

Shadows Never Sleep

By

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## VITA

Aya Natalia Karpinska was born in 1979 in Kepno, Poland. She is an artist and interaction designer who has been working in digital media since the late 1990s. She received a Master's degree from the Interactive Telecommunications Program at New York University, and a Bachelor of Science degree in cognitive science and digital art from the State University of New York at Buffalo. Her diverse output includes performance, installations, digital poetry, electronic music, graphic design, and game design. Aya's work has been published widely on the Internet, including in the Leonardo Electronic Almanac and Electronic Literature Organization's *Electronic Literature Collection (Vol. 1)*.

## PREFACE

The central concern of this project considers what writing in digital media might do for stories. To answer this question, I decided to go back to the beginning of reading, to children's stories. I wrote five stories, loosely tied by a common theme: shadows. What follows is a creative essay in which I introduce each story in turn, beginning with three print stories. Writing these first stories allowed me to get acquainted with the form of children's literature. I explored the repetitive structure of a classic folk tale, the role of fantasy, as well as the pacing of longer narratives that can be read aloud. When a child starts to read on her own her first books combine written words and pictures, more like the multimedia works we associate with writing in digital media. So the next story I wrote was a picture story designed for a different sort of handheld device—not a book, but an iPhone. On the device's large screen text and images look crisp and clear, closer to the fine quality of the printed page, with the multi-touch screen providing an intuitive and delightful means for paging through the images. For the final story in this collection I chose to focus on the ability to zoom in and out of the screen's visible area. This “zoom narrative” is a physical interface for children to stretch, swipe, and dive into text. These last two stories are documented here in print form but they are best experienced in the environment for which they were designed, the iPhone. Further information is available at the companion Web site to this thesis, <http://technikai.com/shadow>.



If your camera phone has a QR Code reader,  
use the barcode above to link to the thesis Web site.

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# ONCE UPON A TIME

*Oh, grandmother, what big ears you have! said Little Red Riding Hood.  
All the better to hear you, my child.  
And what big eyes you have!  
All the better to see you with.*

- Charles Perrault, *Little Red Riding Hood*

What big eyes and ears we have, the better to see and hear words and gestures become a story. As a child I loved yellow above all other colors; I called it “the sun color,” and my mother would tell me the tale of Little Yellow Riding Hood. My brother insisted that Cinderella lost his watch, and not a crystal slipper. Storytelling is an ancient art, rooted in language, and it is an interactive experience: an exchange of words and imagination between teller and listener. How will this exchange develop, given the tools of information and communication technologies?

As a writer, I am attracted to digital technology’s ability to store and transmit text, images, sounds, and data using the same basic system. I envision digital stories embedded in our physical environment, multimedia and immersive, always on, spontaneous and highly attuned to individual as well as collective experience. Video games are among the few examples that come close to merging excellent interactive experiences with storytelling: the cinematic action game *Metal Gear Solid*, the role-playing game *Final Fantasy*, and the cross-genre game *Grand Theft Auto*. These game series are celebrated for their cinematic scenes and intricate plotlines, however the actual text a player reads or hears leaves much to be desired; their focus is good gameplay, not good literature. But playing video games also has a close, hand-held, intimate feel that can be compared to the experience of reading. The connection between physical interface with reader or player imagination can be fertile ground for literary experience.



Literature began to develop as the written word branched off from oral storytelling. For centuries, many of the stories vital to our culture have been stored and distributed via books. But print technology has not cut us off oral storytelling. In our day, film and television, pop songs and brand advertising, participatory installations and online video all owe much to oral storytelling. If traditional tales found a way to achieve new expression using the written word, then digital technology will in turn give new expression to written words. In my creative work I started to explore this proposition by identifying a common ground between print and digital media. Both share a need for a surface when representing text—a meeting place for reader and story; an interface. New media cannot and should not replace old media. Each influences the ways in which the others continue to be taken up by culture and put into practice. I decided to go back to the beginning, to learn from older ways of storytelling, the tale told aloud. Who would the audience be for such a story? Perhaps they listen to stories because they cannot yet read, they are children. Though they may not be literate, children are experts at using language. Children know how to listen to the storyteller, and listening to others is a starting point for learning how to read, for becoming literary. I prepared a story, visited a class of six- and seven-year-olds, and this is what I read:

## **HOW SHADOWS LOST THEIR COLOR**

**L**ong ago, shadows came in different colors, not the shades of gray we know today. Shadows were once the color of thoughts and dreams that people carried in their hearts. Some people had blue shadows, some had yellow ones. Some even had shadows in colors that are forgotten today. Babies and children had the brightest ones, because they were so new.

In one village lived a man with a shadow as black as coal. He never had a kind word for anyone, and his face always wore a frown. Children turned and ran when they saw his dark, dark shadow approach. “This is not right,” the man said to himself. “Why does everyone avoid me?” He made up his mind to change the color of his shadow. That night he stayed up very late, mixing potions and looking up old spells in his books. When the sun came up the next morning, he saw that he had succeeded—a pleasant violet shadow lay at his feet. He walked into the town square, and no one ran away from him. Women even smiled as he passed by. But he still wasn’t satisfied.

At night he went home and mixed stronger, stranger potions. He chanted more powerful spells as he waited for sunrise. As soon as it was light out, he saw that his shadow had changed again. It was fiery red, and when he walked through the town villagers gathered around him.

“Wasn’t it violet yesterday?” a woman asked.

“How do we know it’s his?” her friend whispered. “He could have stolen it.”

No one had ever seen a shadow change from one color to another. And still, the man was not satisfied. He wanted people far and wide to admire his shadow, not just a few villagers. So again he mixed strange potions and chanted spells the whole night long.

By morning, the man had crafted a splendid new shadow for himself, with a pattern of crimson circles and turquoise swirls. He walked to the village with his head held high. It

was market day, and the square was full of farmers and merchants from nearby towns. The man could hardly contain his delight when he saw them stop their work and stare. Even the sun paused in her path across the sky to take a look. Some people looked down at their own shadows, wondering, “Why be content with just one color?” They pulled the man aside, offering to pay him great sums of money to learn his secret.

Soon enough, shadows with brilliant patterns and shimmering colors began to appear. Each person wanted his or hers to be the finest. They spent sleepless nights chanting to transform the colors of their shadows. Children no longer wanted to play together.

“Move over—you’re messing up my shadow!” cried a boy to his sister.

She was standing close enough for her shadow to overlap his own. The boy walked away and sat on a tree stump to give his shadow room. He spent the rest of the afternoon by himself, looking at his wonderful blue-and-green striped shadow.

No one wanted to go near anyone else, for fear of intruding on another’s shadow. People kept a respectful distance as they walked, with their eyes glued to the ground, watching for any shadow more colorful or intricate than their own. They didn’t bother looking into each other’s faces anymore, and no one smiled at anyone. Their only concern was showing off a finely colored shadow.

High up in the sky, the sun saw all that happened. She didn’t like it one bit. Because her light made the shadows, she knew she had to be the one to put a stop to the color competition. Day after day, the sun thought and thought about what to do. And the harder the sun thought, the hotter she became. And the hotter the sun became, the brighter her light burned. It burned so bright and hot, that it burnt up all the colors in the people’s shadows. They stared in disbelief, mopping the sweat from their brows, as the patterns in their shadows slowly faded to a dull gray.

Now everyone's shadow looked the same. No one worried about standing on anyone else's shadow. People stopped walking with their eyes glued to the ground. They smiled at each other in the town square. To this day, we have gray shadows, and no magic potions or spells can make it otherwise.

# THE FANTASTIC BINOMIAL

*Any sufficiently advanced technology is indistinguishable from magic.*

- Arthur C. Clarke, *Profiles of the Future*

Among the types of stories deemed appropriate for children, fantasy and magic figure quite prominently. This may have sprung from nineteenth-century shifts in moral education and attitudes towards the proper way to bring up the inhabitants of the nursery, but I believe that magic and fantasy also became widespread in children's literature due to the close relationship between fantasy and play. In children's play, real and pretend are fluid. Imaginative play helps children develop an understanding of how the world works, and how they fit into this world.

Fantasy in literature (as well as during play) intensifies and magnifies reality. The fantastic stories that work best strike the right balance with reality in order to communicate their message, making the most of the power of belief, reaching for different possibilities. They present an ordinary world, but something is a little off, exaggerated: a peach grows to the size of a house; a dental filling picks up messages from an alien radio station. Fantasy and magic are useful metaphors for how we interact with digital technology in day-to-day life; for us it is an (often) invisible yet accessible layer of information and potential meaning. The hum of electronics blends into the background of our city sounds, office sounds, school sounds, wherever we may be. I live with a cell phone and laptop ever at my side, attached, as if they were my shadow.

