

MAMMUT

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Cover Design by Nick Steinhardt

Nick was born and raised in Southern California. He attended the California Institute of the Arts, graduating in 2009 with a bachelor of fine arts degree in graphic design. Nick specializes in all things typographic, particularly enjoying any chance to delve into type design, patterning and custom lettering. In his spare time he can be found obsessing over and collecting vintage guitars and effects pedals, planning trips to Northern Europe, and touring/recording with two bands.

Title illustration on page 11 by Mansi Shah

Mansi Shah is a New York-based graphic designer and illustrator.

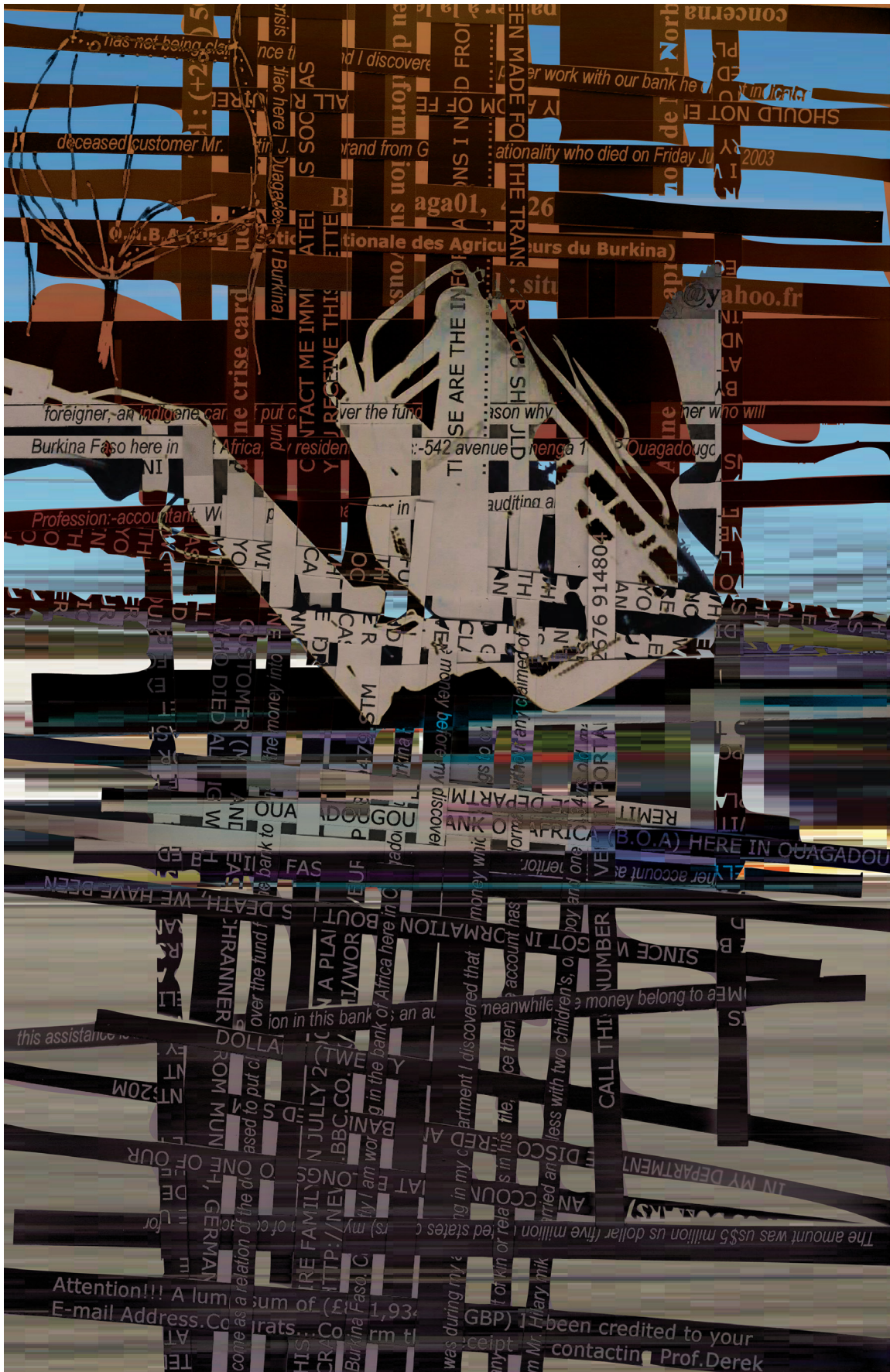
Collages

BY ANA LLORENTE

Mirrored blind contour drawings of a Cuban ground sloth, a species surviving 6,000 years longer than other species wiped by climate change; landscape flattened into two-dimensions, reduced to basic representations of lines and curves; a weaving of junk-mail communication. These fleeting mementos attempt to answer the question of how to define and preserve a present-day "megafauna" in a world of immediacy and impatience. A full accountability of past, present, and future; the actions of securing, surviving, guarding; and personal preservation come to mind as initial answers.

