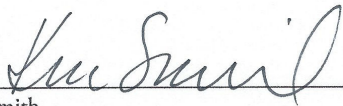Books as Portals

by

L. Ashley Marlowe

A thesis submitted to the faculty of Radford University
in partial fulfillment of the requirements for the degree of
Master of Fine Arts in the Department of Art

April 2015

Copyright 2015, L. Ashley Marlowe

_____   4·30·15
Ken Smith   Date
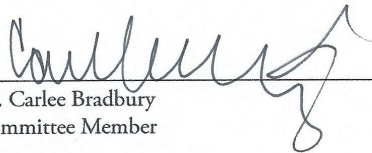Thesis Advisor

_____   4·30·15
John O'Connor   Date
Committee Member

_____   4·30·15
Dr. Carlee Bradbury   Date
Committee Member

Abstract

"Buying a book is not about obtaining a possession, but about securing a portal."
– Laura Miller

Books are more than just ink on paper or dark shapes on a screen to be read. They spark imagination, contain infinite information, and offer escape for those who let their minds run. With the rise of the e-book, many have worried over the "death of the paperback" and the bookshelf, but there may be something special about the physical volumes that take up palpable space in one's home. Between the covers is the promise of adventure, knowledge, heartbreak, or hope, and though books have been transformed from status symbols to mere decoration, they can continue to evolve and change for the better. Perhaps books can come to be seen as portals for inspiration and imagination.

With the rise of technology and prevalence of smart phones, the possibilities for interactivity and augmented reality become an interesting idea to mix with the traditional paperback book. How can this mix be made seamlessly? How will technology interact with the traditional media? And how can this be used to encourage literacy and a passion for reading in children? Through this project, I hope to discover ways in which traditional and new media can be blended to create an exciting and more immersive reading experience.

I wrote my own story, exploring scenery and ideas that I found interesting. The plot follows Kaya, a young girl who lives in Hagenberg, a town where people are happy to do the same things every day. But when Kaya is tricked by a white fox into waking evil Shadows, chaos reigns. She must go on a journey to find the polar bear Spirits and restore order. She is helped by Rosetta, an alien, Laila, a storyteller, Synnøve, a fisherwoman, Ingrid and Astrid, eccentric sisters, and Soren, a scientist. They give her the knowledge, supplies, directions, and help she

needs. It will take intelligence and bravery if Kaya wants to succeed, but she is the only one who can bring a new balance to Hagenberg and change it forever.

This project allows me to explore several different roles of creation, including the jobs of research and development, writer, editor, art director, visual development artist, character artist, layout artist, 3D modeler, color stylist, lighting design, inker, and painter. Including augmented reality with the book must add something to the story that is not or cannot be present on the printed page. It cannot be 3D additions for the mere sake of adding 3D, but should enhance the story experience in a way that cannot be done in the traditional 2D print-on-paper sense.

The quote by Laura Miller at the top of this page inspired me to undertake this project. By finding ways to combine traditional printed formats with digital additions, books can embrace new technology to avoid extinction. In this way, books can truly become portals for imagination and exploration, drawing audiences in for a more complete and enchanting reading experience.

<div align="center">

L. Ashley Marlowe, MFA
Department of Art, 2015
Radford University

</div>

Dedication

To all who helped me,
believed in me,
and put up with me
through this crazy year –
thank you so very much.

I hope the polar bear Spirits never leave your side.

Table of Contents

Table of Figures

Chapter 1: Books, Imagination, and Learning

"Buying a book is not about obtaining a possession, but about securing a portal."
— Laura Miller[1]

In the summer of 2013, I created a digital painting of an orange speckled octopus with purple suckers, wearing a top hat and monocle, reading an upside-down copy of *20,000 Leagues under the Sea* by Jules Verne (Figure 1). In order to submit the illustration to the American Advertising Awards, or ADDYs, I designed a poster to feature the work. The poster showed my illustration as the focal point, with a quote at the top, and a call to action to promote reading and children's literacy at the bottom. It was simple and had a singular purpose. The work went on to win in the illustration category, earning a gold at the regional level, silver at the district level, and silver at the national level.[2]

The quote stuck with me long after it served its purpose of filling in the top portion of the poster design. "Buying a book is not about obtaining a possession, but about securing a portal." The idea of the book as a portal captured my imagination more than I had anticipated. In reading books, we escape from our own world into another of our choosing. Whether it's fantasy, science fiction, history, or mysteries, books hold endless adventures waiting for the right people to find them. Books were undoubtedly portals into other worlds for the people who picked them up and explored the space between their covers. I wanted to explore this idea more deeply.

In Fall 2013, I took a History of Books course from Dr. Carlee Bradbury at Radford University. Throughout the semester's discussions about the origins of books and how their form and purpose evolved over the centuries, I began to think more about the future of the printed book. Books began as tablets and scrolls and eventually changed into the printed and bound forms they are today—a form that has remained more or less unchanged for thousands of years. Although some will argue that the paperback is dying and the ebook will rise victorious, many

die-hard bibliophiles (myself included) will argue wholeheartedly that physical volumes can never truly be replaced.

In the same way that the book's form has changed, the use has changed. Books began as places to record information, evolving into ritual religious objects, into distinctions of education, into status symbols of wealth, into mere decoration. Today, there are websites that sell decorative sets of books, selected for display merely because the hues of their covers create an aesthetically pleasing color scheme.[3] Books adapt alongside society's changes.

I wondered if printed books could embrace technology to avoid their rumored extinction. How could books combine with technology to become something *more*? Could these adapted books become something with a special appeal above the average printed novel? Could the idea of "portal" become more literal?

Fantasy Worlds and Illustrated Books

My lifelong interest in bringing a fantasy world to life on the page in both writing and illustration has grown over time. One author who has explored this process and is a source of great inspiration to me is John Ronald Reuel Tolkien. He is best known as the author of *The Lord of the Rings* and *The Hobbit*. He is a highly influential author in the fantasy genre, and is often referred to as the "father" of modern fantasy literature. In addition to his books, he also frequently created illustrations of his imagined worlds. He drew locations, important scenes and characters, designed maps, and created his own "facsimiles" from Middle Earth. He created a facsimile of a page from the ancient Book of Mazarbul, a book meant to be written by dwarves about their time living in the mines of Moria. He transcribed the "records" and then made the page realistically dirty, cut, torn, and burned. Where the page would have been ripped from stitched binding, Tolkien created tears, and where parts of the paper would have been burned,

Tolkien carefully caught them on fire and put them out again (Figure 2).[4] He worked in an endless attempt to create perfect map designs to be published in his books, and even panicked when he could not achieve on paper exactly what he envisioned in his mind.[5] Tolkien submitted drawings for cover designs for both *The Hobbit* and *The Lord of the Rings* series,[6] and lamented that several early designs for *The Lord of the Rings* sent to him for approval from the publishers were not up to his expectations.[7] He worked closely with his publishers to design the cover for *The Hobbit*, and sent several mockups of jacket ideas to them. Tolkien critiqued his own designs very intelligently in letters to them, and showed a clear understanding of the production process, color needs, layout and design basics, and the attraction of a slightly simplified version of his original idea. The final result of these mockups and letters is still one of the most popular covers for *The Hobbit* today, featuring a striking blue and green ink and watercolor illustration of mountains and trees (Figure 3). Tolkien spoke with clarity and decision about each element of the design, with clear reasons for the layout of the scene, for showing the sun on one side and the moon on the other, and for the quality of the written runes (right down to having them translate to a simple synopsis of the story) and handwritten title.[8] Tolkien created dozens of illustrations associated with *The Hobbit*, ranging from pencil sketches, to ink drawings, to carefully crafted watercolor illustrations. He worked with the publishers so that they reproduced in a satisfactory way, and even took on the task of creating additional illustrations for an American edition of the book, so that the artwork might be consistent across all variations of his story.[9] He selected important scenes or landscapes from the story and illustrated them as they existed in his mind, giving his readers a unique glimpse into his imagination. Tolkien is known for his thoroughness in world building and creation of history and myth and fantasy languages, but his attention to detail also expanded to the visual elements associated with the stories, from their illustrated

representations, to maps and fabricated facsimiles, to book cover designs and publications. Creating a fantasy world in your mind and then sharing it with others in carefully coordinated writing, artwork, and design is a concept that has always intrigued me.

Illustrated books are the most obvious answer for combining my love for reading, imagination, art, and design. Illustrating a children's book is as much visual storytelling as it is written storytelling. The images can and must include story clues and information that are not fully explained in the text. More is often gained from the images combined with words, than is gained from the written story alone. The general storyline of the book should be obvious without needing to read the words, making illustrated stories accessible to children with limited literacy skills, and encouraging them to practice those skills with the aid of interesting pictures.

In addition to my fascination with the artistic endeavors of J.R.R. Tolkien, I have many other sources of inspiration for this project. I pulled the feeling of danger and overcoming a huge, monstrous villain from the stop animation film Coraline, directed by Henry Selick, based on the story written by Neil Gaiman.[10] Tim Burton's sketches inspired the Shadow beasts.[11] Viking and Scandinavian runestones were considered with the stones that surround the town and the glowing markings decorating them.[12] Disney's Peter Pan app inspired the idea of creating an interactive, technology-infused book for children to enjoy.[13] My personal interest in the northern lights, astronomy, and imaginative fantasy stories guided the setting of the story. All these things came together in my creation of *Kaya and the Shadow Spirits.*

Children's Books and Literacy Skills

Children who are read to at home are more successful in school. They recognize the alphabet, can count effectively, and write their names well. The greater the variety of reading material available to them, the higher reading proficiency they have. Children need to be

encouraged to read both in schools and in their home environments. The number of high school students who read "for fun" has decreased over the past years.[14] If books can embrace some of the technology that dominates today's world, it can become "fun" again for a wider audience.

In addition to reading literacy, technology literacy is becoming a priority in schools. The reading experience becomes more engaging and exciting when technology is incorporated with reading skills. When young children are taught to read with interactive videos, they tend to learn more quickly.[15] In technology literacy education, students are expected to be able to use technology, understand how it works, and then use their critical thinking skills to consider ways technology can benefit life. Emphasizing this learning in their early years empowers students as they learn and grow. Peter Nitze, global-operations director at AlliedSignal, which produces automotive and aerospace parts, commented,

> "If you've had the experience of binding a book, knitting a sock, playing a recorder, then you feel that you can build a rocket ship -- or learn a software program you've never touched. It's not a bravado, just a quiet confidence. There is nothing you can't do. Why couldn't you? Why couldn't anybody?"[16]

This is a feeling that I have personally experienced throughout my education. The more I was able to teach myself, the more confident I was in my ability to learn new things. I taught myself how to use many new programs, and feel confident that with enough time and patience, I could learn to do any new thing I set my mind to. Instead of teaching students to merely work a program like a mindless machine, they should be taught to understand *how* the technology works. They should be able to use analytical thinking skills to gain answers to their questions. This feeling of educational self-confidence and giving young readers the technological literacy to create this in themselves is extremely important.

In addition to reading literacy and technological literacy, visual literacy has a huge impact on a student's ability to learn. Children learn to speak by identifying what objects or images are called, but these skills become more complex as their intelligence grows. Not only should a visually literate person be able to view and interpret scenes, photographs, or artwork, but they should use critical thinking to understand what they are seeing on a deeper level. One of the most important aspects of visual literacy is the ability to become an informed and skeptical viewer of media. A visually literate viewer can discern between credible and non-credible sources and understand that manipulations, biases, and constructed realities are nearly always present. The visually literate viewer can take in information and analyze it to make informed decisions.[17] Additionally, improved visual literacy allows people to understand advertising and see the ways in which they, as viewers and consumers, are constantly being manipulated. "Distractify" has a post detailing "21 Ways Advertisers Are Manipulating You And You Don't Even Know It".[18] While this list may seem like obvious things to those with a design or advertising education (noting things such as color theory, humor and mascots, 'limited time' offers, disconnects between reality and the altered images presented, and use of pseudoscience), it can be surprising to those without any visual literacy education. Without visual literacy skills, the constant barrage of manipulation is not always immediately noticeable. After studying graphic design for 7+ years, I am more fully aware of how brands, companies, and media outlets are working to make their audiences think and feel a certain way. I am still sometimes amazed by how easily they manipulate the public's thoughts. Graffiti artist Banksy commented on this idea, noting that "they have arranged the world to put themselves in front of you". Advertising is a constant, and knowing how to navigate it and see how you are being manipulated is important for making educated decisions.

Children can learn visual literacy skills through illustrated books. Scholastic suggests discussing the pictures with the child readers and talking to them about how the pictures make them feel, why things look certain ways, how the words match the pictures, and how they think the artist made the illustrations. They also mention talking about the cover art, typography, end papers, the title, and how these things are important to the book.[19] Students should be able to look at visuals and decide what it is, why it was made, and how it was created.[20] Encouraging thought about the visuals will improve ability to understand deeper ideas behind the illustrations, which leads to better visual literacy skills.