# **LUCIA AND THE SHADOW**

**T**here was once an ordinary house, set all alone on a square of spiky, parched summer grass at the tail end of Ammonia Avenue. In the house, an ordinary mother and father lived with their daughter Lucia, who was anything but ordinary. For one thing, her left eye was green and her right eye was coppery-brown. She was the only girl in the third grade who didn't like the color pink, and she laughed in her sleep. But most curious and best of all, she had a gray cat, whose name was Sara, and the cat had a great deal to say about the world. Lucia could never make Sara say anything. Sara would choose the right time and place to talk.

Now look in through the living room window, and you'll see Sara the cat stretching and purring on the green-and-purple rug. Lean your mind in closer, and you'll make out a rhythm in the purring, like someone whispering beneath a thick blanket. "When searching for something that is missing, the last thing you should use is your eyes," Sara said.

Lucia looked up from the floor, where she had knelt to peer into the shadowy dark underneath the couch. She had one red shoe on her left foot, and a somewhat dirty green sock on her right. "How am I supposed to find my other shoe if I can't look?" Lucia argued.

Sara settled into a comfortable pose, her soft tail curled around her. "The first thing I do," she purred, "is close my eyes." Lucia dutifully closed her eyes. "Then I say the name of the thing I've lost," Sara said, "and ask it to guide me to its hiding place. Just about everything needs to be alone sometimes, even a red leather shoe."

So Lucia said out loud, "Oh, right shoe, where are you? I can't go outside without you, and I will not will not be shut in all day."

"Now open your eyes," the cat continued, "don't say anything, and just let the shoe be your guide."

At first Lucia made a move towards the couch again, but she drew back. She sat quite still



for a moment, then got up and went down the hallway, one foot clomping loudly on the floor with every other step. “Are you in here?” she whispered at the closet door. No answer. She frowned and turned towards the front door. There! A patch of red was poking out from under the plain white curtains. The shoes were reunited, and Lucia shut the door with a bang as she went outside.

\*       \*       \*

Later in the afternoon, when the sun was giving everything long, skinny shadows, Sara the cat padded out to the garden where Lucia was playing. Most of the flowers in the garden were small and half-choked by dust, and this year only one lonely tomato decided to grow. The cat rubbed her side against the girl’s leg, tickling her with her whiskers. Lucia laughed and patted Sara’s head.

Just then Lucia’s mother leaned out an upstairs window to call her in for dinner. Cats were not welcome at the table, so Sara gave the girl a nuzzle and stalked off to the woods beyond the lawn. “Where are you going?” Lucia asked her cat, but Sara kept walking. And there was something funny about her walk. Something like...

Lucia heard her mother call out again, firmer this time. So Lucia got to her feet, and trudged back to the house. She looked back at Sara, wishing she, too, could prowl among the trees and crickets. Suddenly Lucia gasped, realizing why the cat looked strange walking towards the woods. The shadows of the trees stretched onto the lawn, but not Sara’s. Sara didn’t cast a shadow.

\*       \*       \*

Morning came, hot and bright like the day before, just like an endless string of days before that. But as Lucia opened her eyes, there was no gray cat sitting on top of her blanket. “Saaaaaaaara,” she called.

The sound of her voice seemed quiet, pushed back by the bedroom walls. She looked towards her dresser, where Sara would jump up to sleep if a drawer were left open. But all the drawers were neatly shut. “Are you sure you’ve looked everywhere?” came a voice from under the bed.

Lucia flopped her head over the edge of the mattress and peeked down below, but saw nothing.

“Let me come out where you’ll see me better,” said the voice. A soft gray shadow emerged, just the size and shape of a cat.

“You’re—you’re not Sara,” Lucia said.

“Not exactly,” the shadow replied, “but I am her voice. Sara can’t talk without me. People talk, and their shadows don’t. With us cats, it’s the other way around.”

“How did you get separated?” Lucia asked.

The shadow sighed, which looked more like a shudder. “It’s embarrassing,” the shadow answered. “Yesterday, Sara wanted to go outside to the garden, where you were playing. She sat on the kitchen doormat and stared at the door, hoping your mother would get the hint and open it for her. She sat and sat and stared and stared for so long that I fell asleep. Sara must have slipped out soon after, and I kept on sleeping. I guess your mother didn’t notice that I was left behind because the doormat is dark gray, like me.”

“You seem like Sara ‘cause you talk like Sara, but I can’t really pet a shadow,” Lucia said.

“Not much fun for me, either,” said the shadow, “I get cold without fur.”

“We have to get you two back together,” Lucia decided.

As soon as she finished her breakfast, Lucia called to the shadow and set off, out the back door and across the yard. Not wishing to be noticed walking alone in broad daylight, detached from Sara, the shadow kept close to the girl. Their two shadows blended into one as they headed for the woods.

\* \* \*

Sara was silently winding her way through the trees, alone and shadowless. Though the forest was neither thick nor deep, Sara couldn't tell where she was, or how far she had wandered from the plain little house.

When she came across a patch of sunlight she stopped and looked down at her feet, hoping her shadow might suddenly appear. Sara was used to having her shadow firmly attached: sometimes to her right, sometimes to her left, sometimes in front of her, and sometimes behind. With no gray shape beside her Sara was all out of balance. As she picked her way through the forest, Sara felt as if she were walking in circles. Without her shadow, she could hardly stand up straight, much less walk straight. But Sara didn't let herself get gloomy, because she could feel in her heart that if she missed her shadow, the shadow must miss her too. Sara wouldn't be alone forever.

\* \* \*

Lucia and the shadow walked slowly on a narrow path leading through the woods. "What if you got lost instead of Sara," Lucia wondered out loud. "We'd never find you! Finding a gray cat in the forest is hard enough, but a cat's shadow?! The ground is covered with leaf-shadows! Maybe we'd have to wait for winter."

"And I'd be so cold without Sara's fur," the shadow agreed.

They continued walking and calling Sara's name for what seemed like ages, until Lucia stopped to lean against a tree. She let out a long sigh. Seeing her frown, the shadow spoke

up: “Do you remember yesterday, when you found your shoe? Why don’t we try that. Let’s just close our eyes and call her name, together, one more time.”

So they both shut their eyes tight (though you couldn’t really tell that the shadow did). Lucia and the shadow called out: “Saaaaaaaaara! Wheeeeeeeeeere aaaare yooooooooou?!” and the sound echoed through the trees, through the shadows of the leaves, through overgrown trails and quiet clearings, until it reached Sara’s ears. Sara rushed toward the sound as fast as she could. She stumbled and rustled last winter’s leaves, which had dried to a crisp in the summer heat. And this was a very good thing, because cats normally walk as quiet as a passing cloud.

Lucia turned towards the rustling sound, let out a yell, and almost flew over to her dear gray cat. She scooped up Sara and hugged her close, scratching under her chin and behind her ears. “Ahem... excuse me,” the shadow said, “but could you put her down for a moment? I need to get re-attached.”

Lucia set Sara on the ground and watched as the shadow lined up its paws with the cat’s, one by one, with great care. Sara stood very still as the shadow moved on to adjust its tail and each little whisker. Finally, Sara took a few steps, making sure her shadow followed along. She swished her tail back and forth, and so did the shadow. Sara purred, testing out her voice. Perfect. Lucia turned her steps homeward, with Sara walking gracefully at her side.

# PLAYING TRICKS

*Creatures of a day! What is man?  
What is he not? Man is a dream of shadow.  
But when god-sent illumination falls on him,  
bright is the light of men and pleasant their life.*

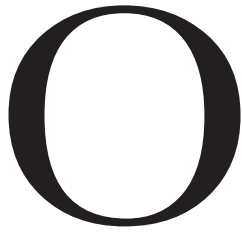
- Pindar, *Pythian 8*

A cast shadow is the figure projected by an object blocking a light source. It defines the edge of light and is perfectly two-dimensional. Shadows love the surface. Like writing, they need a surface in order to be. And like writing, shadows stand for something else—by observing a shadow, you can deduce the shape of the object that casts it. The information carried by the shadow is a necessary aid to seeing and to locating objects in space. But they confuse us: they are uncertain entities.

Unlike objects, two shadows can be in the same place at the same time. And for millennia, before light bulbs, shadows always moved. Firelight and candlelight made them waver and flicker. Shadows exaggerate. What they show is a twisted version of the truth. Babies and very young children make false assumptions about the properties of shadows. If a ball is suspended above a table and casts a shadow onto its surface, they assume that the shadow is a part of the table. Move the table, and they assume the shadow moves along with it. Even adults often err when depicting shadows. Not until the early Renaissance did shadows appear with any consistency in paintings, and even then it took decades of study for painters to learn to portray them with geometric and perceptual accuracy. For both children and adults, shadows are in a strange state, belonging to our world yet behaving as if from another physical reality.

Where there is light, there is shadow. Where there are people, there are stories. And when the sun sets, the shadows take over, and stories come out to tuck us into bed.