Ana Llorente is a Cuban with unruly hair, who loves greasy food and is compulsive about piling stuff on a small desk in her Chinatown studio in Los Angeles. Her current obsessions are motorcycles from the 70s, being a typography nerd, tattoos, teaching the next generation, bad boys, Cuban graphic design, soft leather, and black and white design. You can find Ana at altdesignco.com.







Making a City

BY ISAAC RESNIKOFF



Here we are making a town.

We are changing our minds again and again, because it's our place and we want to get it right. If you're doing a thing for yourself, there's no reason to do it if it won't be how you want it. So we're doing our best.

But actually, everyone just thinks we are anxious, like our town can't sit still.

Isaac Resnikoff is a Los Angeles-based artist. His work, which is political, sculptural and wholeheartedly American, is generally made out of wood. He received an MFA from UCLA in 2009.





Katrina UMBER lives and works in Los Angeles. To see more work, visit katrinaumber.com



Introduction

BY IAN GARRETT

I first became aware of Glenn Albrecht's idea of solastalgia through a 2007 article in *WIRED* by Clive Thompson. The idea of climate changing a place, and the resulting psychological effects on the people who live in that changed climate, really stuck with me. I have a design practice in lighting, and am fascinated by our cultural relationship to illumination, especially the sun. When I spent a few weeks in Bali in January 2008, I met a number of people from Australia, especially Perth, who spoke about the persistent drought and the changes in their climate. I couldn't help but be reminded of Thompson's article and Albrecht's ideas. I shared the article with a number of these Australians, and many were excited to have a word to describe what they were feeling. It was shocking to me how real and visceral the impacts of climate and environmental change were on the psyche.

More recently, as we began this issue of *Mammut*, I was preparing to attend COP15 in Copenhagen in fall 2009. These important climate talks about mitigating global warming would take place in a Danish winter. There would be many attendees with no first-hand experience of a cold season, or its relationship to the winter holidays. A large percentage of the world's population is too close to the equator to experience the same seasonal shifts. The idyllic white Christmas meme would be as foreign as they were.

Stanford professor and renowned psychologist Philip G. Zimbardo has done extensive research on our relationship to time and its connection to climate and geography, and there is an excellent video regarding time that he narrates as part of the Royal Society for the Arts RSAanimate series. In it he speaks about the effect of day-to-day climatological sameness near the equator and a more acute sense of time passing in the areas closer to the poles where days shift through seasons. These location differences affect people's planning capacities and focus on the present or future.

Also, consider that it is estimated that only five percent of the world's population is now indigenous to their location. This affects one's sense of place as well. There are shifts that take place within a culture when it moves from the environment in which it has been cultivated. As a community moves or disperses, this physical change is compounded with a sense of solastalgia, creating a further dislocation from a geographic and climatological home.

All of this finally brings us to this issue of *Mammut*. It is fairly straight forward to depict extreme changes in the environment: progressive photos of ice caps melting, glaciers receding, the desertification of land and bleached coral are all clear indications of some shift in the environmental factors affecting a location. But the emotional impact, the psychic link between person and place, is less demonstrable without turning to more creative interpretation and communication.



SOLA

STATA

GLIA

Solastalgia and Art

BY GLENN ALBRECHT

Many traditional cultures and their indigenous languages have words for home-heart-environment relationships, however, it is interesting to note that modern English has very few. I created the concept of 'solastalgia' to fill this void and to give expression in the English language to a fundamentally important relationship between people, communities and their home environment. I also feel that we need many more new concepts that recapture the closeness that human animals have with their habitat. The realm of the 'psychoterratic' or positive and negative relationships between human mental health (psyche) and the earth (terra) has to be re-created in the twenty first century.

The solace and comfort gained from a positive and creative relationship to home is conducive to physical and mental health. When the human-nature relationship is spontaneous and mutually enriching we experience a state of 'eutierria,' which I define as a positive feeling of oneness with the earth and its life forces (eu=good, tierra=earth, ia=suffix for member of a group of {positive psychoterratic} conditions). By contrast, when the home environment is changed in ways that take solace away and create feelings of distress, the result can be a breakdown in physical and mental health. Solastalgia is the melancholia or homesickness when you remain locked in your home environment while all around you, your environment is being desolated in ways that you cannot control. The existential and emplaced feelings of desolation and loss of solace are reinforced by powerlessness.

Transformation at small scales of human habitation can be liberating for some but a source of melancholia for others. Place-based repair of damaged landscapes, relocation and travel were options for negating solastalgia at a time when the scale and pace of life was small and slow. However, when transformative forces begin to undermine the foundations of sustainability for the whole Earth, there is potential for solastalgia to become a globally significant source of melancholia and distress. We are now facing the universal loss of ecosystem health in the form of toxic pollution and warming climate. Our home, the Earth, is under siege from one species and we are beginning to suffer self-imposed solastalgia.