These three types of literacy come into play with reading books. Literacy skills are required to read the story and understand the words that are encountered. Visual literacy skills are important in a reader's ability to imagine the scenes that they are reading about, or to look at pictures in books and interpret how they relate to the text. And while printed books are a form of very simple technology, technology literacy skills come into play with interactive or digital editions of books.

Books as Portals

Laura Miller said that obtaining a book was about securing a portal. Reading a book can be a method of escape from the routines of daily life, a way to let imagination take over on a guided tour of another life in another world. Books have adapted as the world has changed, and as society becomes more dependent upon technology, books must continue to embrace the new needs and expectations of their audience.

My goal for this project was to dive into a fantasy world, develop all the visuals, and find ways to turn the story into a 'portal' to that world. I planned to write an original story, develop concepts for the character designs and environments, decide on a style, create illustrations and

7

layout the print book, and model 3D objects and characters for augmented reality integration. With the design of this book, illustrations, and additional materials, I hoped to create something that could function like a 'portal' by mixing traditional and new technology to encourage imagination and education.

Chapter 2: Kaya: Storytelling and Visual Development

"In reading a novel, any novel, we have to know perfectly well that the whole thing is nonsense, and then, while reading, believe every word of it. Finally, when we're done with it, we may find - if it's a good novel - that we're a bit different from what we were before we read it, that we have changed a little… But it's very hard to say just what we learned, how we were changed."
— Ursula K. Le Guin[21]

If Ursula K. Le Guin is correct that we are changed in unknown ways just by reading a story, then I believe there is a definite argument for being changed in even deeper unknown ways by *writing* a story. The world and characters and storylines build up, connect, grow and change constantly. In an unexpected way, the story you thought you had will adapt itself into something else. But in my experience, it adapted into something better than expected, into something that demanded more than expected, and into something that will occupy my brain for years to come. As J.R.R. Tolkien once said, "The mere stories were the thing. They arose in my mind as 'given' things, and as they came, separately, so too the links grew. An absorbing, though continually interrupted labour."[22] Years and years could pass in exploring and creating these stories around Kaya's world. I wonder what I might discover if I thought about the origins of the Shadows and the Spirits, Rosetta's early years and arrival to Hagenberg, Kaya's missing parents, Margit's long and powerful tale, Laila's observations and storytelling evenings, Soren's vast and wild expeditions, and how Kaya's adventure to find King BjÖrn affected the rest of her life. And perhaps I will, one day.

What began as an attempt to write a short children's story has evolved into a desire to write a much larger, wider story. For now, however, Kaya's short adventure to correct her curiosity and bring the Spirits back to Hagenberg is as far as this story goes.

Hagenberg is a northern, polar town, where people are happy to do the same things every day, the weather is never unpredictable, you always know what to expect for dinner, and nothing

unusual ever happens. That is, until young Kaya is tricked by an arctic fox into waking evil Shadows. Markings on the stones that surround her town begin to glow, and chaos ensues. The predictable way of life in Hagenberg is in peril, unless Kaya can put things right again.

Kaya must go on a journey to find the polar bear Spirits, the only ones who can chase the Shadows away. Along her journey, she is helped by Laila, a storyteller whose tales come to life in the smoke of a campfire, Synnøve, who gives her a special gift, the sisters Ingrid and Astrid, who guide her in which way to go, and Hilde, a scientist who gives her what she needs to reach her ultimate destination.

It will take intelligence, bravery, and strength if Kaya wants to save her town, but she is the only one who can introduce a new balance to Hagenberg and change it forever.

The Writing Process

According to Pixar, the basic approach to storytelling is to fill in the blanks of "Once upon a time there was ___. Every day, ___. One day ___. Because of that, ___. Because of that, ___. Until finally ___."[23]

I used this simple breakdown to get my ideas for Kaya's story simplified. I also referenced a 15 part series about character arcs and structuring plot to help guide my story's progression.[24] These suggestions proved invaluable to make a streamlined and cohesive story, and were very useful in narrowing down my ideas. The original story concept was more fitting to a middle-grade short novel, but I readapted it to fit into an illustrated children's book's restricted length and complexity.

I followed much of K.M. Weiland's advice on "Helping Writers Become Authors", where she outlined the best way to break down a story into three acts, and what types of events should occur in each one. I introduced Kaya's world as one of predictability and normalcy,

which immediately marked Kaya, with her alien mother and curious nature, as an outlier and potential for conflict. From there, the things which made Kaya different become the things which are the driving force behind her successful adventure. In the end, she even manages to bring some of her excitement and love for imagination and knowledge back to her town, changing it forever. I made sure that the ending scene mirrored the introductory scene, both in text and illustration, to demonstrate this change.

Once I had the story written, I broke it into smaller pieces to decide what parts would be on each page. Then I could determine how many illustrations I would need, and what scenes they would need to feature. I decided not to work from first page to last, but to jump around throughout the book and draw them in no particular order. This was to avoid any chance of a visual progression of style throughout the book. In case my style changed slightly from first illustration to last, I didn't want it to be obvious as someone looked through the book. Keeping them mixed would hide any changes or adjustments that might occur over the many months of illustration time.

Character Creation

I got ideas about my characters while writing the story, but in order to make an illustrated book, I needed to fully design how all of my characters would look. Each one needed a unique silhouette to make them quickly and easily identifiable on the page. Stretching and exaggerating their features and forms not only helped to incorporate some of their personality into their appearance, but also allowed them to be distinctive. I also gave them personalities, goals, dreams, and backstories, knowing that all of these facts about them could play into their final designs.[25] I also gathered up a lot of reference images, whether it was pictures of people or characters that had the right "feeling" for my characters, or pictures of clothing that I thought my

characters would wear. I considered my strengths and weaknesses, and kept those in mind when deciding how my characters should be posing in their scenes, and how much they would change from scene to scene. I wanted them to look good, and not try to do things that I wasn't yet good at.[26] I also listened to a podcast by Chris Oatley, a character designer for Disney, and got five great tips to keep in mind: incorporate surprising contrasts, create a strong, recognizable silhouette, skip drawing "turnarounds" of the characters, avoid clichés, and identify the "power center" or the most important feature on that character's design.[27] With all of this new information in mind, I began to write lists of facts about my characters, and make decisions about what that meant for their design.

Rosetta has a curved shape with thick and thin variations, giving her an otherworldly, elegant silhouette. Her double arms additionally set her apart. She always wears jewelry and long, flowing gowns that stream out behind her as she moves. Everything about Rosetta needed to look elegant, from her fashion to the slant of her eyes and the shape of her head, the narrowness of her waist and extended length of her fingers. With her graceful alien features, she is almost imposingly beautiful and intelligent, like a fashion model with three doctorate degrees. Her shoulders are always bare, showing off the starry pattern that speckles her skin. Her shape was inspired by Athenian vases, the grand councilwoman from Disney's *Lilo and Stitch*, fashion model "croquis" drawings, and the *Bird in Space* sculpture by Brancusi.

Laila, being a cozy sort of character, has a rounded, bundled silhouette, a bit like a penguin. She wears many layers to keep warm, and a scarf that wraps many times around her neck. Her clothing has a soft, squashy, too-big sort of look, but feels more comfy than sloppy. She's dressed warmly to echo her warm personality. Her coat has big pockets for holding many

different items: lighters to start her campfires, small books, crochet projects, snacks. She nearly always has quick access to anything she might need, in a "Mary Poppins's bag" sort of way.

Synnøve has very fluid, flowy clothing, with small delicate hands. She lives in a small house by the shore, and is a fisherwoman. Her flowy clothing mimics the flowing nature of the ocean she lives beside, and was based on clothing seen in two paintings of fisherwomen, which are replicated (somewhat vaguely) in frames on the wall inside her home. The first is a painting called *Fisherwoman on the Coast* by Norwegian painter Otto Sinding from 1883 (Figure 4). The second was an image captioned *Pecheuse de Crevettes*, or *Pretty Shrimp Fisherwoman*, on a postcard from Dunkerque (Dunkirk, in Northern France; Figure 5). Inspiration for Synnøve's clothing can be seen in the flowy clothing, asymmetrical skirt, and fabric head scarf of these two paintings (Figure 6). Small hands would indicate precise dexterity, good for tying knots and adjusting small fishing lures. Synnøve's home has shelves of books, some of which are about fishing and the sealife around Hagenberg, and some of which are journals which she has filled with her research and sketches of fish and creatures she has caught. She also displays her favorite homemade fishing lures on her shelves, and keeps jars of interesting rocks, shells, and other items she finds on the beach by her home. Under her bed are her tackleboxes stuffed full, and all her precious fishing poles.

Ingrid and Astrid both have vase-like forms with wide hips and thin waists, but while Ingrid is miniature, Astrid is tall and thin. I wanted them to look like complimentary opposites, convex and concave, short and tall, rounded and pointy. Where Ingrid was small, round, and exuded an excited energy, her sister Astrid was elongated and pinched, with a more prim and reserved essence. Their hair was drawn in similar curls all around their head to hint at a relation. Astrid's patterned sweater didn't quite match her striped pants, but made for a very whimsical,

wild appearance that reflected her personality. They both have wide hips, small waists, and very narrow wrists and ankles. Their thin necks lead up to similarly shaped faces. I kept the commonalities between the two characters similar enough to indicate their blood relation, while still allowing their big differences - height, shape, indicated personalities - to shine through and make them unique.

Soren's key thought was "bear-like", so I gave him a sturdy, strong appearance. He was based on a trapezoid shape with long limbs ready for all the mountain climbing he likes to do. Then I simply put him into clothing appropriate for his environment and activities, including warm boots, coat, and gloves, as well as a fuzzy hat to introduce a more playful, friendly element to his design. His poses are generally more dynamic because of his energetic and easily excited personality.

Kaya's silhouette was potentially the most difficult to design, but eventually became small with naturalistic shapes, based on circles and squares. Her large, heavy coat was balanced by big boots, and her figure was lightened by having her skinny legs connect between the two dominant forms. She's small and playful, but prepared for adventure with the dominant outlines from her winter gear.

Margit is based on an arctic fox. While foxes are associated with cleverness and trickiness, arctic foxes don't necessarily look menacing. Their tiny legs and fluffy bodies don't naturally instill a feeling of danger. To hint at her evil side, I altered her form slightly as the story progressed, becoming slightly more wolf-shaped as time passed. Additionally, with the exception of her first appearance, her shadow is always visible. Her shadow has scowling eyes and bared teeth, like the Shadows that she tricks Kaya into freeing, and it also serves as subtle

foreshadowing to her great transformation at the climax of the story when she becomes an enormous Shadow beast.

When designing these characters, I began with a rough sketch of my initial impression. I refined this first sketch to create simpler, more recognizable silhouettes, and finally added the details to make them unique and memorable. In the design process, characters' clothes and hair were given colors, but those were ultimately not used in the final illustrations of the book. Figure 7 shows a compilation of the design process for Ingrid and Astrid. I also drew the final designs of all the characters together, to use as a reference throughout the illustration process (Figure 8).

Research & Decisions

The landscape of Hagenberg is based on regions around Bodø, Norway. Daylight hours are extremely limited in winter, lasting from 10:00am until 2:00pm. With such limited sunlight, candles, fire, and lights are beloved in town. Even when the sun isn't up, there is light, called "blue light". Snow is very reflective, and the aurora borealis glows brightly in the sky.[28] I took this lack of sunlight into account with my illustrations, taking advantage of beautiful starry skies and auroras, and adding blue lanterns to several scenes. In low light, objects appear more greyscale. In my illustrations, all color comes from the light sources and reflections.

I also researched typical Scandinavian wildlife to determine what creatures Kaya might interact with, and selected from that list for the Shadows and Spirits. While permafrost keeps most foliage in Scandinavia low, warmer areas have evergreens. I surrounded Kaya's town with evergreen forests, which created an interesting silhouette against the stars and auroras. I was inspired by Viking runestones for the stones that surrounded Hagenberg. Vikings used a non-standard alphabet of runes based on sounds, and inscribed these on stones to act as memorials in honor of their ancestors.[29] While originally these designs were a larger part of the story, they still

feature prominently in one scene, and their Viking inspiration is clear. The runes used on this illustration are called Rodunik, and were designed by Adam Weisz (Figure 9). They were also inspired by original Viking runes. When translated to English, they are the first few lines of the story that Laila tells (Figure 10).