# **THE DAY THE SUN GREW TIRED**



ne evening, just as the first Stars were beginning to shine, the Sun made a decision as she settled down to sleep. “I’m not going to get up tomorrow,” the Sun said. “I’m tired of working so hard every day.”

Her job was not easy. Every day the Sun got up, then climbed to the top of the sky and back down again, dragging her rays of light behind her. It was especially hard for her to cast shadows. There were so many of them! The Sun had to make a shadow for everything, from people to street signs to every single petal of every single flower. No, it was not an easy job.

When morning was due to begin the next day, the Sun just snuggled further under her bed-covers, and shut her eyes tighter. She dreamed a quiet dream, where the Earth was filled with soft light and there were no shadows to be seen.

“Outrageous!” cried the Moon.

“Who does she think she is?” the Stars protested.

“This sudden darkness will frighten the people on Earth,” the Moon said, “the plants and animals will be frightened, too. What can we do?”

The Stars fell silent, wondering how to sort out the strange problem. Finally the Morning Star spoke up, “Let’s ask our friends to make a storm. People on Earth will see that it is dark and rainy, but they won’t know it’s because the Sun got tired and stayed in bed.”

All agreed this was a fine idea. Together, the Moon and Stars went to their friends, the Clouds, and asked them to pick the thickest and grayest among them to cover up the sky. Then, the Moon and Stars called up the Rain and Thunder, and asked them to prepare a storm. A very nasty, gray, soaking wet storm. So all the creatures on Earth now lived with daily rainstorms, instead of daily sunshine.

In the evenings, the Clouds and Rain would go home, very tired after another day of storming. The Moon and Stars tried their best to shine a little brighter once night came, but the glow of their silvery lights was nothing like the powerful Sun, who was still sleeping. And sleeping. And sleeping.

After a whole month, the Stars, the Moon, the Clouds and the Thunder decided they had had enough. It was time to talk to the Sun and coax her back into shining during the day. They found the Sun still in bed, reading a comic book.

“Dear Sun, our own dear Sun, the Earth is suffering without you,” they began.

“Oh, just let me finish,” the Sun interrupted. “I only have a few pages left.”

The Sun loved reading comics because they were short and she could read them quickly. She never bothered with big, thick books because by the time she got halfway through, her heat would start burning up the pages. The group waited patiently until the Sun put down the comic.

Then the Clouds began again: “With no sunshine during the day no plants can grow, so the people are eating only sardines and canned soups.”

The Thunder spoke next: “Rain has been pouring for so long, it’s starting to wash all the color out of the world. Please won’t you shine for us again? We miss you, and we need you.”

“Pleeeeeeeeeeease!” begged the Moon.

The Stars joined in: “Please please pleeeeeeeeeeeeeeeeeeease!”

“Ooooh!” the Sun sighed. “It’s such hard work! And it’s always the same thing, over and over.”



“Think of it like a rhythm,” answered the Moon, “a song of life—and you’re the conductor.”

“Hmmm.... well...” The Sun struggled to find a new excuse, but nothing came to mind. After all, she had enjoyed a nice long month of rest. “Well, all right,” she said.

The Moon and Stars cheered, the Rain wept with relief, and the Thunder clapped.

“But!” the Sun said, “I won’t cast any more shadows. I have to move and adjust them every minute of the day, stretch them long in the morning, squash them at noon, pull them long again in the evening. I’ll shine all day, but NO SHADOWS.”

Everyone was so relieved at the Sun’s return that they agreed to the no-shadow rule.

\* \* \*

Dawn came and the Sun rose with it, strong and bright as ever. Flowers burst open; trees shook themselves dry and bore fruit. Children ran outside and danced in the sunlight. But it didn’t take long for one of them, a girl named Cassie, to notice something was funny. “Look!” yelled Cassie to her friends. “Paul doesn’t have a shadow!”

Everyone stopped their dance, and all eyes turned to look at him.

“You don’t have one either!” Paul yelled back.

“Me either!” cried a chorus of voices.

They wondered if they had forgotten their shadows at home, like they sometimes forgot their hats or jackets. As each boy and girl ran home to check, they saw that nothing had a shadow. Neither trees, bushes, nor the cars parked at the side of the road. Not street signs, dogs, nor garbage cans. Nothing!

So all the shadows had disappeared, but everything else was normal as could be. At least

it seemed that way, at first. Cassie's family went to the beach the next day, happy that the sun was back. But no matter where they stuck their big red beach umbrella, it didn't cast a shadow. "It's too hot," Cassie complained.

"There's no shade anywhere," said her father.

"I think I'm getting a sunburn," said her mother.

There was nothing to do but pack up and walk back to the house.

\* \* \*

Every day after school, Cassie went to visit her mother at work. Her mother was a painter, and her studio was a wonderful mess of paint jars, brushes, ladders and old easels. It was a great place to play before going home.

Cassie's mother wiped her hands on a rag and gave her daughter a kiss. "I was just thinking of you," she said. "Do you remember when the shadows in here used to scare you?"

"You told me stories about them, so I wouldn't be afraid," Cassie said. "But now it's bright in here all the time. No more shadows."

"What was the story I told about the old coat-rack over there?" her mother asked. "It used to have a shadow that looked just like an octopus."

Cassie looked at the coat-rack, and suddenly, an idea popped into her head. She dipped her brush into a dark gob of paint, and right there on the studio floor, she painted the silhouette of a little girl. She stepped onto the feet of the painted shape.

"I've made my own shadow!" Cassie said.

Her mother laughed and painted one for herself. Cassie started on the shadow of the coat-rack next. The two of them went about the room painting in smudges of gray

underneath each jar of paint, and dark patches under the chairs. They painted in all the strange and funny shapes that shadows make. Soon they were out of dark paints, and the room looked just like it did in the days before the Sun grew tired.

Thanks to Cassie's clever idea, her mother had another one: she became a Shadow Painter. She painted in the shadows in people's houses, and the shadows of streetlamps and signs in the neighborhood. There were too many shadows for just one person to paint, so Cassie's mother asked her friends to help. Before long, every painter and illustrator in the city found work as a Shadow Painter.

The Sun peeked through some clouds and frowned when she saw the Shadow Painters. "Who did they think they are? It'll never work," she thought, then slept some more.

\*       \*       \*

The painted shadows were a big improvement, but they couldn't move with the path of the Sun—everyone knows shadows are different at nine o'clock in the morning, at twelve noon, and different again at six o'clock in the evening. The painted shadows lay in one place, lifeless. For a time, people hired Shadow Erasers as well as Shadow Painters. The Painters would paint a shadow of a building at dawn. The Erasers came five minutes later and washed away the paint. The Painters returned to paint a new shadow, one inch to the left of the original. And so on, all day. It was a lot of trouble. No matter how fast the painters worked, it was impossible to paint a shadow for every single thing, everywhere, at all times of the day. Thankfully, they could rest after the Sun set. Then everyone went inside and turned on their lights. The lamps and light bulbs took care of making the shadows indoors.

Cassie's idea inspired many more ideas for dealing with the lack of shadows. Some were very complicated and didn't catch on as well. But Cassie's friend Paul had a simple, clever idea. Paul missed having his shadow walk with him to the bus stop in the morning. So he

started walking around with his flashlight, holding it above his head as he walked. Other children at school copied the flashlight idea. Some even attached small lamps to their hats. Wearing lamp-hats spread to the children's parents and the parents' friends. Ultra-bright streetlamps were designed that blasted a light brighter than the Sun. The ultra-bright lamps cast shadows on the street, even during the day.

\*       \*       \*

The ultra-bright lamps did not escape the attention of the Sun. She scowled at them. "Look at all the lamps they need to do the work I used to do, by myself."

A passing Cloud stopped to look down upon the Earth, and agreed. "Those lamps aren't very smart, you know; they can't move the shadows."

The Sun had learned long ago that moving shadows was very important: it helped everyone see that time was passing. As the hours went by, the painted shadows and the lamp-shadows didn't move one bit. When the Sun met the Evening Star in the sky, she snorted and said, "That it should come to hat-lamps!"

"They're trying their best," said the Evening Star. "Can't you see how precious your shadows were to them?"

The Sun turned her back and went to off bed. But she didn't sleep well that night. She had nightmares of monstrously large lamps that swallowed up the world and kicked her out of the sky.

When the Sun awoke the next day, she made a new decision. She decided that shadows were as much a part of her as the bright, warm light she gave. The Sun carefully arranged all her rays of light, and started working on making the day's shadows unforgettable. As she rose higher in the sky, shadows began to stretch out from the houses and street lamps. Shadows followed children as they walked to school. They crept in among the jars of paints

and brushes in the studio where Cassie's mother painted. Every single petal of every single flower sighed with relief when their shadows appeared once more. Everything was familiar again. The people in the cities left their lamp-hats at home. They stared at their true, Sun-made shadows, seeing every shade of gray, every little detail. Who knew that sun-shadows were so delicate and beautiful? And what is light, if there is no shadow?