Creative writers and artists have always intuited 'solastalgia' in varying degrees. Edvard Munch's *The Scream* was painted in response to the eruption of Krakatoa in 1883. The blood red sky was a product of volcanic dust ejected into the global atmosphere, but Munch produced an archetypal, ecoapocalyptic response. A lesser degree of existential distress at environmental disturbance can be found in the work of surrealists such as Salvador Dali and his response to the desolation of mind and landscape as a consequence of transformative powers such as war. Romantic and nature poets such as

Wordsworth also contributed to the theme of the gradual loss of a loved home environment. Contemporary environmental art portrays the loss of species and ecosystems as something more than loss of biodiversity—it also depicts the loss of something vital within us: the negation of the very possibility of eutierria.

The challenge of recognizing and responding to solastalgia is more important than ever. Yes, small scale, local damage is still happening to loved home environments as globalisation homogenizes all before its bulldozers, cookie-cutter buildings and neon signifiers of McLandscape. Good people lament the loss of their endemic landscapes as a universally branded global culture obliterates the distinctive and the unique. Urban solastalgia is the distress caused by unwelcome changes to the physical appearance of local and city landscapes, including sensescapes and streetscapes. (It is no wonder the graffiti artists want to tag every surface with a reasserted local identity.) Rural and regional solastalgia is produced under the impact of mining and agribusiness as they bring unwelcome homogeneity on a huge scale. Humans now possess the power to rapidly change home environments on a huge scale with powerful transformative technologies.

As bad as local and regional neg-transformation is, the Earth itself is now a home under assault. That Munch feeling is reasserting itself as the planet warms to a Krakatoa-like conclusion. In a greenhouse that is getting hotter, the cryosphere weeps into the ocean and we all get that sinking feeling. As the climate gets hotter, more hostile and unpredictable, we seek solace wherever it is offered. Even virtual worlds depicted in films like *Avatar* seem better than the one we are creating for ourselves. We have virtual solastalgia within a film for a world that delivers moments of eutierria but is under assault from the Earth miners. We feel elation when the Na'vi win back their planet with the help of human eco-warriors. It would be good if such eutierria could prevail here on the real Earth as climate change is reversed and genuine steps are taken toward safe renewable energy and resources. For this to happen, a new social movement based on what I call 'soliphilia' will be needed. Soliphilia is the solidarity needed between all of us to be responsible for a place and the unity of interrelated interests within it. Solastalgia will be overcome only when sufficient numbers of us act in solidarity to defeat the forces of desolation. A cultural and political movement based on soliphilia is now needed to protect the possibility of that wonderful psychological state I call 'eutierria' being experienced by future generations.

Glenn Albrecht is Professor of Sustainability at Murdoch University in Perth, Western Australia. He is a transdisciplinary philosopher with a focus on the intersection of ecosystem and human health. He is the author of many book chapters and academic papers on environmental and animal ethics, social ecology and the existential impacts of environmental transformation.

A Study in Pathology:
a meditation on the neuroscience, psychology, and philosophy of perception

BY CAROLINE PARK











Solastalgia describes a longing, a deep ache experienced simultaneously via mind and body. More specifically I believe it to be a symptom or evidence of a-yet-to-be-recognized bodily sense, a sophisticated physiological method of perception. It works very similarly to what happens in the mind's eye, or in the realm of the imagination, a neurological act, where the "immaterial" mind leaves a material trace, a (microscopic) signature.

Because it is characterized by an unrelenting desire, an uncomfortable craving that marks, carves or leaves an impression, solastalgia could be dismissed or rejected as "pathological," as too awful, grotesque, and even virulent.

Yet I am suggesting an uncomfortable, quiet confrontation of sorts, that is to embody ugliness and repulsion by way of digestion. Actively internalizing this discomfort is a way of identifying what is at the heart of solastalgia—an intimate relationship between our body and our place, sensing an unraveling, a loss.

Caroline Park recently graduated from the CalArts graphic design MFA program. Admittedly she is feeling a bit out of sorts these days because she can not help but contemplate the whole wide world and her place in it, nonetheless she is terribly eager to find it.



Blizzard of '79

BY LISA ANNE AUERBACH

I wore a light blue t-shirt that said "The Blizzard of '79 – Dig it."

We were all digging it in Chicago that year, with snow shovels as broad as the cafeteria trays converted into sleds. Plows scraped snowfall from streets and converted it into icy piles edging sidewalks. Cul de sacs were clogged with graying piles of precipitation. I walked to my rooftop via a mountain of snow. Make-shift sledding hills were everywhere. The parking lot at Dominick's was like a maze, with filthy snowstacks hulking silently between the spaces. The landscape was transformed. Under evening streetlights, it looked like the moon.

I kept a file of newspaper clippings about the storm in a big brown folder. Every day I added new stories about the records the storm was breaking along with photographs of people shoveling snow or bundled up outside. I was obsessed.