The aurora borealis was an important part of the story, and vital to the illustrations. The aurora lights are caused by solar wind and magnetospheric charged particles. An interaction between high-energy particles from the sun and neutral atoms in the earth's upper atmosphere cause the glowing lights. Excited oxygen causes green and red-orange light. Excited nitrogen causes deep red light, and ionized nitrogen causes deep blue. Aurora lights are in three bands, and are most commonly greenish yellow with red light generally only on the top or bottom. Rarely, every ten years or so, it can appear blood red from top to bottom.[30] The colors depend on the presence of oxygen and nitrogen in the atmosphere. I wanted to use the green and red to indicate good and bad in my story. Because nitrogen enters the atmosphere from decomposing plants and animals, and nitrogen causes red aurora lights, the connection between death and red auroras creates a fitting tie between the red auroras and the appearance of the Shadows in Hagenberg. Oxygen is associated with breath, growth, and life, and causes the green aurora lights. The connection between life and green auroras further pushes the green connotations of renewal and a full life, which creates a fitting tie between the green auroras and peacefulness in Hagenberg.

At the beginning, the auroras are plain green with very little color variation, indicating the consistently predictable nature of life in Hagenberg. With the release of the Shadows, the auroras turn blood red. Some green returns into the aurora lights when Rosetta goes back to fight the beast, and even more green mixes in when the polar bear Spirits return. Once the crystals are

16

replaced, and the balance between Shadows and Spirits are restored, the auroras glow in natural multi-hued color schemes, indicating the return of depth, harmony and variety to life in Hagenberg.

Chapter 3: Kaya: Illustration & Print Design

"What an astonishing thing a book is. It's a flat object made from a tree with flexible parts on which are imprinted lots of funny dark squiggles. But one glance at it and you're inside the mind of another person, maybe somebody dead for thousands of years. Across the millennia, an author is speaking clearly and silently inside your head, directly to you. Writing is perhaps the greatest of human inventions, binding together people who never knew each other, citizens of distant epochs. Books break the shackles of time. A book is proof that humans are capable of working magic."
— Carl Sagan[31]

Once I had a storyline written out and character designs created, it was time to decide on an illustration style and begin laying out the book. I wanted to create a style that was unique and appropriate to the story. I also wanted to play to my strengths and work around my weaknesses, and create an illustration style that would allow me to work as quickly as possible to compensate for the book's length.

Illustration Styles & Processes

The style of the illustrations had to express the essence of the story, and had to be a relevant, sensible choice for the overall mood and ideas presented. I sketched a simple scene of Laila standing in front of her home, with a few light sources to play with, and began to render the sketch in multiple styles. I wanted to test out these variations to see what worked and what did not.

I tried several illustration styles in my attempt to find one that best fit the story. My first version was very detail intensive with a lot of shading and attention to light sources reflecting off objects (Figure 11). While I liked the overall look it was achieving, it was highly time consuming. Knowing that I had 30+ illustrations to do in a constricted amount of time, I needed to simplify. Because the first style I tried was so dark and monotoned, except where light sources added color, I decided to try a version where color was more dominant (Figure 12). I liked the look of this as well, but it didn't capture the right feeling I was trying to achieve. It was bright,

but felt very flat. I started again, this time exploring an extremely simplified black and white flat shading style, and decided almost immediately that it wasn't right either (Figure 13). For the fourth version, I used just black and white to do detailed shading. I liked this one, but it was even more time consuming than the first style (Figure 14). I decided to step back, and study what it was I liked and disliked about these various styles. Then I tried to mix and match elements together to achieve something that would work.

I liked the simplicity of color in the first version, where the light sources provided color on an otherwise monochromatic image. Because Kaya lives in an environment that receives very little sunlight during the winter months, light sources would be an important part of her life. The auroras, too, were very important to the story. Having the auroras and glowing blue lights as the main sources of color in the illustrations would be both impactful and relevant to the story. I also liked the simplicity of shading in the second style I tried, and decided that blockier, simple shading would be best. In order to avoid the flatness that I didn't like, I added textures. The backgrounds would be a simple grey, with overlays of desaturated watercolor textures. I also added textures on top of that to individual parts of the illustrations to add variety and speed up the shading process (Figure 15).

The final result was a simple line drawing in black, done with a Photoshop brush customized to behave like a thin paintbrush loaded with ink. The medium grey background was textured with watercolor overlays. Additional fabric or pattern textures were added to individual parts of the illustration as needed, such as on clothing or upholstery. I added shading with a custom brush that behaved like a graphite pencil, in black or white, set at varying opacities as needed. The light source colors and reflections were added on their own separate layers, using the same custom brush. Two adjustment layers were added on top of the illustrations. I added a

vignette effect with a gradient layer, and skewed the grey to a more interesting purple-tinted grey via custom curves settings.

When I needed reference images, I searched for images that were free of any copyright. I used Google's search options to find images that were part of the Creative Commons, so that no matter how much or little I changed the poses of the people, animals, or the layout of the scenery I was referencing, there could be absolutely no problems with copyrighted work.

I shared previews of my illustrations on social media as I went, featuring it on my Facebook, Instagram, and Tumblr accounts. I was always interested to see friends' and family's reactions to these work-in-progress images. After sharing an illustration showing the Beast roaring angrily (Figure 16), I got comments like "Yikes!", "I thought this was suppose[d] to be a kids book", "woah, your dark side", and "He is scary!". I was asked why the story seemed so dark, why the illustrations were so dark, and why this terrible scary beast had destroyed a village and evil Shadows were terrorizing people, if this was meant to be a children's story.

Two quotes came to mind when I began to answer these questions. The first was from J.R.R. Tolkien, who wrote in a letter to his publisher: "a safe fairyland is untrue to all worlds".[32] The second was from *Coraline* by Neil Gaiman: "fairy tales are more than true – not because they tell us dragons exist, but because they tell us dragons can be beaten,"[33] referencing and paraphrasing a quote originally by G.K. Chesterton.[34] It's no secret from children that there are scary things in this world, and I agree with Tolkien, Gaiman, and Chesterton's approaches to it. There's no sense in writing a perfect, fright-free world. It simply doesn't exist. Instead, I wanted to write a world where there *were* things to be afraid of, but where these were things that could be fought and defeated. This would be a world where the good would triumph over evil, where the scary things could be beaten by our heroine and her friends. The words of Albus

Dumbledore, written by Steven Kloves for the movie adaptation of *Harry Potter and the Prisoner of Azkaban*, have stuck with me: "happiness can be found, even in the darkest of times, if one only remembers to turn on the light."[35] Presenting a world in which there is always hope and always a chance for victory was important, because that's the kind of world that children deserve to grow up believing in.

One last quote sums up the way I wanted to view this world, from an episode of "Doctor Who" titled *Vincent and the Doctor*: "The way I see it, every life is a pile of good things and bad things. Hey. The good things don't always soften the bad things, but vice-versa, the bad things don't necessarily spoil the good things and make them unimportant."[36] A balance can always be found between the good things and the bad things, and that was an idea that I wanted to express in this story. This idea is most obviously shown when the Spirits and Shadows are finally in balance at the end of the story. Both exist, and you can't get rid of the Shadows just because the Spirits have arrived, but the bad feelings of the Shadows cannot spoil the good feelings that the Spirits bring.

Book Layout

The standard picture book is about 32 pages, with a goal of 500-600 words, and 1,000 words being the top figure.[37] My first draft of *Kaya and the Shadow Spirits* was enormous, and certainly too long for a picture book. I edited, cut, and combined scenes wherever possible. My final result was a 68 page book and a manuscript of about 2,000 words. It was just over twice the size of the "standard." I decided to keep it at this size, because to shorten it any more would require changing the story that I wanted to tell. I didn't want to "dumb it down", cut out big sections of the story, or leave out any of the events simply for the sake of word and page count. I knew my story was for a slightly older audience than the typical picture book, and felt that a

longer than standard book would be acceptable.[38] In retrospect, I wish that I had simplified for the sake of time and quality. If I had only needed to complete 10 to 15 illustrations, as opposed to 35+, I could have dedicated more time to each one to ensure all the details looked exactly as I wanted them.

I chose to produce this book through lulu.com. After having used their services for previous projects, I knew their print and binding quality would be up to the standards I hoped to achieve. The number of options they have available for customizing a book is also a huge benefit to using their services.[39] I designed Kaya and the Shadow Spirits to be an 8.5" x 11" book, making it large enough to show off the illustrations and have big, easy to read words for the child readers. Lulu offers letter size books in both paperback and hardcover versions, with options for either a case wrap or dust jacket on the hard cover. I formatted the final version of the book to be hardcover, 8.5x11, with a dust jacket with a matte finish. The dust jacket allowed for extra flaps, where I could put information about the story and myself.

The illustrations are set to full bleed and the edges fade into black, which works to pull the viewer into the scenes. The text is placed in generally predictable places at the top or bottom of the pages, except where there were opportunities to place the text within the illustration so that it could be framed by objects in the scene. All text size and formatting was kept consistent, set in Adobe Typekit's Museo Slab, 300 weight, white, 12.5 point size with 18 point leading. If necessary, I added a faint, diffuse dropshadow behind the text for improved legibility.

I wanted to set the illustrations for Laila's story-from-long-ago apart from the rest of the story in a subtle way. Placing these scenes into frames and handling the shading a little differently allowed me to give them a "story-within-a-story" feeling while still keeping the overall look consistent (Figure 17). The outlines are sketchier in these illustrations, and the

shading on the figures is rendered to a fuller degree. They're also contained within "frames" to visually indicate that the story being told is slightly separate from Kaya's story. However, the figures break the plane of the frames around them, indicating that the events of this old legend are escaping into the present story.

Once I had created a unique, appropriate illustration style for this book, I carried the style throughout all 35+ illustrations. My careful attention to detail ensured consistency and coherency, and thorough research of picture book standards ensured that my book could convincingly belong on a Barnes and Noble shelf when finished.

Chapter 4: Kaya: Augmented Reality

"Fantasy is hardly an escape from reality. It's a way of understanding it."
— Lloyd Alexander[40]

My original concept for introducing technology into print books was to incorporate augmented reality via the Aurasma app. I wanted to create characters or environments that the viewer could reveal by pointing their smartphones at the page, and then look at all sides of the 3D additions. I began by doing research on what similar books and technologies existed.

Approaches for Digital Books

Digital books come in varying degrees of interactivity and complexity. Most e-books are simply a digital version of the print book, where the reader turns digital pages in the same way that they turn print pages. Digital magazines today are making use of embedded videos, links, and scrollable areas on pages. Some children's book apps exist, such as Peter Pan: Disney Classics app, that have far more interactivity.[41] The reader can tap characters to see their names pop up on screens, the illustrations animate, and there are activities and games to play between pages. There are also a few augmented reality books, which use either a computer's webcam or a smart device's camera to "read" the images on the pages of the book. Where virtual reality replaces our real world with a simulated one, augmented reality simply adds objects to our real world. Augmented reality uses a camera to show a live view of real world environments with simulated objects added to it on screen. In an augmented reality book, when the camera finds a recognized page, it displays an on-screen 3D scene that looks as if it has magically popped up on the surface of the page. *Dinosaurs Alive!* attempts to use a computer webcam to make 3D scenes show up, including tiny habitats with a dinosaur egg that readers can hatch by pressing the correct keys on their computer's keyboard.[42] I wanted to use the technology available to me to create a version of *Kaya and the Shadow Spirits* that would use technology in an intelligent,

sophisticated, and functional way to enhance the reading experience and add educational elements to the story.

Augmented Reality

Surprisingly few augmented reality books exist. A few that I could find included *Jack Hunter: the French Connection* by Martin King, *The Search for Wondla* by Ton Deterlizzi, *Meet the Animals* series from BooksARalive, *Dinosaurs Alive!* by Robert Mash and Stuart Martin, *The One and Only Ivan* by Katherine Applegate, and *Two Left Feet* by Adam Stower. Penguin Classics explored using augmented reality with a few of their classics, such as *Moby Dick*.[43] Sony Playstation 3 put out *Wonderbook: Book of Spells*, a physical book with augmented reality integration allowing readers to study and practice spells from J.K. Rowling's *Harry Potter* series.[44] I thought it was strange that there were so few augmented reality books, when the technology was easy to obtain, and there were free production options available.

Aurasma is an augmented reality app that uses the camera of a smartphone or tablet to identify images and overlay on-screen 3D models, animations, or videos on top. Aurasma is available for anyone as a free app in both the Apple app store and the Google Play store, and is used by both businesses and individuals. In addition to companies such as Universal Pictures, Maybelline, Forever 21, Marvel Entertainment, and GQ, teachers are common users of Aurasma, putting it to work for them in the classroom.[45]

Aurasma works by identifying images with the smartphone's camera. Once it locks onto an image it recognizes, it loads the "Aura", or 3D object, animation, or video that has been assigned to that image. Often these Auras are videos placed into magazines, click-throughs to websites on advertisements, 3D models of products in catalogues, or other interactive, educational, or entertaining elements placed onto any printed material or physical scene.

Aurasma is designed to be simple to use, allowing its users to assign Auras in three steps. Once the 3D content is loaded into the library, the user only needs to take a photo of where the Aura should be placed, scale the content and move it into position, and save it. The Aura content instantly becomes viewable when the Aurasma app is open by any user worldwide, as long as their smartphone's camera is pointed at the matching target image.