## S IS FOR SUNSHINE, S IS FOR SHADOW

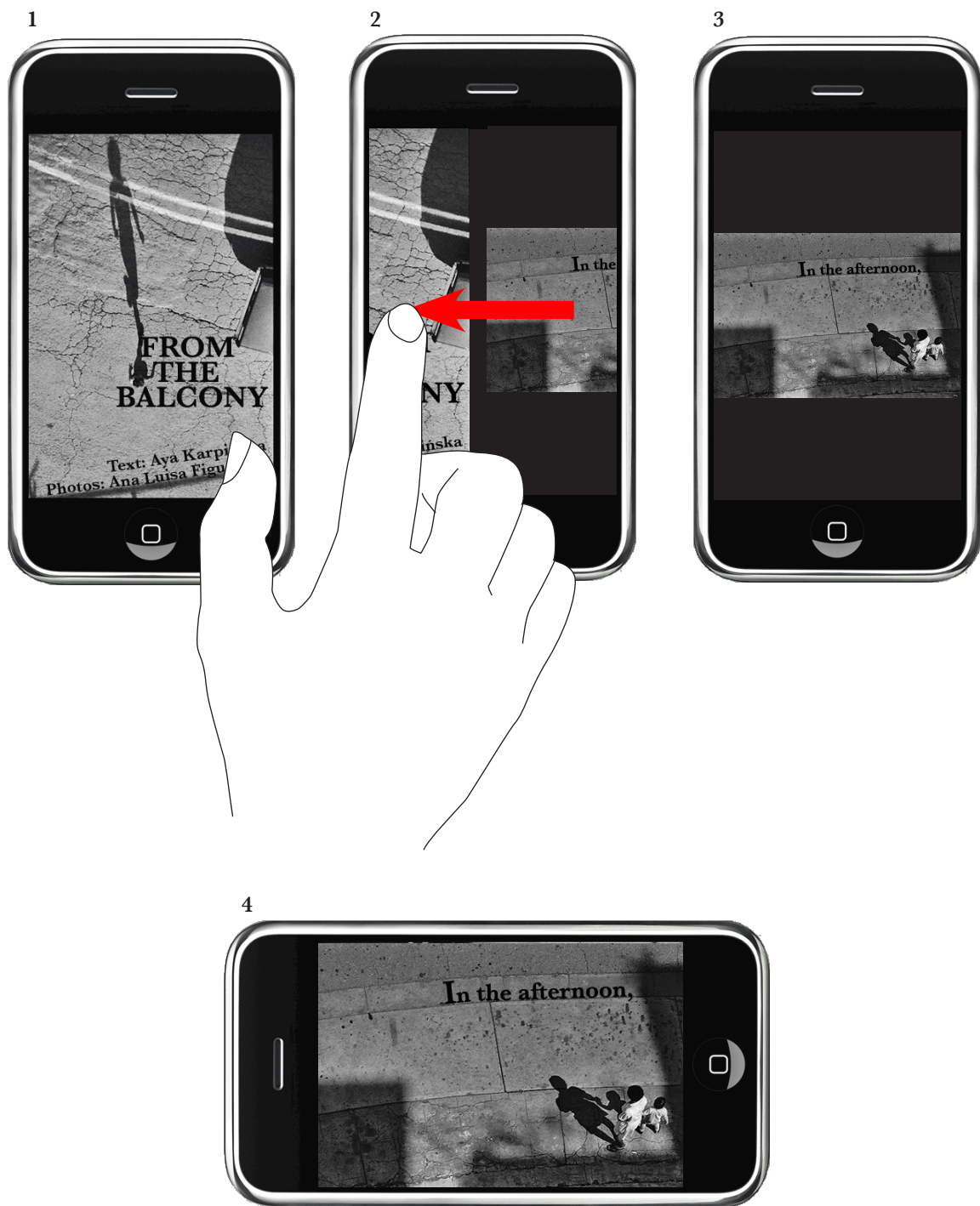
*...what is the use of a book, thought Alice, without pictures or conversations?*

- Lewis Carroll, *The Adventures of Alice in Wonderland*

Shadows are absences, holes in the light, but they belong to visual perception. A shadow is first and foremost an image. When children learn to read (are conditioned into the culture of reading), their first books are filled with pictures. In and among the pictures, words and letters are designed and laid out in a thousand ways, bold and expressive. Only later do they settle down into the regimented, ruled pages of adult books.

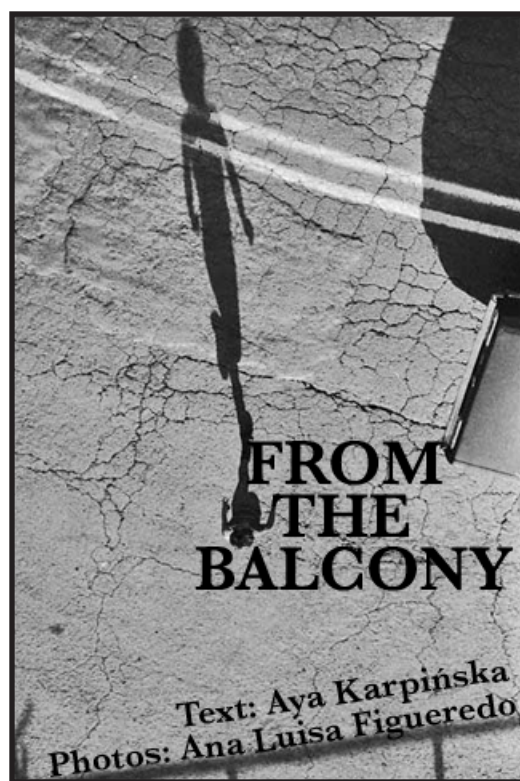
Learning to read is also learning new ways in which language operates, and it takes years of training. There is the physical task of holding a book the right way up and turning pages one at a time at the proper rhythm, carefully looking from left to right and from top to bottom. There is the disciplining of attention, arriving at the right meaning. There are differences to negotiate between spoken and written words. The interaction between words and images in a good picture book requires even more sophisticated analysis on the part of the reader. We can see and hear at the same time, but we cannot read words and look at pictures simultaneously. Words and pictures require different ways of seeing, and different ways of thinking. Images are spatial, text is not. The relationship between words and images make for a complicated task for the beginning reader, but one that seems to allow for a broader or more radical definition of what can be called a story. I set myself the task of writing directly onto images, finding my story in each image as a whole, as well as in the very shapes within the pictures.

**FROM THE BALCONY**

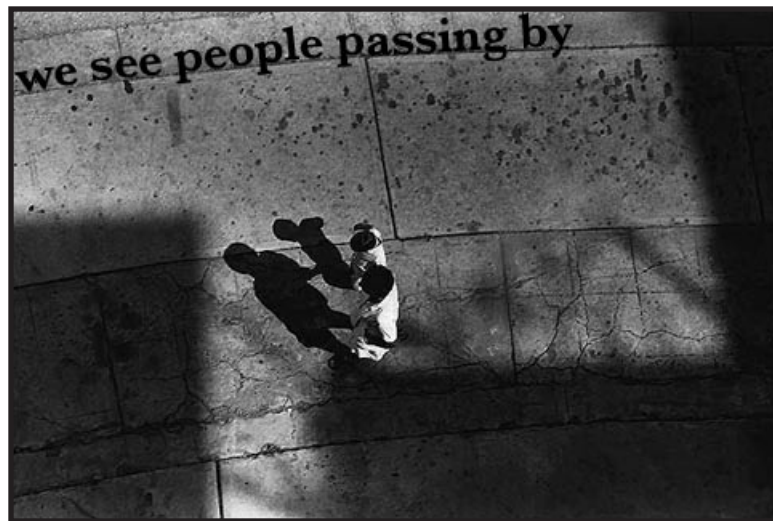


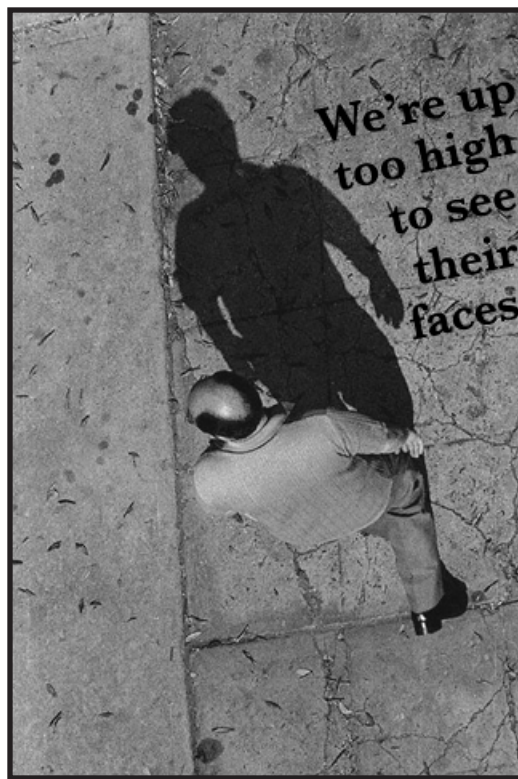
*From the Balcony* was designed for viewing on the iPhone. The diagram above represents how an image is displayed on the device. The reader swipes their finger across the touch screen to page through the images. When the device is rotated, images automatically reorient. The following pages will show only the story images, without the context of the iPhone. To download the images onto your iPhone, or to watch a video demonstrating how the story is read on the device, visit: <http://technikai.com/shadow>.





