme for the past decades. A place of both sanctuary and delight, children's literature often portrays treehouses in a positive light. Tree houses have been found in literature for 200 years. Many today grew up with stories of the Swiss Family Robinson and their tree house.¹⁸ Written in 1812, *The Swiss Family Robinson* promoted self-reliance, creativity, accountability in partnership, ingenuity, resilience and tolerance.¹⁹ Their tree house was a place for sanctuary but also included a library proving the tree house to be a place of security, family love, and adventure. J.M Barrie, (1860-1937) almost a century after Wyss' book, produced the stage play, *Peter Pan* in 1904 post-Christmas.²⁰ The narrative was first published in book for *Peter and Wendy* in 1911.²¹ In it, Wendy Darling lived in Neverland, in a house "of leaves deftly sewn together". *Peter Pan* (the Boy Who Would

¹⁷ Russell, FM; Starr, M; Hayman, J; Curtis, N; Johnson, PDR, *Journal Of Pediatrics And Child Health*, 06/2002, Volume 38, Issue 3

¹⁸ Wyss JD. In: Seelye J, ed. [*Der Schweizerische Robinson 1812.*] *The Swiss Family Robinson*. London: Penguin Classics, 2007

¹⁹ Moody E. A Note on Wyss's *Swiss Family Robinson*, Montolieu's *Le Robinson suisse*, and Kingston's 1879 text. Available from: <http://www.jimandellen.org/montolieu/robinsonsuisse.html> [accessed 3 May 2018]

²⁰ [Editor]. Duke of York's Theatre. 'Peter Pan'. Reviews. *The Times*. London, 28 December 1904. [The first stage production of J.M Barrie's play was entitled 'Peter Pan' with the subtitle 'The Boy who Wouldn't Grow Up'. It was first performed in London on 27 December 1904].

²¹ Barrie JM. *Peter and Wendy*. London: Hodder and Stoughton, 1911

Not Grow Up) was partially inspired by Pan, the Greek deity in the woods. Children of later generations have been fortunate to delight in the works of Alan Alexander Milne (1882-1956) in which his son, Christopher Robin Milne, (1920-1996) in fiction, lived in a tree house. First published in 1928, one of Christopher Robin's toys, Owl, also lived in 'The Chestnuts', a magnificent tree house.²²

A tree house is a physical place of enthusiastic adventure for children. In their imagination, the tree house becomes a fort, a ship, a treasure island, a spaceship or a bunker. For adults, it can be all of these, relived again in the recalled imagination of their own childhood or in their adult childhood of today. There is a recent architectural trend to design adult houses and offices in the tree house genre. The artist Tadashi Kawamata has created spaces in Madison Square Garden in New York into tree houses for local children and adults. The success of his exhibit was linked to the creativity of the building and fondness associated with re-living childhood memories, and an escape from urban life.²³

As stated before, both the tree and the treehouse can take one back to their childhood. The children that once inhabited the childhood treehouse have now grown up. The modern treehouse is a direct result of the growing body of interested, paying adults that want to break away from their daily routine and retreat to a place of refuge unlike any other. Adults face high pressure jobs or are constrained in various areas of their life. The "modern" treehouse offers an escape to the pressures found in the day to day adult lifestyle. Americans spend four years of their life indulging in escapism, according to new research. The study of 2,000 adults across the United States, which was commissioned by global tour operator G Adventures, showed 12 hours 56 minutes of escaping our reality each week comes partly in the form of reading books (1 hour 34 minutes), watching movies (2 hours 37 minutes) and dreaming of vacations (44 minutes).²⁴ Treehouses offer comfort, refuge, and an opportunity for one to escape in a special place independent of the above listed methods of departure from reality. The treehouse offers a paradox of escape and refuge in nature that is different from the conventional means of escapism.

Tree house design should address a critical definition for architecture and design. This is the theory of "prospect and refuge". This theory seeks to describe why certain environments feel secure and thereby meet basic human psychological needs. Environments that meet such needs will often provide people with the capacity to observe

²² Milne AA. *The House at Pooh Corner*. London: Methuen Children's Books, 1928; 8, 144, 154

²³ Cemore JJ. Wendy houses. In: Carlisle RP, ed. *Encyclopedia of Play in Today's Society*. New York: Sage Knowledge, 2009; 789-90. Accessed online [Online ISBN: 9781412971935]. DOI: 10.4135/9781412971935. [accessed 3 May 2018].

²⁴ Swins. "Americans Spend 4 Years of Their Lives 'escaping Reality'." *New York Post*. July 03, 2017. Accessed May 03, 2018. <https://nypost.com/2017/07/03/americans-spend-4-years-of-their-lives-escaping-reality/>.

(prospect) without being seen (refuge).²⁵ This theory is the driving force behind the twenty first treehouse that is nestled into nature.

Approach

These houses can achieve the simplicity and perfection of form. The principle fault with primitive treehouses is in regards to their bold dominance. These structures use the tree simply as a foundation and do not hide in the trees. These houses had been conceived of a spirit of necessity rather than a spirit of play that evolved after the primitive tree house.² The tree house more recently has progressed as a play place for children as discussed before. The child is involved in the building or maintenance of a tree house, but an adult can enjoy the planning stage more and create a grand structure as the imagination dictates with the new technology that is found in the tree house industry. The adult, alongside the driving factors that have led to the newly developed tree house identity through form allow one to command the world's resources to the satisfaction of a dream that responds to escape and refuge in a way not attainable until recently.

The case study method of exploration will allow one to further explore this idea. The exploration will answer the basic questions of how the treehouse has evolved in program, technology, and site in relation to trees. Month one would General Research/ Development, specifically program and the tree houses relationship to prospect and refuge. Months two and three would be exploring and illuminating creating a set of images in relation to the trees and technology/structure. Month four would be about combining all of the work into a manual that incorporates all overarching ideas. By having a 'manual' that helps one understand these components of the evolution of the treehouse, readers will be positioned to deliver design that address all areas on concern in terms of the functional tree house: program, technology and relation to the tree itself. It can now be a realized dream. As advised by the program study, adults are now not necessarily building for their children but now their own ambitious vision for their enthusiasm that now outruns the child's. For whom it is made raises his own dreams.

The treehouse is indeed a new form that has resulted from a client's desired program thanks to the newly developed technology that allows one to design in the tree. Regardless of the type, a tree house offers a unique dualism of being inside but being outside, being rooted but being held up, being free but being protected. To be up in the air is to be rooted, held. Three houses enclose all the spirit which needs enclosure and liberate all the spirit that needs to see the horizon and guess what lies beyond.²

²⁵ Dosen, Annemarie & Ostwald, Michael. (2013). "Prospect and Refuge Theory: Constructing a critical definition for architecture and design". International Journal of Design in Society.

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