The schoolbuses didn't run on time, resulting in seemingly endless snowball fights. Two, three hours waiting for the bus and we didn't think to give up. Just waited. Bullies stuffed snow down other kids' shirts or trousers. The bus stop was a battleground. Say the wrong thing and get a face full of white. Not great packing snow for making snowpeople, but it didn't stop me from trying. Somewhere in my head was an idea about a snowman with a carrot nose and coal eyes. It was an idea from another century, but carrots still existed and charcoal briquettes made OK eyes. I tried to make an igloo, but it didn't work.

Snow was chaos. Our roof leaked. There was a night of emptying a 55-gallon garbage can every single hour.

We took turns. It was only me, my mom, and my dad. We didn't sleep much. I was 11. It was epic. It was exciting, even though the roof was a mess and had to be completely replaced. Finally my mom said, to hell with this flat roof. The goddamn architect doesn't have to live with it, we do. Despite its austere and modernist lines, the flat roof was a casualty of the Blizzard of '79.

Even with the leaks and the unhappy parents and the cold feet waiting for the bus, it was truly magical. Snow brings silence. Outside my window looked like the inside of a Faberge egg, the trees piped in elegant white. My bedroom had no curtains, and I had a door that led to the outside. One night I rolled naked in the snow, just to see what it would feel like.

It was cold everywhere, even in the house. This was the era when Jimmy Carter would get on television in a sweater and tell all of America to turn down the heat in order to conserve energy. Sometimes I think the only person who listened was my father.

When the heat was turned on in the car, it smelled like Dentyne gum. I'd accidentally dropped a piece in the vents when the car was new. It was slow to drive down the road. Snow tires made a lot of noise. Just going out for groceries was a major adventure. Getting from point A to B was not a sure thing. Cars slid everywhere, into ditches and into each other. At stop lights, some cars kept going. Some went sideways. It was like being in a canoe, with no paddles, adrift. Lane lines were obscured, every driver for herself, a constant adventure. This was before front-wheel-drive and anti-lock brakes. No one drove an SUV then unless they owned a horse or towed a boat. Four wheel drive was only for the mountains. My family, usually too cheap to hire a snowplow, during the Blizzard of '79, made an exception. The first plow to come heaved its way into the ditch. The second one pulled the

first out and then hit a tree. The stories of failure piled up like the drifts; eventually it was the family out with shovels and maybe by that time there was a snowblower too. I went outside to be part of the excitement, and my just-washed hair froze.

My mother and I had moon boots. The whole family had matching Gerry down jackets, but when the snow reached past our knees, we put on ski outfits with overalls and colorful stripes and pompoms on hats that were unisex and ridiculous. I put my skis on and hiked to the roof and skied down. The house was only one story. It wasn't a lot of vertical but anything was better than nothing.

In Southern California, there are no seasons, in the way that there are seasons in the Midwest, and I find myself unable to keep track of the days and years. Time runs together without the punctuation of snowstorms and autumn leaves and sticky summers full of mosquitoes and dank humid nights. Without the first flowers of April poking through the earth in the woods, it's impossible to understand the meaning of the word "Spring." Likewise, the idea of "Fall," with leaves needing to be raked up, bagged, or burned. We may as well just call it "Autumn" here, since not much is falling. A few deciduous trees, planted by homesick Midwesterners can be found in parks and gardens, but for the most part, the plants live green year round.

With seasons come a respite from the cold, the collective sigh of winter coming out, along with shockingly white legs parading in shorts when the mercury first hits 33. Here in Los Angeles, people don't need to get dressed, and often they don't. Shorts are not a celebration, but a uniform.

I've scheduled trips to cooler climes in order to get my fill of weather, but it doesn't always work out as per my desires. Last time I went to London, in September, longing for that certain "crispness," it was too hot to wear long sleeves and everyone was partying in the park. When I went back to Chicago during the high months of mosquitoes, it was "unseasonably cool." Those I visit credit me sometimes with the weather, telling me I've brought the sunshine or the moderate temps. It's no such thing. It's just that weather's unexpected. It keeps the meteorologists in business. The Blizzard of '79 only happened once. There was other snow, but never to the roofs, burying the cars. Usually it was snowy, we'd shovel the driveway, maybe a couple days of school cancelled, but the drama was minimal. But now, when I fly in for a day or a few, I want Ultimate Weather, all the time. As soon as the flight touches down safely, I demand the heavens to open up and the winds to roar, the blizzard to wrap me up in its web of white linen and carry me back to 1979.

Lisa Anne Auerbach makes sweaters that tell it like it is, and her tract publishing project, *The Tract House*, changes the hearts and minds of the masses. When she's not on her bike or playing with her pussycats, she teaches at Pomona College.



Snow trek
Throughout the Chicago area, schoolchildren got a snow holiday last week. Most spent the time well, playing in the snow and helping or staying out of the way of parents, who for some reason don't think the white stuff is much fun at all. And then it all ended. The streets were cleared and the youngsters had to hit the books once more. These two Glenview boys seem resigned to the fact that snowstorms come and go, but school prevails.