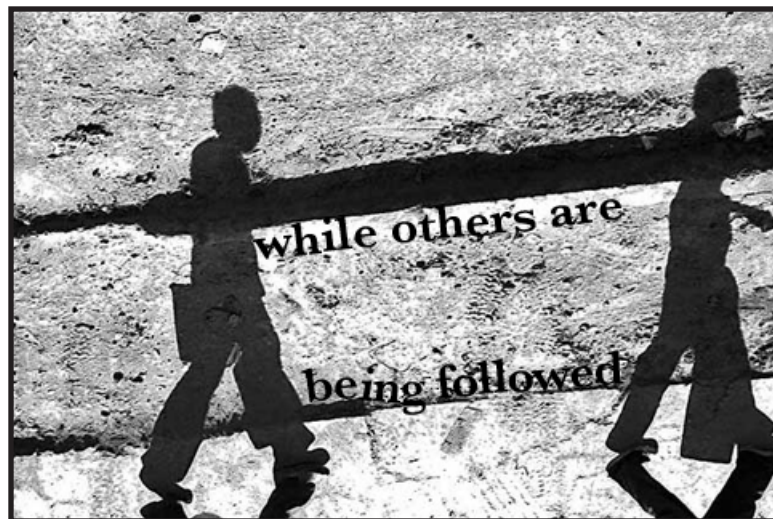


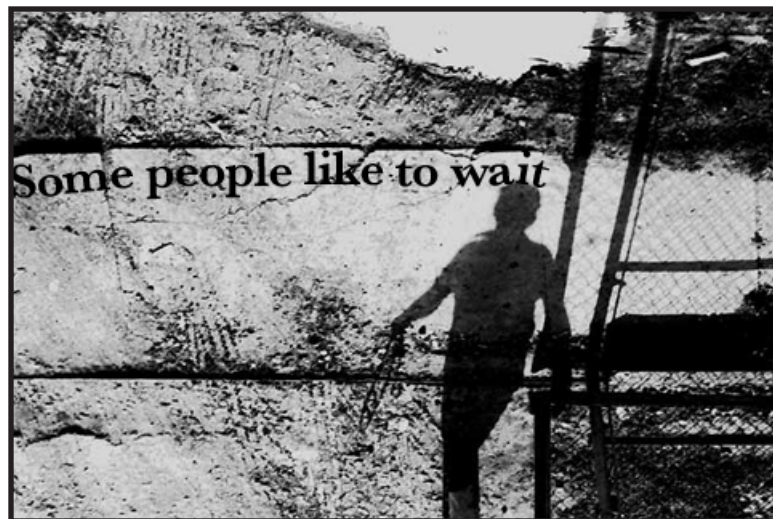








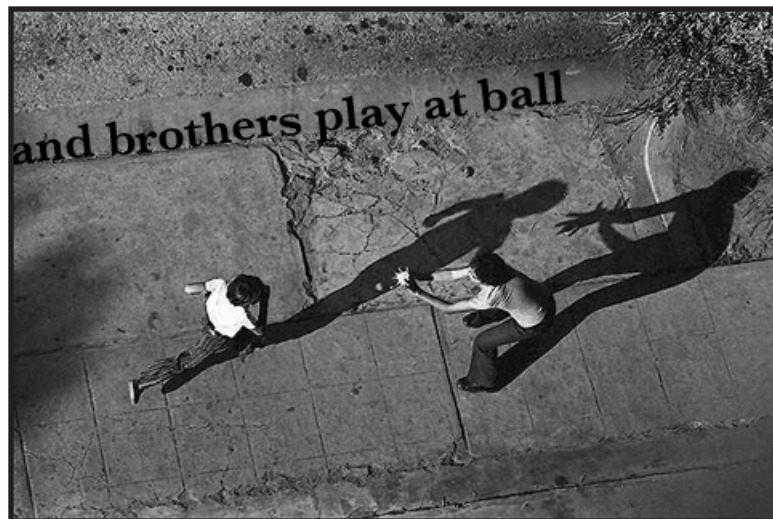


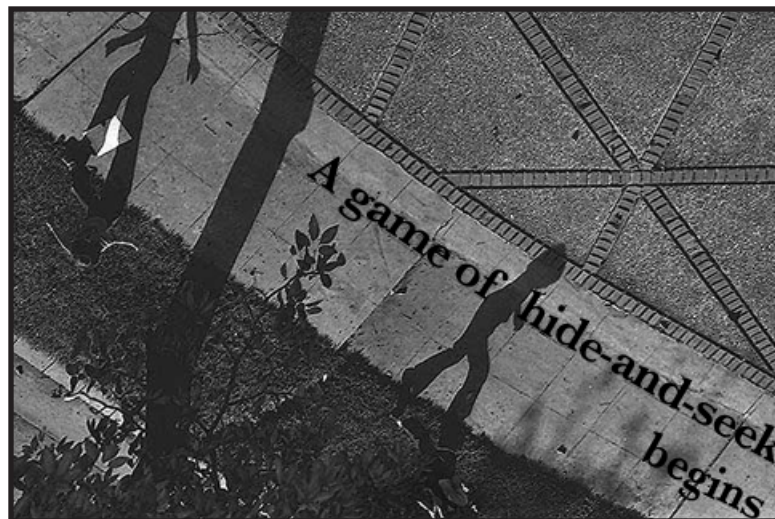




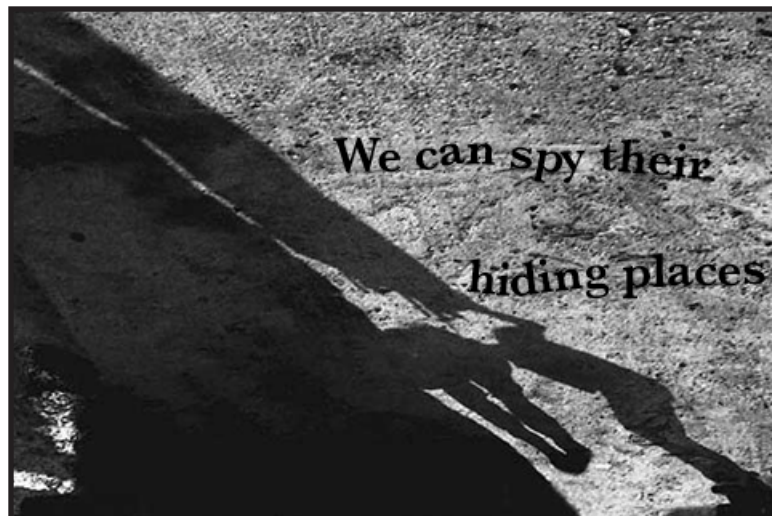


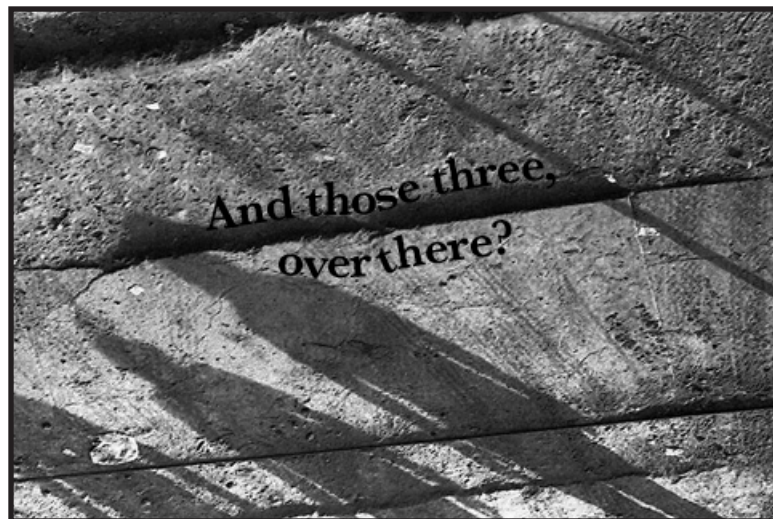




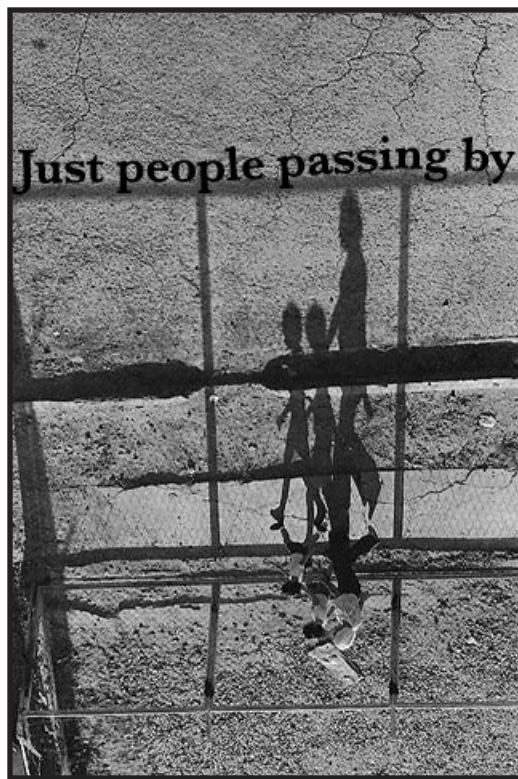














# COMPLEX SURFACE

*Man is only man at the surface. Remove the skin, dissect,  
and immediately you come to machinery.*