I had several ideas for how to implement augmented reality into my story. I considered illustrating an "alternate" version of the book, where the pages were simply environments and the characters and buildings would appear when the reader pointed their smartphones at the pages. I considered a version where the pages were illustrated the same, but the characters would become 3D and walk around the page or wave at the reader when viewed through their smartphone. I also considered a version that would involve a map of Hagenberg and the nearby islands. A symbol would be printed on a corner of certain pages, and when the reader pointed their smartphones at the page, a 3D Kaya would appear, holding a sign to tell the reader where to look on the map. When they pointed their smartphone at that location on the map, they would be able to see the miniature 3D landscape, complete with houses, characters standing in front of them, and some trees and other natural features. I also considered an adventurous version of the story which would use the GPS location in the reader's smartphone. It would place islands, viewable through their smartphone's camera, in physical locations close to the reader. They could travel from island to island with Kaya on her journey to find the Spirits. This idea was inspired by Tokyo's Sunshine Aquarium, which created the Penguin Navi app that allowed visitors to follow augmented reality penguins along the sidewalk to find their way to the aquarium.[46] Ultimately, none of these worked like I wanted them to work. I discovered a few problems with augmented reality books, and realized why there are so few in existence.

Augmented Reality: The Problem

So why aren't more children's book publishers using augmented reality? The technology is readily available, and today's target audience is already familiar with using smartphones and tablets. It's possible that anything based on a book that has interactive elements is simply turned into a game or a movie. It's also possible that the publishers who handle children's books focus on the print and illustrative aspects of the market, and do not have staff who work in interactive design. Interactive and print design are, by nature, two separate areas of graphic design. Most people have a preference either one way or the other. Mixing the two requires different skill sets that not every designer has, and that not every designer has the time to dedicate to developing fully.

It's possible that the required use of two handheld devices - the print book and the smartphone or tablet - makes it less appealing. Holding a book open while pointing a phone at it, trying to see what will appear, is potentially more than young readers are able to handle with their small hands. Isolating the experience to solely the book or solely the device simplifies portability and manageability. Additionally, there's a bit of a learning curve to making the book and augmented reality technology work together, which was evident in several YouTube videos of people looking through the *Dinosaurs Alive!* book.[47] With Aurasma, the phone's camera had to be pointed at the target image in the exact same position and angle each time. If the reader tried to move the camera too far while looking around at the 3D object, it would lose the target and the 3D object would disappear, which became frustrating while trying to get a closer look.

The idea itself is appealing: looking at your normal, printed storybook and seeing something extraordinary, something that can only be revealed in a special way. The implementation of the idea needs finesse. It needs to be simplified and made easier for the target

audience to use. With the invention of hands-free devices, using these to view the augmented reality would simplify the experience.

Microsoft HoloLens is a holographic computing platform, worn like glasses, that allows users to view programs in the space around them, and work using gestures with their hands. It takes a step beyond augmented or virtual reality to allow the user to interact with the 3D objects they see. It can scan and map the user's environment, allowing the 3D objects to interact perfectly with the actual objects in the room. The holograms can be 'pinned' to actual locations, making the experience of interacting with the 3D objects more impressive, believable, and exciting.[48] However, this technology is not widespread or readily available like smartphones. If this technology can take off, it opens the concept of books as portals to interact with an entire room environment. 3D objects or characters could be standing in a child's bedroom as they read the story. The reader could wave their hand to help defeat the villain, search for clues among their bedroom furniture, and follow little creatures on adventures throughout their houses. HoloLens incorporated books could turn their rooms into other worlds and surround them with fantasy landscapes and characters, capturing their excitement and imagination in deeper ways than ever experienced before.

Children's E-Books

There are hundreds of children's book apps in both the Apple and Android app stores. All of them have varying amounts of interactivity, from the simplicity of page turning to the very well designed Peter Pan storybook app with simple games and activities incorporated into the story. I wanted to use some of these ideas in my digital edition, while also taking the opportunity to make it valuable and educational, rather than just full of superfluous additions. If augmented

reality's technology was not yet refined enough to achieve my goals, an interactive *Kaya and the Shadow Spirits* app was my next solution.

Chapter 5: Kaya: Interactive App

"Read. Read anything. Read the things they say are good for you, and the things they claim are junk.
You'll find what you need to find. Just read."
—Neil Gaiman[49]

I wanted to structure this digital version of the story to include hidden educational extras. I wanted to add something to the book that wasn't there in the printed version, and that wouldn't work as elegantly in a print edition. If a digital version exists, there should be a compelling reason for it, and taking the opportunity to teach the readers about parts of Kaya's world would be perfect.

Kwik App Development

Most app creation involves heavy code writing, a skill which most graphic designers do not possess. I can create all the necessary graphics, but without the coding knowledge, it wouldn't function. Luckily, things are being made easier for people who do not know how to code. Kwik is an extension for Photoshop that allows those without coding knowledge to create a functioning app design right out of their Photoshop documents.[50]

When I was creating the illustrations, I used many layers in Photoshop to keep different parts of the drawing separated, for easy edits later. I always applied the light colors on their own layers, so they could be turned on or off. This made formatting files for use in the Kwik app very easy. I saved multiple .jpgs of each scene, one of the final version as it appears in the printed book, and usually one or two with various light sources "turned off". Kwik allows me to create invisible buttons, which I used as "light switches" for the app. When the reader taps on a lantern, they can make the light fade on or off. The button created using Kwik, when activated, can turn images on or off. By layering multiple .jpgs of a scene, one with the light on and one with the light off, the button can make it look like the light is turning on and off.

Kwik allows me to set timing for each of the animations I create. I can tell it to wait 3 seconds before revealing the aurora in a scene, or I can tell it to blink a lantern on and off. I can also control how soon text appears, whether it is on the page immediately or if it should fade in once the reader has swiped to that page. These timed animations ensure that each page of the app will "play" for the reader without needing a cue, and then the reader can swipe the screen to turn to the next page of the story.

So that the digital edition could include experiences not available in the print version, I decided to add educational screens to the story (Figure 18). Throughout the book, the reader can tap on various glowing objects, like reindeer, the arctic fox, auroras, and crystals. When they tap on the glowing object, a book pops up on screen that shows pictures and a list of facts about the various topics. Some pages even have information about activities they can do, like a science experiment to grow sugar crystals or hosting their own afternoon tea. Navigation back to the story is simple, with a "Return to Story" button in the bottom right corner of the screen. These extra pages of fun information add to the educational experience of the book, and are an extra hidden surprise only available in the digital format.

To make the reading process more intuitive, I added small indicators for the reader to pay attention to. When the animation is complete, the right edge of the screen will glow blue. This lets the reader know that it is safe to turn the page without missing any animations that have not yet played. When there are educational elements available on a page, a blue outline around the object subtly flashes. This indicates to the reader that the object is clickable. When the reader taps on it, it opens the "book" to give more information about the subject. Navigation to get back to the story is a straightforward "Return to Story" button at the bottom right. Pages can be turned by swiping one finger across the screen, a common gesture on touch devices. By combining

familiar touch gestures with subtle visual cues, the use and navigation of the *Kaya and the Shadow Spirits* app is made as simple as possible. I created a directions screen that appears before the story begins, to give readers a quick demonstration of these features, as well as an example, explanatory book popup (Figure 18). On the directions screen, the lantern animates on and off, and is then clickable to test, the book's outline glows, and can be clicked on to show the book popup, and the right edge of the page glows, just like it will on every other screen to indicate all animations are complete and it's time to turn the page. Figure 19 shows an example page from the story. The lantern turns on when the reader swipes to this page, and they can then tap it to turn it off or on again. The outline around the reindeer flashes briefly 3 times, and when tapped on, the book screen pops up, which has information and images of reindeer. All educational pages are formatted similarly, with basic information and fun facts on the "left page" and images on the "right page". On the educational pages about crystals, there is a clickable link to a video demonstration for how to grow sugar crystals at home, and on the page about tea parties, there is a clickable recipe for making raspberry thumbprint cookies. I wanted to include simple activities or experiments kids could do at home, to extend their educational experience into real activities beyond simply reading the book.

Publishing the App

Once I had completed the design and animation of each page in the app, I used the functions built into Kwik to publish the app into Corona SDK, which allowed me to view a test version of the app on my computer screen. I could click or click and drag to simulate tapping and swiping. After ensuring all the interactions in my app were working properly, I used Corona SDK's features to build the app for an Android device. Corona SDK can also build for Apple devices, but the process of publishing an app onto an Apple product is much more involved and

requires many more steps, subscriptions or memberships, and a long process of app-approval before it is available to use from the app store on your device. With Android, Corona SDK saves my app as a .apk file, which I can drag into the downloads folder of any Android device. Once the .apk file has transferred to downloads, I simply locate it on the device, tap it, and tell it to install. The app is instantly useable and functions perfectly. I installed my Kaya app onto a Nexus 7 for demonstration purposes, but any Android-based device would be able to run the app once installed from downloads,

Chapter 6: Books as Portals

"Let me give you some advice: Try to approach things without preconceived ideas, without supposing you already know everything there is to know about them. Get that trick down and you'll be surprised at what's really all around you."
— Charles de Lint[51]

Laura Miller, the author of the original quote which inspired this project, wrote about "the single book that had most influenced" her, *The Lion, the Witch and the Wardrobe* by C.S. Lewis. She recalls that it "showed me how I could tumble through a hole in the world I knew and into another, better one, a world fresher, more brightly colored, more exhilarating, more fully felt than my own".[52]

Kaya and the Shadow Spirits

The most frustrating thing about writing this story was the requirement to keep it short. There needed to be only a few sentences per page, and it needed to be around 60 pages maximum. This extreme limit on writing forced me to narrow the original story concept immensely, and leave out many things which could have added greater depth and suspense. There was so much more to the story in my mind than what made it into the final book. This also presented a challenge in ensuring that the simplified story made sense to a reader who did not know all the extra details that existed, locked away in my imagination. This required having several friends read the story and ask me any questions that came to mind as they went, and then reworking the story to answer as many of them as possible. Many edits were made over the span of about eight months of working on the print edition of the book.

Though the story in its present state works and includes the main ideas I wanted to write about, there is so much more that I wanted to add. There are backstories and side stories and much deeper character relationships that I would have loved to explore. The character of Margit in particular has some great backstory I would have liked to include, with the idea that she was

even more special than a Shadow able to disguise herself as a white fox. Additionally, the exchange of Kaya's biological mother and Rosetta would have been nice to include. The ideas that Kaya's mother may have needed to go with the aliens for health or lifesaving reasons, that Rosetta and Kaya's mother were exchanged in order to share technological knowledge and skills, or that they traded homes in order to satisfy curiosity or wanderlust - all were interesting possibilities I would have liked to explore. There was also a time in the brainstorming process where I wondered if maybe Laila was Kaya's grandmother, and that years ago Margit had attempted to trick her to place the Shadow Crystal as Kaya did, but it hadn't worked. There were also more developed ideas with the town of Hagenberg. Their science-fiction-style technology included the turquoise lights, unique methods of heat, travel, storage, and cooking, a special power center, greenhouses for growing food year round in their arctic climate, and portals to underground housing that could have better thermoregulation than aboveground homes. The special technology would be presented as completely normal, something Kaya was accustomed to since birth. However, when visiting Laila, she would see old technology: lightbulbs, woodstove heaters, cross-stitched pillows, etc, which would feel completely unusual and unfamiliar to her.

In this respect, I can fully identify with the feelings of J.R.R. Tolkien, who felt he had an entire world and mythology in his mind, if only he could get it all written down. But so many obligations in his life kept him from being able to write his story to the extent he wished, and he worried it would never fully be explored. He expressed these fears in his psuedo-autobiographical short story *Leaf by Niggle*, about a man who is polite enough to visitors, while secretly always thinking about his big project, and wishing for uninterrupted time to work and sincere encouragement about its worth.[53] These wishes are not only Niggle's, but they were

Tolkien's, and they are now mine. I believe the number of ideas I have about Kaya and her world deserve more time dedicated to them, and one day I hope to return to Hagenberg and give her story the full attention I cannot afford now.

The Illustrated Children's Book

My goal to give the illustrations a unique style helped to set them apart from existing stories. The shading style and color scheme capture the essence of the story and environment. Though the illustrations are mostly monochromatic and set at "night", they don't lack color or light because of the multiple, colorful light sources. I am pleased with the overall look of the illustrations and magical feeling they invoke. The landscapes and shapes look familiar, but the glowing blue lights and contrasted shading introduce a feeling of wonder. The characters' personalities become apparent in their designs, and all the background planning and research paid off. It was freeing to push myself to attempt drawing styles I had never done before, and while I would still like to go back and refine some of the drawings that got rushed, the resulting book is a successful realization of my goals.