The way we look

Snowfall provides slick surface, serene setting for suburbanites

By Eleanor Page

MANY SUBURBANITES spent some unexpected days at home earlier this week. They were unable to get their cars out because of the snow piled high in driveways, and unable to get the harried professionals with snowplows to come to their aid.

Among them was Ruth (Mrs. Thomas A.) Dues, whose husband took delivery of a new car on the eve of the snowfall. It was snowed snugly in their garage, and the old car they had left outside to get them about in emergencies was equally snugly buried in drifting snow.

Mrs. Dues spent her time making further arrangements for the dinner-dance she is giving Jan. 19 at the Casino to celebrate Tom's 50th birthday. It's a black-tie party, but if the weather is anything like last weekend's, she tells friends, "Come in blue jeans or whatever is necessary, but come."

THE SNOWFALL should give a boost to the business of George Hunter, 41, a resident of the Avers Group Homes, 1500 N. Avers Ave. in Chicago's South Side. He'll clear out driveways, sidewalks, and parking spaces, using other Lawrence Hall boys if business demands.

Hunter hopes to finance his college education through his efforts. Call him at 588-9984 or 485-5283. Let it snow.

"Let George do it" is his motto. At what the board of the English-Speaking Union describes as an "English test" and television station WFLD-52 bills an "ock-sion and hour of snow," from 5 to 7 p.m. Thursday for Jess Marsh, star of "Uptown, Downstairs." The series will be rerun on Channel 52 beginning Sunday.

At the Arts Club for tea from 4 to 6 p.m. Wednesday to open an exhibit of "Works on Paper: American Art 1865-1915," the Washington and Consortium Collection circulated by the American Federation of Arts. At the Artie Crown Theater Friday for the opening of "The King and I." At the Chicago Indoor Armory, 241 E. Chicago Ave., for the Polo Club of Chicago's 11-week season of indoor polo.

THE MAN (Garth H. Stern) if not the store (Shop and Shop) with the Christmas spirit proved it to his neighbor Jack (Mrs. Jerome A.) Strass on Christmas Day when she was looking for a grocery that was open so she could buy some milk. Having tried several that were closed, she ran into Stern at Cedar Street and Lake Shore Drive and asked if Shop and Shop's chairman of the finance committee might be open. It was closed, he said, but a few minutes later he telephoned her to say, "I'm in the Old-Bank store. What did you need at Rush Market. What did you need at the obliging Stern." She told him, and the obliging Stern said, "I'll drop it off on my way home."

Nature's next bad joke siege of cold weather

COLD, NOT SNOW, is expected to be the main message visited on Chicago by an apparently humorless Mother Nature.

The mercury was expected to dive into single digits Saturday night and climb only as far as the low teens on Sunday.

National Weather Service forecasters said a mass of cold, dry air is expected to cling to the area for the next three to five days, and estimated chances of new snow at less than 20 per cent.

Temperatures in this period could dip as low as to below zero in outlying areas, forecasters said. Uncomfortable wind-chill conditions are expected because the low temperatures will be matched with winds of 8 to 15 miles an hour.

The snowfall ceased five gave transportation lines a chance to creep toward resuming normal operations, although there were reports of some delay Saturday.

FULL SERVICE to all stations is to be resumed Monday on the Lake-Blue Ryan rapid transit line, the Chicago Transit Authority said. Stops at several stations in the South and West Sides of the city had been eliminated during rush hours but were resumed because of a shortage of trains. The CTA's action drew charges of racism from black leaders in communities during the first month of 1979.

All Summer in a Day

BY CHRISTINE S. LEE AND GUNDULA PRINZ

We were intrigued by the 1954 Ray Bradbury short story *All Summer in a Day* for its great storytelling and heart-wrenching emotional arc. The themes in the story relate to current environmental issues in need to be addressed with tremendous urgency. In the story, the characters live in a world with constant rain. Bradbury shows the reader how extreme weather conditions can be the impetus for out-of-control emotions and he forewarns us of the fragility of human nature and what can happen if we do not learn to change our ways.

Unable to reprint the story in its entirety (we did ask) here is an excerpt:

It rained.

It had been raining for seven years; thousand upon thousands of days compounded and filled from one end to the other with rain, with the drum and gush of water, with the sweet crystal fall of showers and the concussion of storms so heavy they were tidal waves come over the islands. A thousand forests had been crushed under the rain and grown up a thousand times to be crushed again. And this was the way life was forever on the planet Venus, and this was the schoolroom of the children of the rocket men and women who had come to a raining world to set up civilization and live out their lives.

"It's stopping, it's stopping!"

"Yes, yes!"