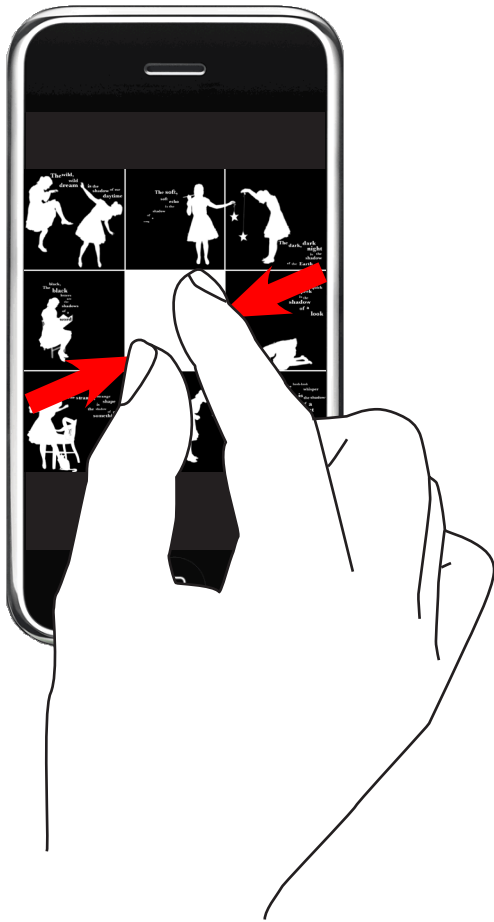
- Paul Valery

From stories told aloud, to stories on the page. A traditional picture story, but viewed on a mobile device. Publishing *From the Balcony* on the small screen of a handheld device was a significant choice. The size of the device makes a difference. It is small enough to be held in one hand (or two hands, for a child), slipped into a pocket and taken everywhere. We can ignore it when we need to, and by night it rests on the bedside table. It is less obtrusive than the laptop computer and fits more easily into our lives. The mobile device is a better mediator between our physical and digital presence than a laptop.

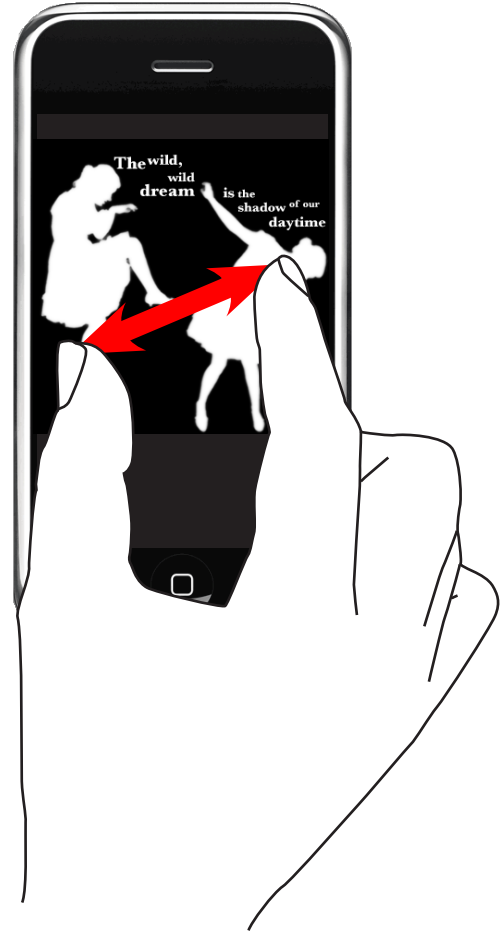
Large digital projections can be shown on any surface: the wall of a room, a building façade, or a sidewalk. This presents interesting opportunities for digital storytelling, but the scenario of laptop plus digital projector lacks some of the small screen's key strengths, such as the intimate scale, portability, and the ability to be viewed even in bright light conditions. With the iPhone, I had access to an important feature: the multi-touch screen. No mouse, no pointer, no buttons needed to make a story go. Just fingertips. I was particularly interested in the ability to pan and zoom within the display—left and right, up and down, in and out. The iPhone screen is flat like a page, but unlike a page in that its surface can be flicked and pinched to reveal unseen spaces beyond what is immediately visible. New kinds of writing emerged with the transition from scrolls to books. What if turning pages becomes zooming into surfaces and walking your fingers across a screen?

**SHADOWS NEVER SLEEP**

1



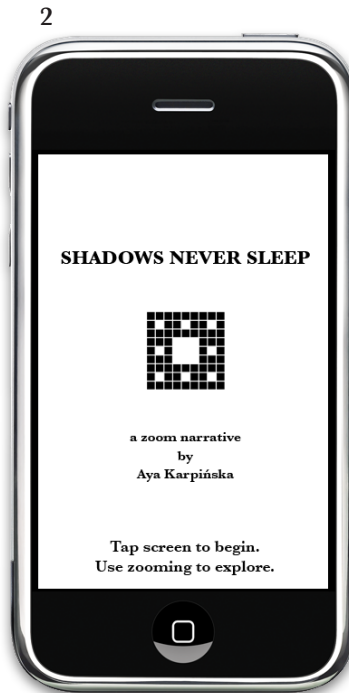
2



*Shadows Never Sleep* is a custom application for the iPhone. The diagram above represents how the story works on the device. Readers use their fingers to zoom in and out of the story images; zooming in advances the story while zooming out takes the reader back. The next page shows key points in *Shadows Never Sleep*; in pages that follow each story image is shown in greater detail. To download the application onto your iPhone, or to watch a video demonstrating how the story is read on the device, visit: <http://technekai.com/shadow>.



The iPhone home screen, with a link to the *Shadows Never Sleep* application towards the bottom left.



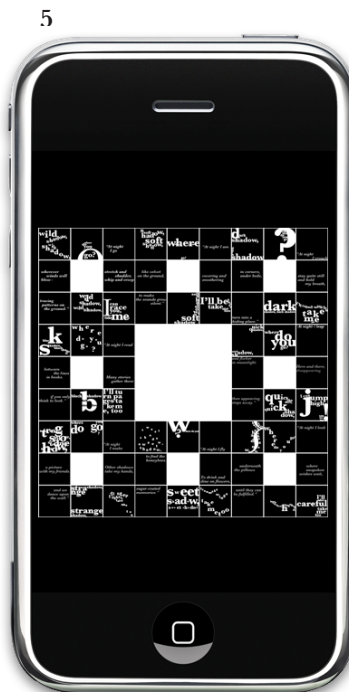
The opening screen, with instructions for the reader.



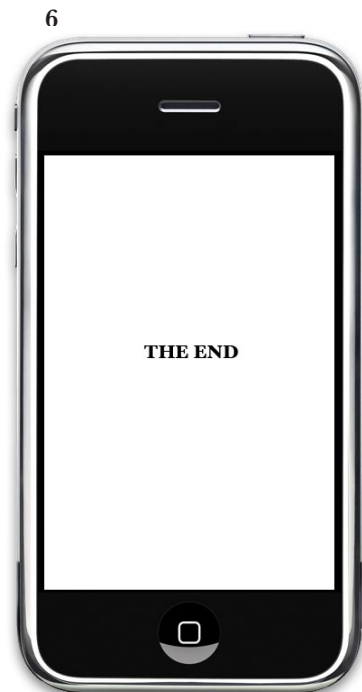
The story begins. When the reader zooms in a certain amount, she lands on the next section of the story.