Digital Educational Opportunities

The app version of *Kaya and the Shadow Spirits* offers opportunities for many types of education. The popups offer knowledge about various topics, but the three types of literacy skills are also improved. Reading the story increases literacy skills, using the app increases technological literacy skills, and analyzing the illustrations increases visual literacy skills. Combining the three skills into one experience offers learning benefits in both classrooms and at home. As a child, I absorbed information from my favorite stories like a sponge. If more information can be packed into a story app, children can learn even more from it each time they use it.

The potentials for expanding this idea are endless. Other stories could be adapted into the 'educational popup' format, teaching *Alice in Wonderland* readers about rabbits, longitude and latitude, croquet, and trials, or teaching *Where the Wild Things Are* readers about jungles and sailing. In addition to educational pages, videos, links, or pictures could be incorporated, especially with books that have been turned into movies. Multilingual versions would also be more easily available in a digital format, allowing users to switch between English and Spanish and French and countless others. Bilingual or language-learning editions could also be made, which show the story in two languages at once, allowing the reader to tap the words to switch them back and forth between the two languages.

The Kwik extension has options to incorporate timed voice-over and music. Narration for the stories lets the book read aloud to you, and can help with learning how to read, or learning pronunciation of a new language. These apps could become so complex that they function more like interactive movies with the pace being controlled by the reader, but that creates the question: at what point does it stop being a "book" and become more of a game? How can the app version of books still incorporate the print versions? Ultimately, when the augmented reality technology improves, I believe that will be the new technological life of books. I can imagine entire libraries of books with HoloLens incorporation, bringing characters and scenes straight out of the book and into the room, depending on the motions and interactions of the reader for the story to progress and the heroine to reign victorious.

Books as Portals

I think, in the end, this book is more of a portal for me as its creator than it may be for any of its readers. In order to design this book, from the characters, to the style and lighting, the illustrations and layouts, and augmented reality additions, I had to immerse myself in the story. I

had to get to know the heart and soul of the characters and understand who they were in order to determine how they should look. I had to figure out how each part of the story would make me feel in order to draw something that might inspire awe, or fear, or curiosity. I needed to understand the world so deeply that I knew everything that happened even *before* the events of the book, more than any of my readers will ever learn. For the long months that I worked on *Kaya and the Shadow Spirits*, I was absorbed into her world, thinking about it whenever my mind wandered. I found myself wishing I had a Spirit Gem to display on my desk, or owned a copy of the book about the aurora borealis and Spirits that Astrid gave to Kaya. I wanted these things to be real. I fell into the excitement of imagination and creation, and escaped for a little while into the portal of my book.

Notes

[1]   Miller, Laura. *The Magician's Book; A Skeptic's Adventures in Narnia*. New York: Little, Brown and Company, 2008. Print. p23. The quote I found online and featured on the poster was a slightly edited version of the quote in the book, which originally reads: "If I hadn't been able to obtain a copy of the book, I have no doubt that I, too, would have resorted to typing up one of my own. This was not about obtaining a possession, but about securing a portal." The idea of typing her own copy was in reference to a girl who loved *The Hobbit* so deeply, that when it went out of stock in bookstores before she could buy a copy, she borrowed it from the library time and time again to make a copy of her own using her family's typewriter.

[2]   Tentacled Monocled Sir, digital illustration by Ashley Marlowe. Illustration done Jun 2013, poster done Jan 2014. Awards won between Feb - May 2013. http://www.ashleymarlowe.com/Tentacled-Monocled-Sir

[3]   "HucksterHaven." *Etsy*. Web. 22 Mar. 2015. <https://www.etsy.com/shop/HucksterHaven?ref=l2-shopheader-name>.

[4]   Hammond, Wayne G. and Christina Scull. *J.R.R. Tolkien: Artist & Illustrator*. Boston: Houghton Mifflin Company, 2000. Print. p163-64

[5]   Carpenter, Humphrey and Christopher Tolkien. *The Letters of J.R.R. Tolkien*. Boston: Houghton Mifflin Company, 1981. Print. p171. "The Maps. I am stumped. Indeed in a panic. They are essential; and urgent; but I just cannot get them done. I have spent an enormous amount of time on them without profitable result. Lack of skill combined with being harried."

[6]   Hammond, Wayne G. and Christina Scull. *J.R.R. Tolkien: Artist & Illustrator*. Boston: Houghton Mifflin Company, 2000. Print. p179-184

[7]   Carpenter, Humphrey and Christopher Tolkien. *The Letters of J.R.R. Tolkien*. Boston: Houghton Mifflin Company, 1981. Print. p182-83. "I wish that I could say that I approve of the proofs of this jacket, herewith returned. I do not. I think they are very ugly indeed…. I tell you what I think, since I am asked: tasteless and depressing. But surely asking my opinion is a formality." and then "It was a great moment yesterday when I received the advance copy of The Fellowship of the Ring. The book itself is very presentable indeed. I think the jacket is no much improved, and is rather striking."

[8]   Hammond, Wayne G. and Christina Scull. *J.R.R. Tolkien: Artist & Illustrator*. Boston: Houghton Mifflin Company, 2000. Print. p148-51

[9]   Carpenter, Humphrey and Christopher Tolkien. *The Letters of J.R.R. Tolkien*. Boston: Houghton Mifflin Company, 1981. Print. p14-20. "I am also grateful and pleasantly surprised that the drawings for 'the Hobbit' can be used. I leave it in your hands as to the best way of reproducing and using them." "As for the illustrations: I am decided between knowledge of my

own inability and fear of what American artists (doubtless of admirable skill) might produce. In any case, I agree that all the illustrations ought to be by the same hand: four professional pictures would make my own amateurish productions look rather silly." "Even if I did not know your production costs have been excessive (and that I have been hard on proofs), you are most welcome at any time to anything you think I can do, in the way of drawing or redrawing, that is fit to use on The Hobbit."

[10]   *Coraline*. Focus Features, 2009. Film.

[11]   "The Art of Tim Burton." *Tumblr: Archive*. Web. 22 Mar. 2015. <http://artoftimburton.tumblr.com/archive>.

[12]   "Rune Stones." *Scandinavian Archaeology*. Web. 22 Mar. 2015. <http://www.mpm.edu/research-collections/anthropology/online-collections-research/scandinavian-archaeology/rune-stones>.

[13]   Hidalgo, Jason. "Peter Pan Disney Classics App." Web. 22 Mar. 2015. <http://portables.about.com/od/gamingdevices/ss/Peter-Pan-Disney-Classics-App-Review.htm>.

[14]   "Facts about Children's Literacy." *National Education Association*. Web. 22 Mar. 2015. <http://www.nea.org/grants/facts-about-childrens-literacy.html>.

[15]   Hart, Richard. "Kids Become Literate Faster with Multimedia Technology." *ABC7 San Francisco*. Web. 22 Mar. 2015. <http://abc7news.com/archive/7144362/>.

[16]   Cordes, Colleen, Lowell Monke, and Steve Talbott. "Technology Literacy." *Alliance for Childhood*. Web. 22 Mar. 2015. <http://drupal6.allianceforchildhood.org/technology_literacy>.

[17]   "The Importance of Visual Literacy." *Why Visual Literacy?* Web. 22 Mar. 2015. <http://ccb.lis.illinois.edu/Projects/youth/literacies/visual2.html>.

[18]   Iannone, Jason. "21 Ways Advertisers Are Manipulating You And You Don't Even Know It." *Distractify*. 17 Nov. 2013. Web. 22 Mar. 2015. <http://distractify.com/culture/ways-advertisers-manipulate-us-into-buying-their-products/>.

[19]   Stephenson, Susan. "Visual Literacy Through Children's Picture Books." *Scholastic.com*. 12 Sept. 2014. Web. 23 Mar. 2015. <http://www.scholastic.com/parents/blogs/scholastic-parents-learning-toolkit/visual-literacy-through-childrens-picture-books>.

[20]   Cairney, Trevor. "Visual Literacy" *Literacy, Families and Learning*. 22 July 2010. Web. 23 Mar. 2015. <http://trevorcairney.blogspot.com/2010/07/visual-literacy.html>.

[21]   LeGuin, Ursula K. "A Quote by Ursula K. Le Guin." *Goodreads*. Web. 1 Mar. 2015. <http://www.goodreads.com/quotes/456496-in-reading-a-novel-any-novel-we-have-to-know>. "In reading a novel, any novel, we have to know perfectly well that the whole thing is nonsense, and then, while reading, believe every word of it. Finally, when we're done with it, we may find

- if it's a good novel - that we're a bit different from what we were before we read it, that we have changed a little... But it's very hard to say just what we learned, how we were changed."

[22]   Carpenter, Humphrey and Christopher Tolkien. *The Letters of J.R.R. Tolkien*. Boston: Houghton Mifflin Company, 1981. Print.

[23]   Lamar, Cyriaque. "The 22 Rules of Storytelling, According to Pixar." *io9*. 8 June 2012. Web. 23 Mar. 2015. <http://io9.com/5916970/the-22-rules-of-storytelling-according-to-pixar>.

[24]   Weiland, K.M. "Creating Stunning Character Arcs, Pt. 1: Can You Structure Characters?" *Helping Writers Become Authors*. 9 Feb. 2014. Web. 23 Mar. 2015. <http://www.helpingwritersbecomeauthors.com/character-arcs-1/>.

[25]   Burgerman, Jon. 20 Character Design Tips. *Creative Bloq*. Web. Jul 22, 2014. <http://www.creativebloq.com/character-design/tips-5132643>.

[26]   Hassell, Lisa. Character Design Tips from 11 Leading Illustrators. *DigitalArts*. Web. Jul 22, 2014. <http://www.digitalartsonline.co.uk/features/illustration/character-design-tips-from-11-leading-illustrators/>.

[27]   Oatley, Chris. 5 Tips to Make Your Character Designs More Dynamic & Believable :: PWP #9. *ChrisOatley.com*. mp3. Jul 22, 2014. <http://chrisoatley.com/pw-9-five-tips-to-make-your-character-designs-more-dynamic-believable/>.

[28]   "How to Survive the Dark Winters." *My Little Norway*. 16 Dec. 2008. Web. 24 Mar. 2015. <http://mylittlenorway.com/2008/12/how-to-survive-the-dark-winters/>.

[29]   Sanderson, Nicole. "Viking Runes Through Time." *PBS*. PBS, 9 May 2000. Web. 10 Apr. 2015. <http://www.pbs.org/wgbh/nova/ancient/viking-runes-through-time.html>.

[30]   "The Cause | Causes of Color." *The Cause | Causes of Color*. Web. 10 Apr. 2015. <http://www.webexhibits.org/causesofcolor/4D.html>.

[31]   Sagan, Carl. "The Persistence of Memory." *Cosmos: A Personal Voyage*. PBS. WNET, New York City. 1980. Television.

[32]   Carpenter, Humphrey and Christopher Tolkien. *The Letters of J.R.R. Tolkien*. Boston: Houghton Mifflin Company, 1981. Print. p24. "A safe fairyland is untrue to all worlds."

[33]   Gaiman, Neil. *Coraline*. New York: HarperCollins, 2002. Print. "Fairy tales are more than true: not because they tell us that dragons exist, but because they tell us that dragons can be beaten."

[34]   Chesterton, G.K. "A Quote by G.K. Chesterton." *Goodreads*. Web. 23 Mar. 2015. <https://www.goodreads.com/quotes/341193-fairy-tales-do-not-tell-children-the-dragons-exist-children>. "Fairy tales do not tell children the dragons exist. Children already know that dragons exist. Fairy tales tell children the dragons can be killed."

[35]   *Harry Potter and the Prisoner of Azkaban*. Warner Bros. Pictures, 2004. Film. "Happiness can be found, even in the darkest of times, if one only remembers to turn on the light." Quote written by Steve Kloves, spoken by Michael Gambon as Albus Dumbledore.

[36]   "Vincent and the Doctor." Moffat, Steven. *Doctor Who*. BBC. 5 June 2010. Television. "The way I see it, ever life is a pile of good things and bad things. Hey. The good things don't always soften the bad things, but vice-versa, the bad things don't necessarily spoil the good things and make them unimportant." Quote written by Richard Curtis spoken by Matt Smith as The Doctor.

[37]   Sambuchino, Chuck. Word Count for Novels and Children's Books: The Definitive Post. *Writer's Digest.* Oct 24 2012. Web. Jul 22, 2014. <http://www.writersdigest.com/editor-blogs/guide-to-literary-agents/word-count-for-novels-and-childrens-books-the-definitive-post>.

[38]   Pattinson, Darcy. Picture Book Standards: 32 Pages. Fiction! Notes. <http://www.darcypattison.com/picture-books/picture-book-standards-32-pages/>.

[39]   "Create & Publish." Lulu - Online Self Publishing Book & EBook Company. Web. 24 Mar. 2015. <http://www.lulu.com/create>.

[39]   Hamilton, John. *You Write It: Fantasy*. Abdo & Daughters, 2011. p4. Print.