Margot stood apart from these children who could never remember a time when there wasn't rain and rain and rain. They were all nine years old, and if there had been a day, seven years ago, when the sun came out for an hour and showed its face to the stunned world, they could not recall. Sometimes, at night, she heard them stir, in remembrance, and she knew they were dreaming and remembering an old or a yellow crayon or a coin large enough to buy the world with. She knew they thought they remembered a warmth, like a blushing in the face, in the body, in the arms and legs and trembling hands. But then they always awoke to the tattering drum, the endless shaking down of clear bead necklaces upon the roof, the walk, the gardens, the forests, and their dreams were gone.

All day yesterday they had read in class about the sun. About how like a lemon it was, and how hot. And they had written small stories or essays or poems about it:

I think the sun is a flower,

That blooms for just one hour.

That was Margot's poem, read in a quiet voice in the still classroom while the rain was falling outside.

Christine Suewon Lee is a graphic designer based in New York City.

Gundula Prinz is a graphic designer based in Frankfurt am Main, Germany.

Both graduated from the California Institute of the Arts in 2007 and contribute to the design blog lanyber.net.



nk the sun

flower
WINTER
blooms for

ome
ADAY

All Summer in a Day, a short story by Ray Bradbury
—Originally published in the March 1954 issue of *The Magazine of Fantasy and Science Fiction*

Island in the Sun

BY AVIVA RAHMANI

I came to Vinalhaven Island, Maine, in 1989, when it was an artist's dream of a remote place to forget the world and concentrate on beautiful light; a place at the end of the world to treasure and protect like an adorable child. In truth, the reality was I came to an alien fishing culture and bought the town dump, transformed it into flourishing wetlands, *Ghost Nets*, and then sallied forth at intervals into the world, knowing I still had this toehold on a Shangri La I was clinging to like a limpet.

It is January 25, 2010 and we are enduring a noisy lashing rainstorm that put out our power for an hour, instead of a decent, silent blizzard.

I miss the certainty of winter white in dead quiet. I miss gazing at the boreal Spruce forest that is already beginning to migrate, knowing it will be that same green forever. I miss the cardinals I used to see in the springtime. I carefully watch the faces of fishermen who can't catch lobsters the way they used to, because they are moving to colder waters. I see *for sale* signs on properties whose families can no longer pay their mortgages, are losing their boats not because of the economic downturn, but because our ocean wilderness is changing. I miss a secure shoreline at high tide that won't drown my studio at the end of my deep-water wharf. When the



A Beautiful View #6, 2009, oil on linen, 10" x 10"
Watching the rising sea in winter at the *Ghost Nets*
restoration site control marsh.

spring tides come now in a storm, I wonder if this will be the one to carry away my life's work.

Some of what worries me is the loss of albedo, meaning the reflective value of snow, ice and ocean surfaces. Some of what worries me are the new responsibilities we all have.

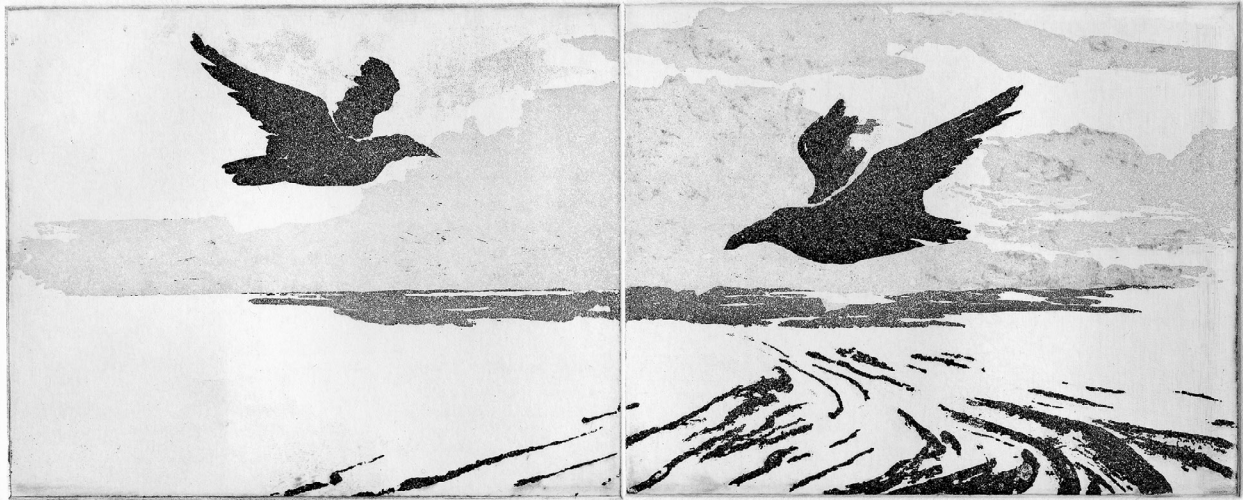
In Copenhagen, the gap between South Pacific Island states facing extinction and the Maine islands seemed dramatic. But Mohamed Nasheed, president of the Maldives spoke for many at COP15, when as the Cassandra of the proceedings; he warned that no island, no coastal region would be spared the consequences of rising seas. The goal is for the Maldives to become carbon neutral. Island nations in the South Pacific such as Kiribati and Tuvalu are facing full evacuations, imminent land and cultural loss and have become inadvertent models of adaptive behavior.