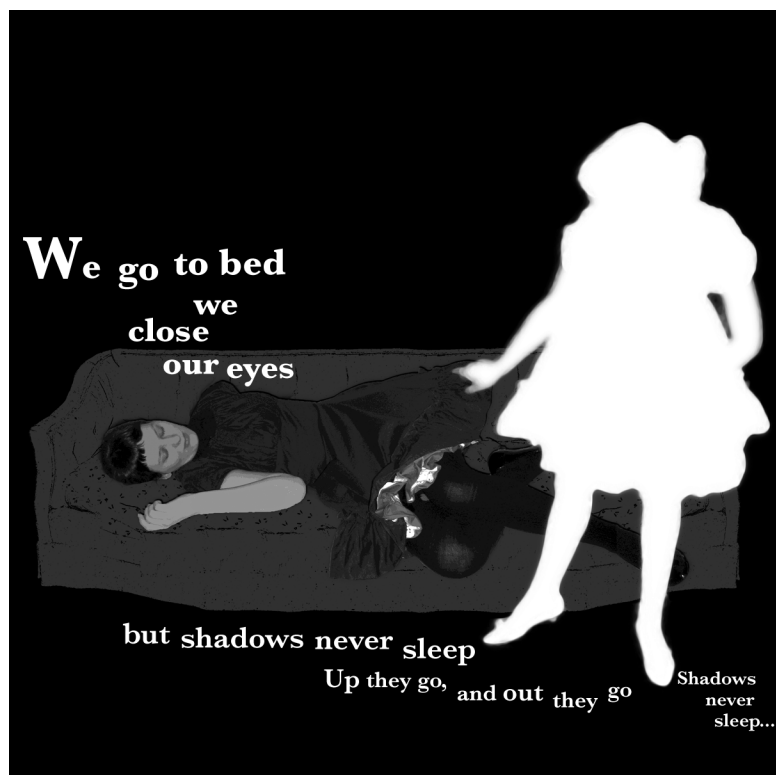
The reader can zoom in to each of the eight “scenes” of the second section. Zooming in further jumps the reader to the third and final section.



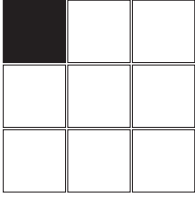
The reader can zoom in to each of the sixty four “scenes” of the third section. Zooming in further jumps the reader to the closing screen.

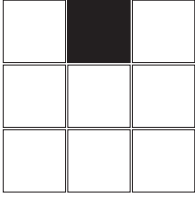


The closing screen. Zooming out jumps the reader back to the previous screen.

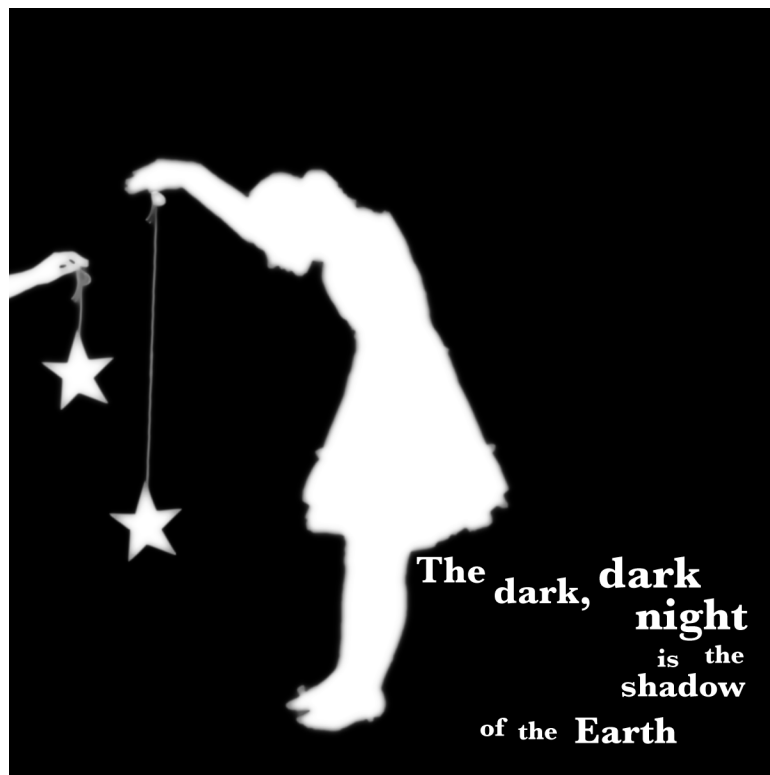
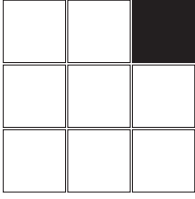


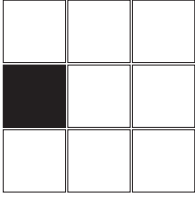


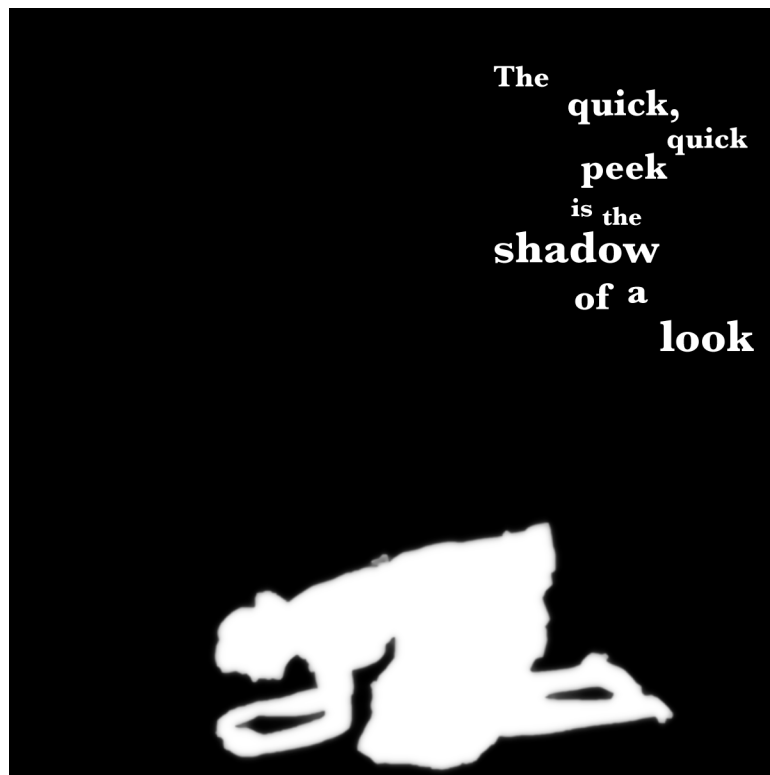
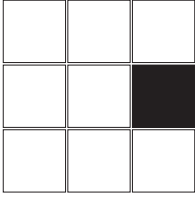