[41]   "Peter Pan: Disney Classics." *Disney Stories*. Web. 10 Apr. 2015. <http://disneystories.com/app/peter-pan-disney-classics/>.

[42]   Mash, Robert, and Stuart Martin. *Dinosaurs Alive!* London: Carlton, 2010. Print.

[43]   "Penguin Partners With Zappar to Bring AR to Moby Dick." *TNW Network All Stories RSS.* 17 May 2012. Web. 22 Mar. 2015. <http://thenextweb.com/media/2012/05/17/penguin-partners-with-zappar-to-bring-augmented-reality-to-moby-dick-and-other-classic-novels/>.

[44]   "Wonderbook™: Book of Spells." *Playstation*. Web. 22 Mar. 2015. <http://www.playstation.com/en-us/games/wonderbook-book-of-spells-ps3/>.

[45]   "The World's Leading Augmented Reality Platform." *Aurasma*. Web. 22 Mar. 2015. <http://www.aurasma.com/>.

[46]   "How Virtual Penguins Are Leading the Way to Tokyo's Sunshine Aquarium." *Jaunted The Pop Culture Travel Guide RDF*. Web. 10 Apr. 2015. <http://www.jaunted.com/story/2013/10/23/155636/53/travel/How Virtual Penguins are Leading the Way to Tokyo's Sunshine Aquarium>.

[47]   reallyaugmented. "Dinosaurs Alive - Augmented Reality Enhanced Book." Online video clip. *Youtube.* Youtube, 13 Apr. 2013. 8 Apr. 2015. <https://www.youtube.com/watch?v=97VowLv0MnA>.

[48]   "Microsoft HoloLens." *Microsoft HoloLens*. Web. 22 Mar. 2015.

<http://www.microsoft.com/microsoft-hololens/en-us>.

49   "A Quote by Neil Gaiman." *Goodreads*. Web. 1 Mar. 2015.
<https://www.goodreads.com/quotes/491284-read-read-anything-read-the-things-they-say-are-good>.

50   "Kwiksher: Mobile Application Development Plugins for Photoshop." *Kwiksher*. Web. 8 Apr. 2015. <http://kwiksher.com/>.

51   De Lint, Charles. *Someplace to be Flying*. Tom Doherty Associates, LLC. New York, New York. 1998. p121. eBook on books.google.com.

52   Miller, Laura. *The Magician's Book; A Skeptic's Adventures in Narnia*. New York: Little, Brown and Company, 2008. Print. p4

53   Tolkien, J.R.R. "Leaf by Niggle." *Tree and Leaf: including the poem Mythopoeia*. London: Harper Collins Publishers, 1988. 93-118. Print. "When people came to call, he seemed polite enough, though he fiddled a little with the pencils on his desk. He listened to what they said, but underneath he was thinking all the time about his big canvas.... He could not make up his mind what he thought about it, and wished he had some friend who would tell him what to think... What he would have liked at that moment would have been to see himself walk in, and slap him on the back, and say (with obvious sincerity): 'Absolutely magnificent! I see exactly what you are getting at. Do get on with it, and don't bother about anything else! We will arrange for a public pension, so that you need not.'"

Figure 1. *Tentacled Monocled Sir,* digital painting, poster design, 2013-14
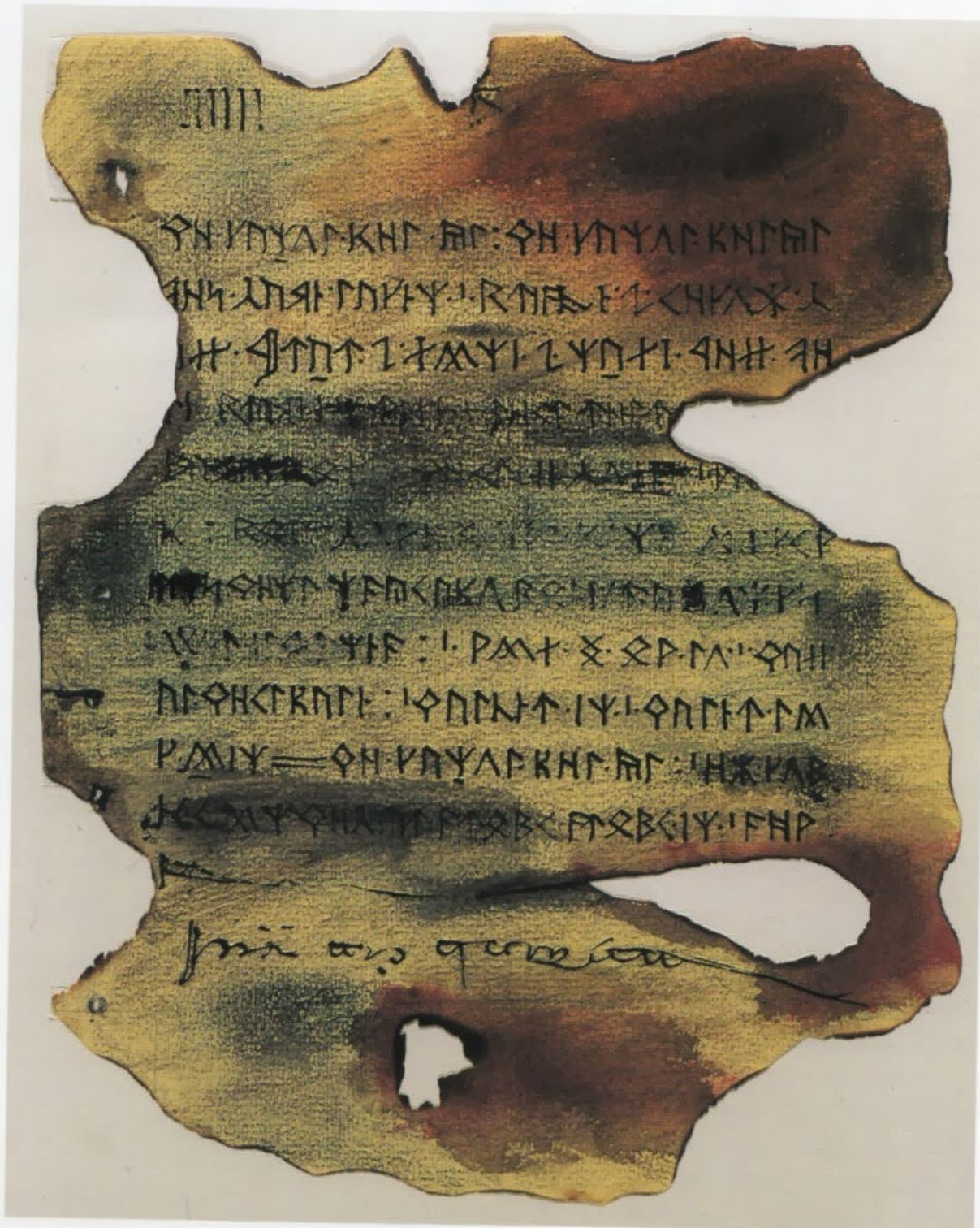
Figure 2. Tolkien, J.R.R. *Untitled (Book of Mazarbul)*. Black ink, colored pencil, watercolor, 1947
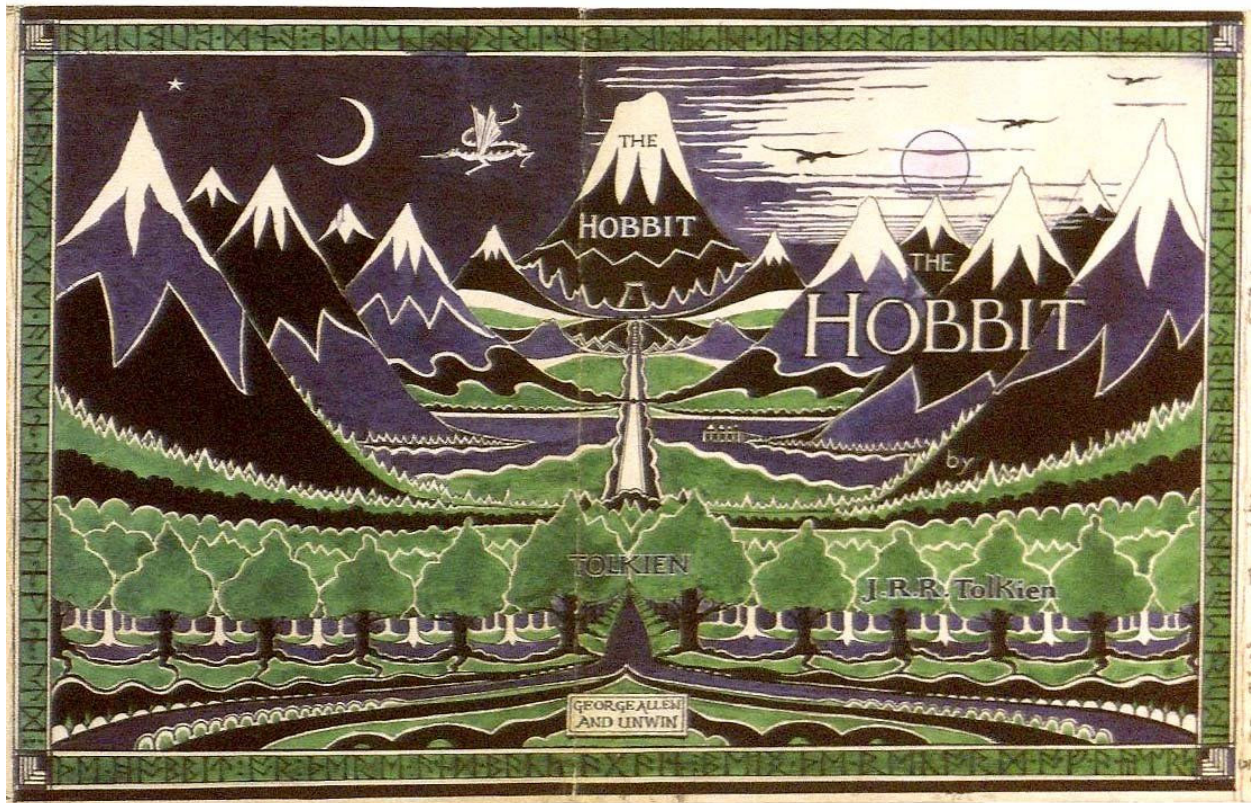
Figure 3. Tolkien, J.R.R. *Dust jacket for The Hobbit*. Pencil, black ink, watercolor, white body color, 1937.

Figure 4. Sindig, Otto. *Fisherwoman on the Coast*. Oil on canvas. 1883

Figure 5. *Pecheuse de Crevettes (Pretty Shrimp Fisherwoman)*. Postcard from Dunkerque (Northern France).

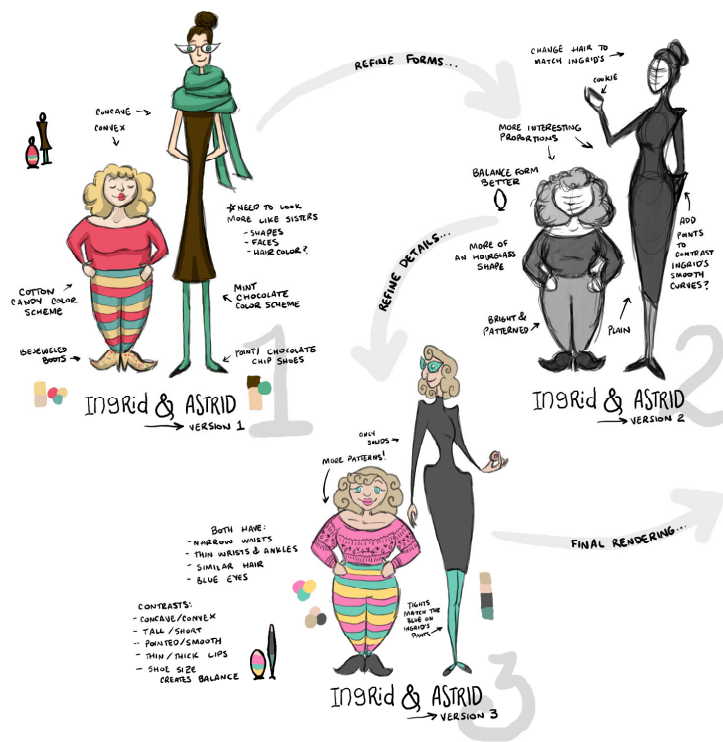Figure 6. Marlowe, Ashley. *Synnøve*. Digital painting, 2014.