The survival strategies of the poorest island nations were presented at COP15 with modest grace. Kiribati described its resources as "sticks and sand" and presented a moving display of their cultures' songs and dance to a packed audience of enthusiastic supporters while passing out handmade necklaces of local shells. Tuvalu has advertised its needs with the film, *Trouble in Paradise*. It's strategy was to challenge the remaining almost 200 nations of the planet to be responsible to all. Kiribati and Tuvalu both proclaim they want to stay on their land but are assessing what transferrable skills they can contribute as new immigrants to other lands such as Australia. They are well aware that no nation welcomes immigrants today. In a study of public attitudes towards their crisis, Kiribati natives describe their responses to their plight as primarily fear and grief.

There was a time when any island was a symbol of remote refuge. Now islands worldwide are suddenly in the position of becoming mentors to the world, even as they face a new and frightening vulnerability.

I miss the way I used to experience time. Climate perceptions were slow and steady. Decisions could be made quickly. Now climate is a rushing train and when we make quick decisions, they are often wrong. For example, we put wind turbines on our island but didn't anticipate the effects of terrible noise pollution on a number of residents, including terrified chickens and ducks.

Models prescribed by island states are three pronged. First is the courage to demand transparent, accountable binding treaty agreements of the larger nations, including our own federal government. Islands nations and Least Developed Countries (LDC) took political leadership in Copenhagen, achieving the suspension of COP15 negotiations until a binding agreement could be transparently agreed upon. This diplomatic crisis forced developed and developing countries to public accountability. The second prong is enlisting help to map regional vulnerabilities such as to hurricanes and tidal flooding. Third is reinforcing shoreline



A Beautiful View #7, Sugarlift Aquatint, 2010, 4" x 10"
 Watching the rising sea, with gulls flying, at the *Ghost Nets* restoration site control marsh.

buffering while developing emergency plans for evacuation when and if necessary.

In the face of global warming, islands are rebuilding barrier reefs, reinforcing coastal buffer zones with indigenous plantings and seeking funding to create models of where rising seas will reclaim land in the next decades. We know the international dimensions and complexity of migration problems will increasingly effect serious socio-economic and political disruptions. Causes include desertification from drought and deforestation, as in Africa and salt water intrusion into aquifers, as in Bangladesh. Island states provide examples of discreet planning for calamity. They are early warning systems for land loss in other communities as climate change continues.

It is tempting in Maine, founded on stable granite rather than a fragile atoll like Kiribati, to presume such concerns are remote. But as the representative from Tuvalu stated, and most scientists concur, what Tuvalu faces today, we will all face tomorrow.

The effects of global warming are felt first in equatorial regions, as in the Pacific islands and Africa but most dramatically at the polar extremes. Accelerated and extreme impacts will begin to be felt by 2030, in most of our lifetimes and certainly that of our children. In Maine, our spruce, lobsters and many songbirds are migrating or disappearing.

Generally, Maine is considered one of the best-prepared states in the United States. But speaking at a COP15 side event on coastal preparedness in the Ameri-

can pavilion, Thomas Strickland, head of the U.S. Department of the Interior stated:

Task forces can assess sources of danger and vulnerabilities and have plans in place for eventualities. In addition to fresh water and development, some concerns might include: economic impacts, storm water run off and infrastructure resilience, costs of protections, assessing ecosystem services lost, prioritizing what to protect and value as salinity moves up into estuaries, modeling and habitat equivalency, changes in habitat spatial distribution, cost benefit analysis of restoration vs. replacement and between conservation and adaptation.

This is not exactly how Maine islanders are used to treating our shoreline. We have enjoyed a cavalier sense of entitlement to dispose of marshes and expand lawns to the low tide mark.

I wasn't born here on Vinalhaven Island. I didn't feel entitled to bury wetlands. But I did come here imagining it was a not only a precious child but a safe womb. And it was, in many ways, for many years. No more. It is a place, like all islands today, that is being forced to grow up, to parent the world even as the world drowns us.

Aviva Rahmani, affiliate with the Institute for Arctic and Alpine Research, at the University of Colorado at Boulder and a recipient of the Arts and Healing Network 2009 award, has more than 40 years experience in installation and environmental remediation earthworks. Known internationally for her environmental art activism, her works have resulted in the restoration of a dump site to a flourishing wetland system and helped catalyze a USDA expenditure of \$500,000 to restore 26 acres of critical wetlands habitat.