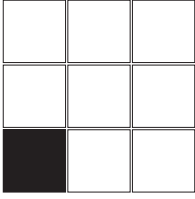


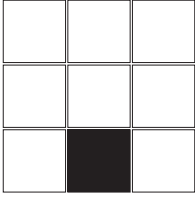


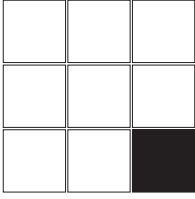


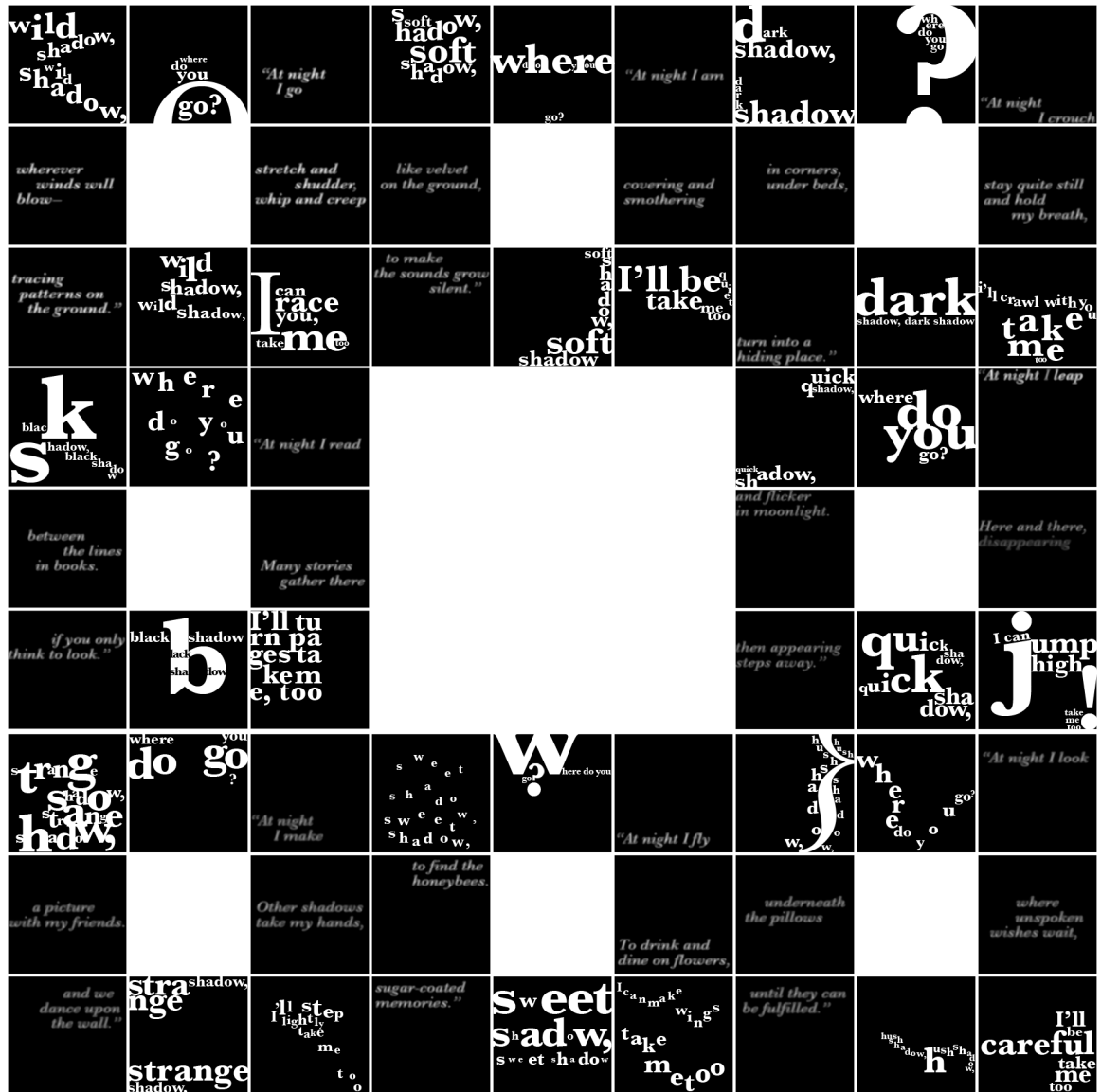


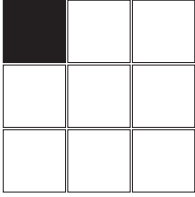




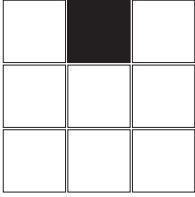


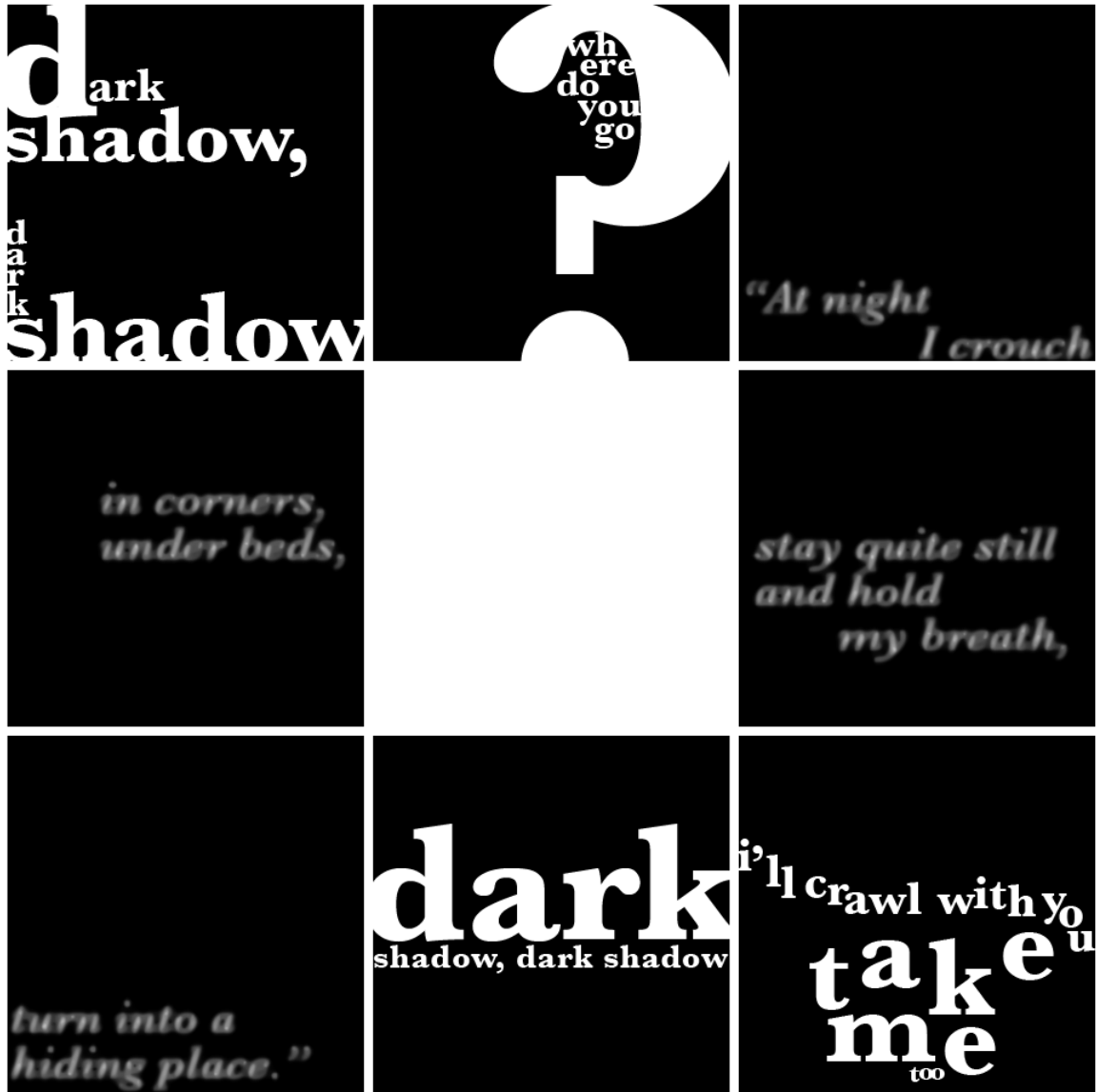
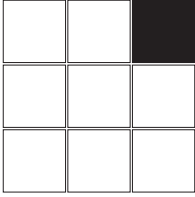


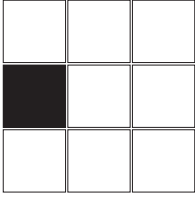












blac  
k  
shadow,  
black  
shadow  
w

wh e  
r e  
d ° y ° u  
g ° ?

*"At night I read*

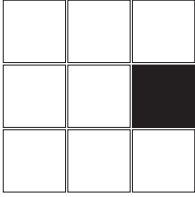
*between  
the lines  
in books.*

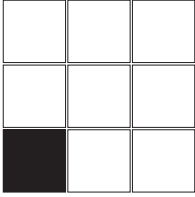
*Many stories  
gather there*

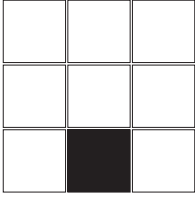
*if you only  
think to look."*

black shadow  
black  
shadow

I'll tu  
rn pa  
ges ta  
kem  
e, too







s w e e t  
s h a d o  
s w e e t w,  
s h a d o w,

W  
go? here do you

*"At night I fly*

*to find the  
honeybees.*

*To drink and  
dine on flowers,*

*sugar-coated  
memories."*

Sweet  
shadow,  
Sweet shadow

I can make wings  
take  
meetoo



## THE END

*If I have something that is too difficult for adults to swallow,  
then I will write it in a book for children.*

- Madeleine L'Engle, *Circle of Quiet*

Over tea, a friend showed me video she had shot of the *Design and the Elastic Mind* exhibition at the Museum of Modern Art in New York City. As we bowed our heads over the small screen of her digital camera, I noticed an important difference between the way children and adults reacted to a particular piece. The work consisted of an elaborate pattern of colors and gridlines projected onto the floor of a darkened room. The adults stood still around the edges, keeping a respectful silence as they admired the image. The two children, on the other hand, walked right into the middle of the piece and hopped on different areas of the projected surface, as if triggering a button. They even got down on their knees to touch the “buttons” with their hands, laughing at their shadows and watching the colored light play on the surface of their skin. The piece was not interactive, but I was struck by the spontaneous, unstructured way in which the children discovered the work. Light, shadow, image, physical motion and imagination all came together for them. Some things, whether installations, toys, or stories, are best experienced by children. It is their capacity for imagining what could be, unconstrained by practical needs and responsibilities, that is an inspiration to me as I approach the art of writing in digital media.