Figure 7. Marlowe, Ashley. *Ingrid and Astrid, Design Process*. Digital painting, 2015.
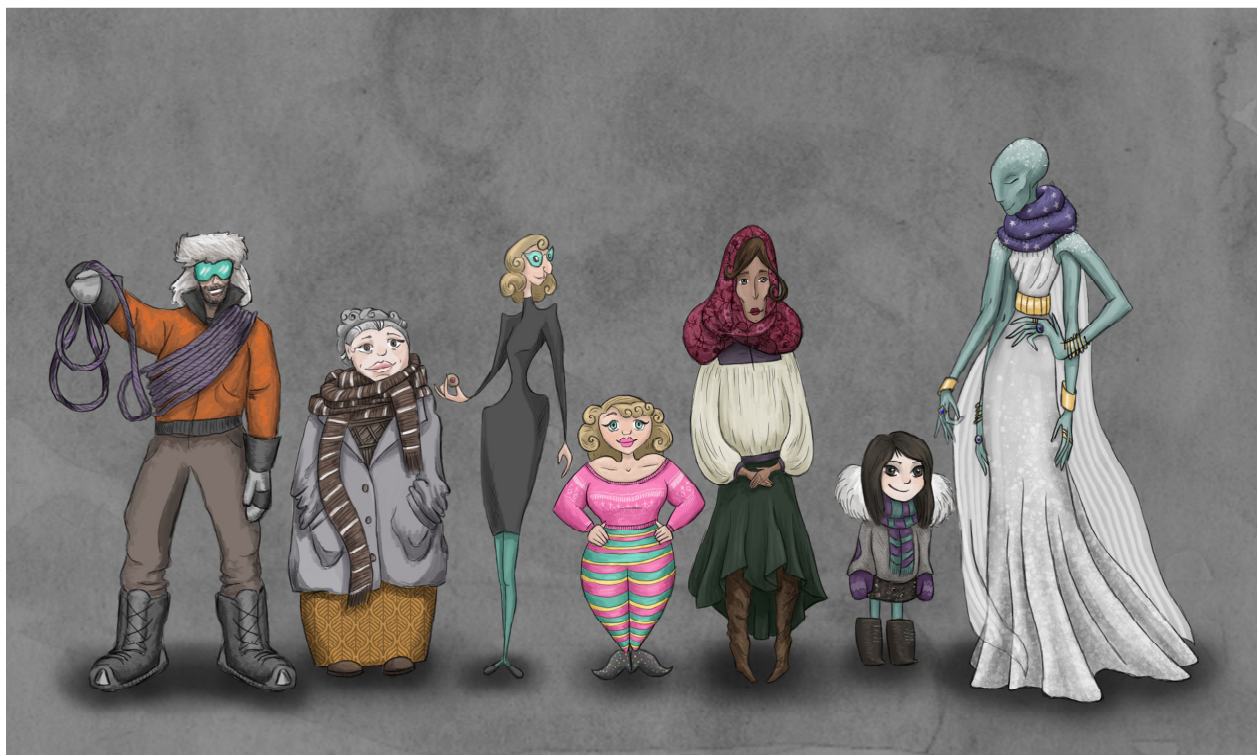

Figure 8. Marlowe, Ashley. *Character Lineup*. Digital painting, 2015.

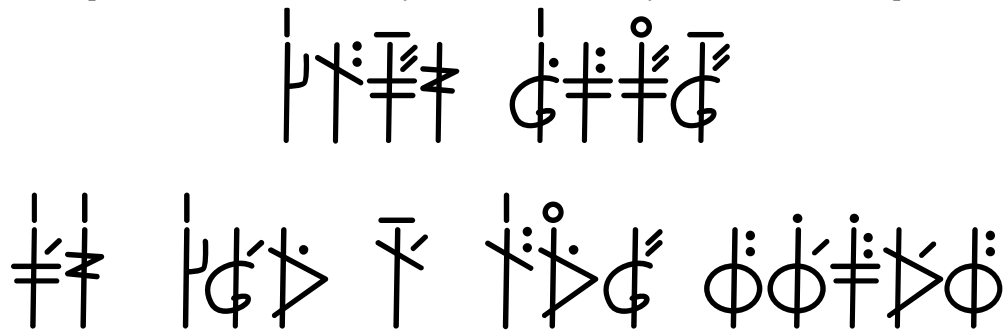These phrases translate to "Ashley Marlowe" and "Kaya and the Shadow Spirits"

Figure 9. Weisz, Adam, Daniel Weisz, and Ashley Marlowe. *Rodunik* Samples. 2014.

Rodunik on the main side of the stone translates to "Once Hagenberg was a town full of Spirits and Shadows. Bright shimmering Spirits shaped like animals kept the dark night terrors away" around the outer banner, with "Fox" "Beast" and "Shadows" among the animal illustrations.

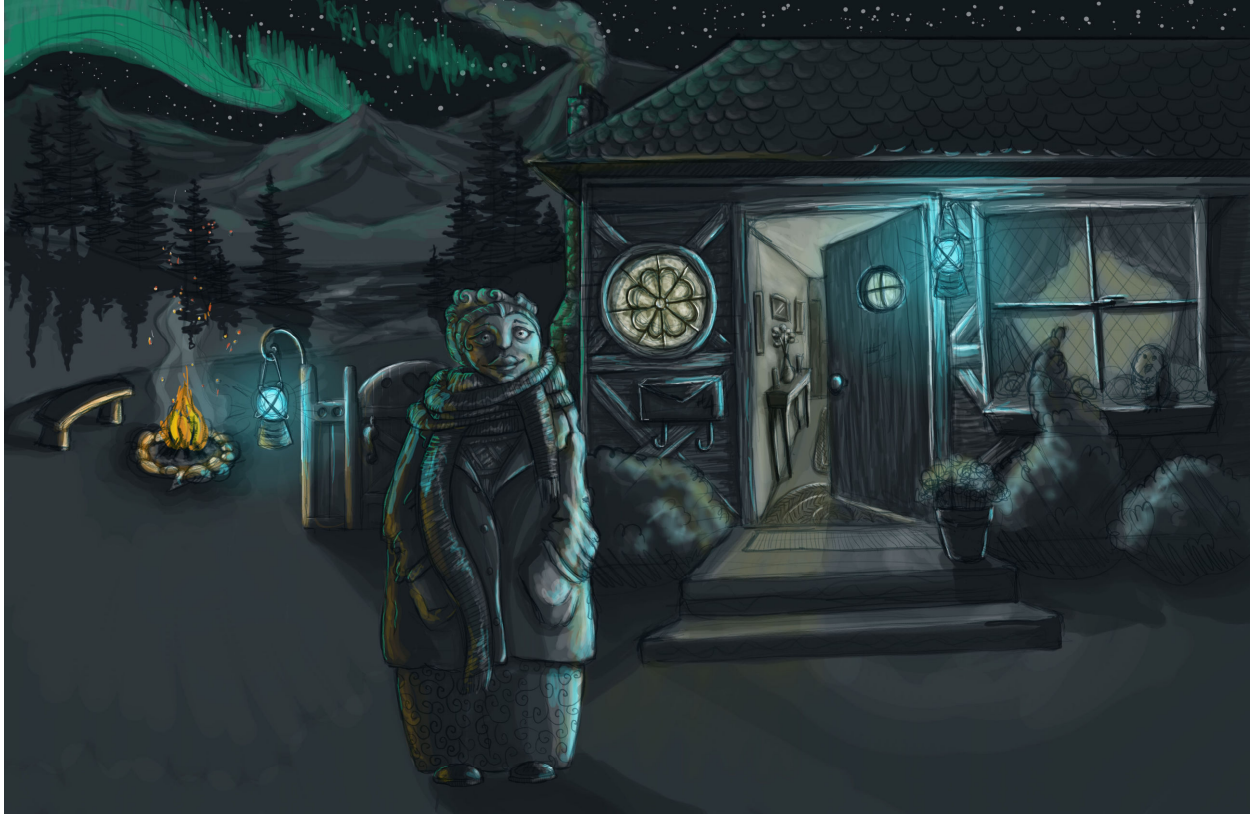Figure 10. Marlowe, Ashley. *Stones Glow*. Digital painting, 2015.

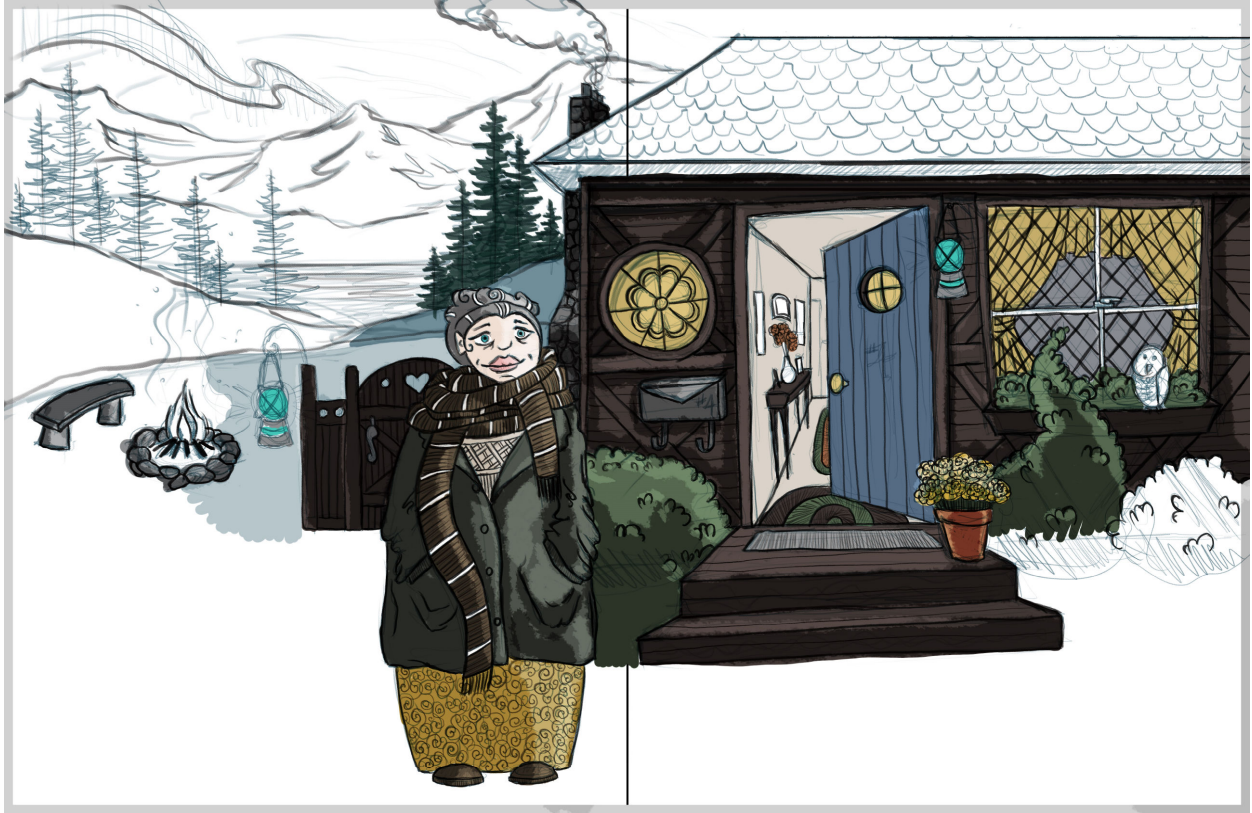Figure 11. Marlowe, Ashley. *Laila (Original Idea)*. Digital painting, 2014.

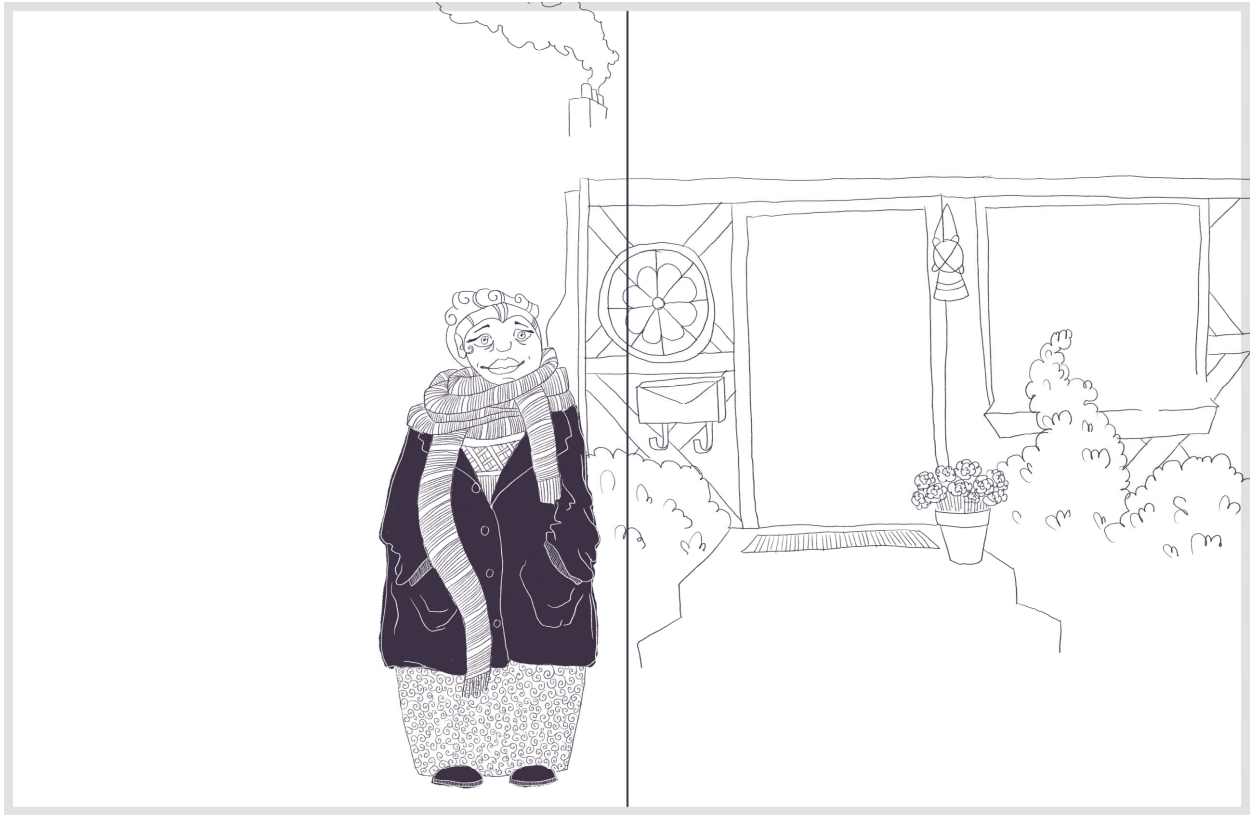Figure 12. Marlowe, Ashley. *Laila (Color).* Digital painting, 2014.

Figure 13. Marlowe, Ashley. *Laila (Flat Shading)*. Digital painting, 2014

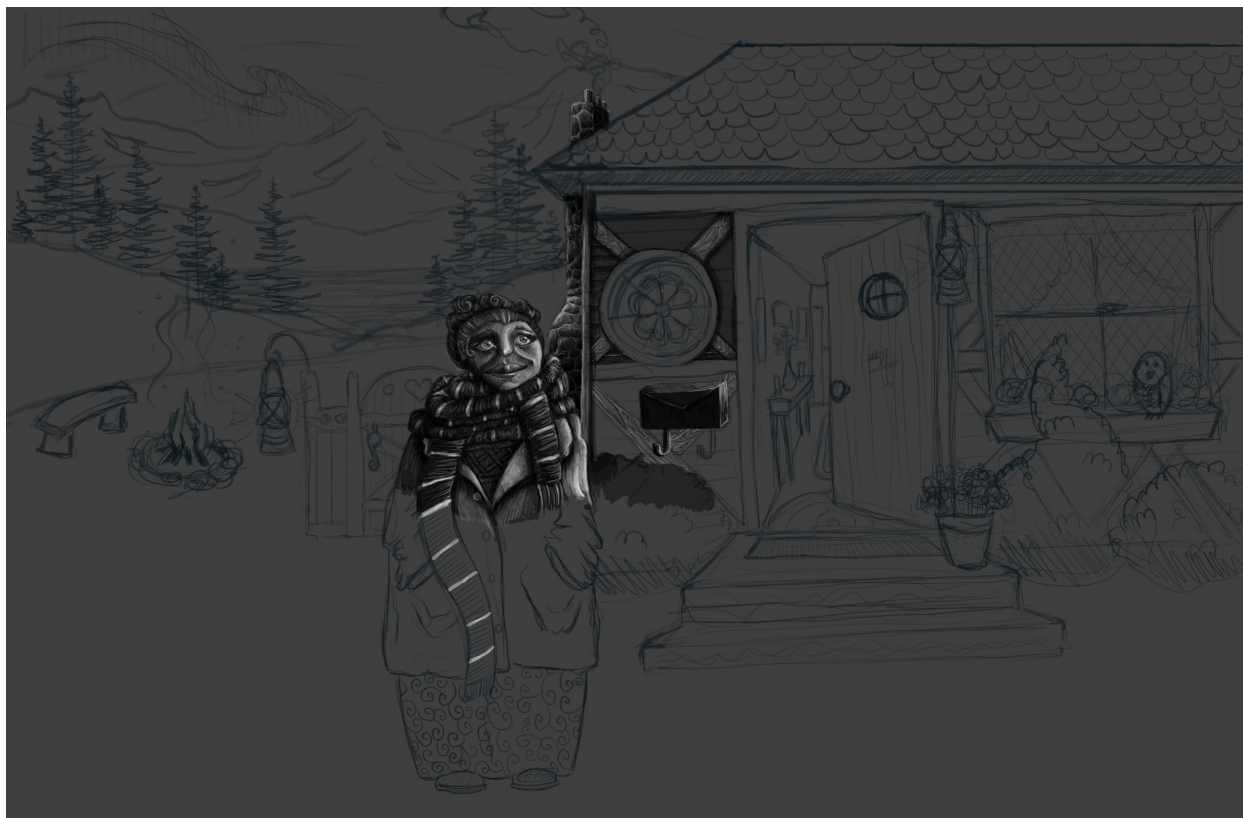Figure 14. Marlowe, Ashley. *Laila (Shaded)*. Digital painting, 2014.

Figure 15. Marlowe, Ashley. *Laila (Final Style)*. Digital painting, 2014

Shared on social media on Sept. 24, 2014 with captions: "Another thesis illustration. Someone got up on the wrong side of his bed." and "The ancient beast roars, and the runestones glow brightly with his anger."

Figure 16. Marlowe, Ashley. *The Beast*. Digital painting, 2014

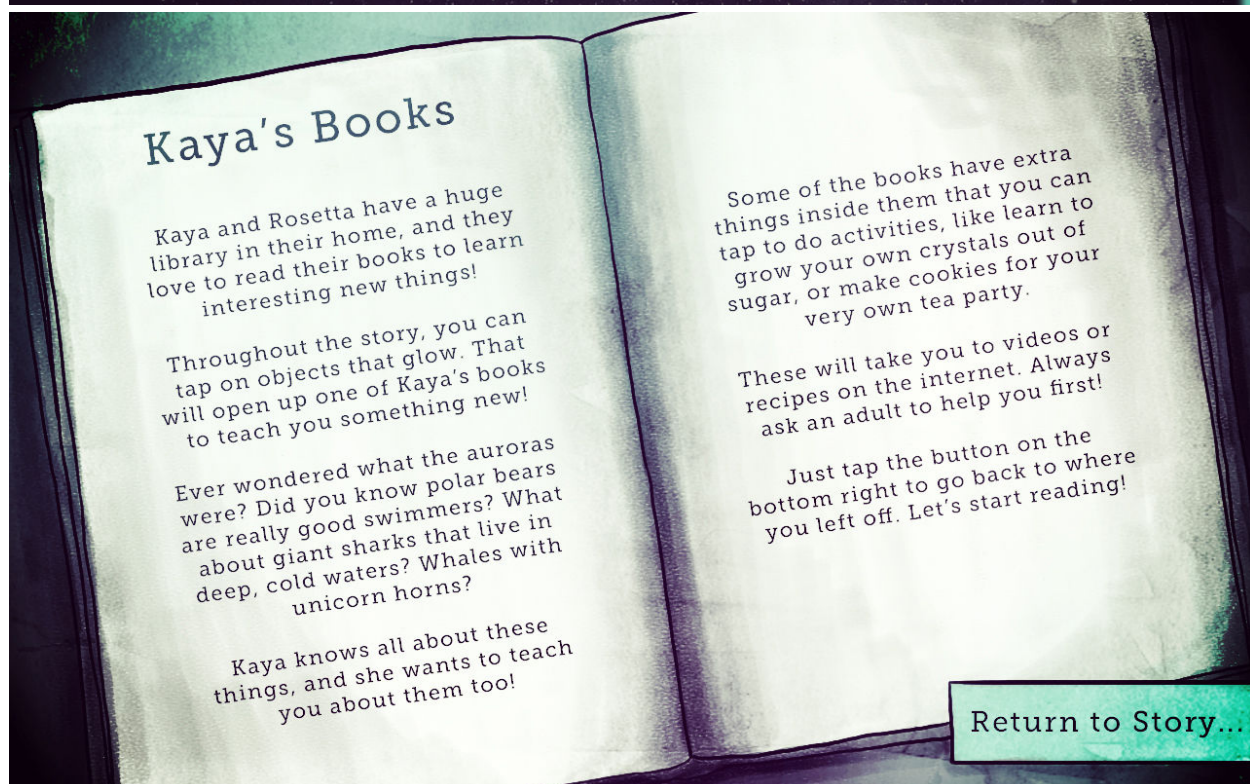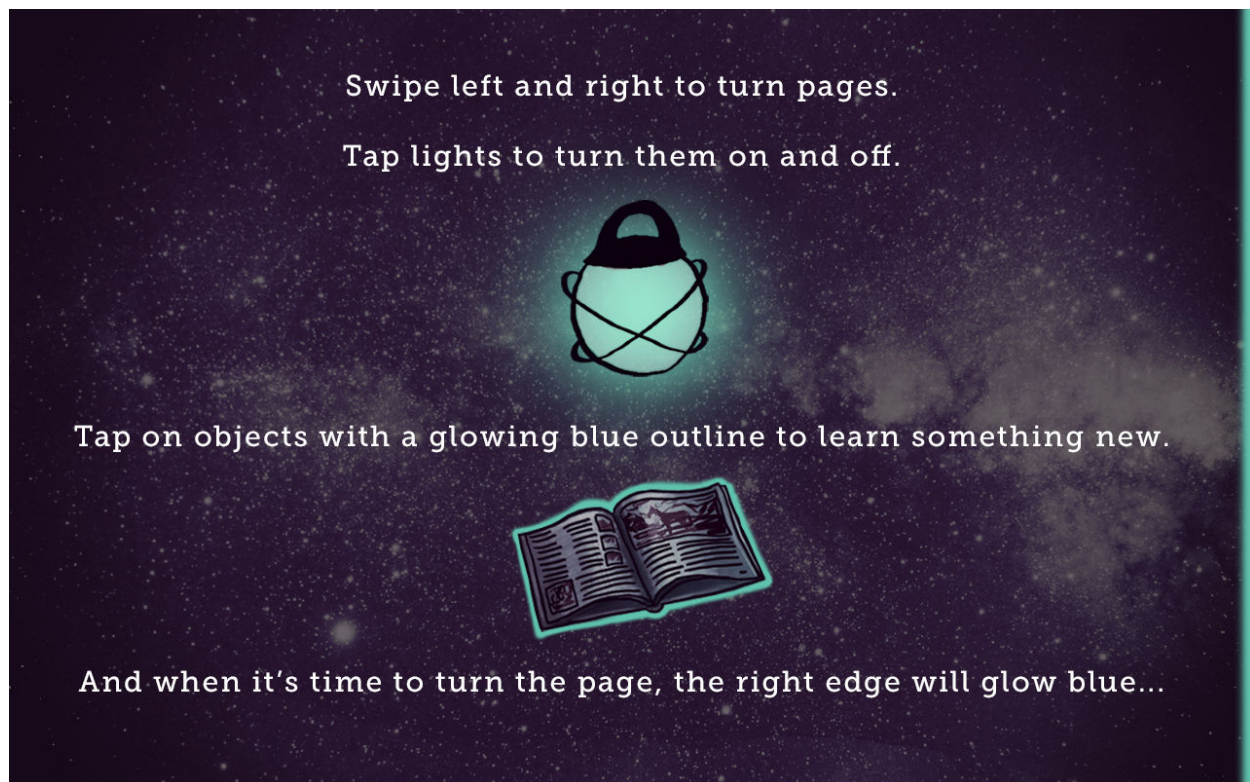Figure 17. Marlowe, Ashley. *Long Ago Spirits and The Thief*. Digital painting, 2014.

Figure 18. Marlowe, Ashley. *Directions screen, example educational page*. Digital painting, 2015.

Hagenberg was always the same, day after day, and everyone who lived there liked it.

Reindeer

Reindeer have special noses! They warm up the air that they breathe, so that it isn't so chilly going into their lungs. Their fur also traps air in it to keep them warm, and to help them float better when they swim across lakes and rivers.

Both male and female reindeer grow antlers, but the female's are smaller.

Reindeer like to eat "reindeer moss", willow leaves, grass, and mushrooms.

They are fast runners, and can travel between 37 and 50 miles per hour. Even baby reindeer only one day old can run faster than an Olympic sprinter!

Reindeer are also very good at pulling sleds, and the Sami people of Scandinavia herd reindeer. You can see a picture of a Sami man with his reindeer and sled to the right.

Return to Story...

Figure 19. Marlowe, Ashley. *Reindeer, reindeer educational page*. Digital painting, 2015