NEPTUNE

BY JEREMY PICKARD AND BRIELLE KORN



NEPTUNE, co-written by Jeremy Pickard and Brielle Korn, is the second in a series of ecologically-inspired *Planet Plays* currently being created by Superhero Clubhouse. A dark and playful adaptation of H.C. Andersen's *The Little Mermaid*, *NEPTUNE* explores the question of water and how we adapt to change. Onstage, two stories play out simultaneously: in one, a Boy on his birthday discovers a girl swimming naked in the flooded Hudson River, begins hearing the voice of a god in his bottled water, and finds himself devolving into a fish. In the second story (told entirely through song by a singer/songwriter at a piano), a Whale embarks on a harrowing journey to find Prince William. *NEPTUNE* premiered at NYC's Flux Factory in November 2009 directed by Sarah Hughes. Selections from *NEPTUNE* were performed at Dixon Place in October 2009 and as part of the "Dragons Egg @ The Construction Company" festival in September 2008 and 2009.

Superhero Clubhouse is a society of theater artists engaged in making original plays and events about the natural world via a green and collaborative process. The collective's experiments involve cultivating an intrinsic relationship between the ideals of ecology and the processes and content of theater, forming lasting collaborations with scientists, activists and artists from

diverse mediums in order to further develop and define the future of a green and unique theatrical event. Since its inception in 2008, Superhero Clubhouse has mounted productions of the first four *Planet Plays* (*URANUS*, a play about waste; *MERCURY*, a play about poison; *VENUS*, a play about energy) as well as *Phone Call*, a little play about climate change.

Find out more about the play at superheroclubhouse.org/Neptune.html and listen to the songs at superheroclubhouse.org/JourneyToNeptune.html

Jeremy Pickard is a NYC-based theater artist and the captain of Superhero Clubhouse. Jeremy is an active member of RiFRAC (O'Neill Institute alumni collective) and Upright Egg (MN), a frequent SITI Company collaborator, a teaching artist with the Baldwinsville NY School District and Bushwick Starr's Big Green Theater program, and a friend of Columbia University's Earth Institute.

Brielle Korn is a singer/songwriter from Rhinebeck, NY, and a founding member of Superhero Clubhouse. She has recorded two albums, *isn't it funny?* and *Return*, both produced in Boulder, CO, where she lived and performed for two years. In Manhattan, Brielle played regularly at Jack in the Village and at the late CBGB's. Her band Fortune Baby has recently debuted in NYC.

It's become very difficult to breathe. The air tastes inescapably rotten, and air is ubiquitous, so he tries to hold his breath for as long as possible.

There are now three long paper cuts running horizontally on either side of his neck. He touches them:

One, two, three.

One, two, three.

He's fashioned his bathtub with a stool so that he may peer out the little window, hoping to catch a glimpse of the lost, mercurial girl, who could at any moment pass on the street three stories beneath his water-logged renovation of a body. Two bare legs, an awkward, pretty swagger on designer flip-flopped feet...

She does not appear.

He takes a shower.

Time ebbs.

(In a bar, on his birthday.)

I don't know what it is about you. I don't know anything about you. I should be terrified, shouldn't I? You'll steal my computer, or ravage my cereal collection, break the whistle on my teakettle, pillage my savings—

(She kisses him.)

You're probably married.

(She kisses him.)

I probably have a girlfriend.

(She kisses him.)

Or a boyfriend.

(She kisses him.)

Or both.

(The Girl gingerly stands.

She dances. It is a dance she has known her entire life, a ritual from the ocean. With legs, it is impossible, and terribly painful. But she does it anyway, because it is her gift to the Boy. A birthday present.

When the dance finishes, she collapses in pain. The Boy scoops her up.)

Come on. You can sleep on my futon.

AQUA-DIPHENHYDRAMINE...

WHALE

This feels strange

I am colors all over

I see shifting shiny shimmering shapes

And I feel sick, and turned around, but strangely happy, like I'm floating,

I'm forgetting where I'm going...

N (as octopus)

They call it

Aqua-diphenhydramine-halluc-acetameno-estro-test-synthetic-MAOI with added Yellow #5

And that's just the abbreviation

A household name in every nation

No one goes on a vacation without

Aqua-diphenhydramine-halluc-acetameno-estro-test-synthetic-MAOI with added Yellow #5

Humans use it to purify their drinking water. And then to forget about it!

WHALE

Humans like feeling this way?

N (as octopus)

Sure!

A water high in expectation

The very best purification

And the taste – what a sensation!

Yellow is my favorite flavor.

Superior to chlorination

This stuff has been man's salvation

From almost certain dehydration

WHALE

Look—a crazy red crustacean!

N (as octopus)

How do you feel?

WHALE

I feel like an electric eel

N (as octopus)

Aqua-diphenhydramine-halluc-acetameno-estro-test-synthetic-MAOI with added Yellow #5

N & WHALE

Aqua-diphenhydramine-halluc-acetameno-estro-test-synthetic-MAOI with added Yellow #5

Time flows.

She does not appear.

He takes two showers.

Time ebbs.

I c--an't j--just let this hap—hap—hap—

“Things have changed.”

Nothing ch—ch—changes

“No, you’ve changed. I mean, you look different.”

Noth—ev—cha—g—es--

“And I’ve changed. I want... I want... I want things.”

We-- --ll c—fro--m th—se--! We-- --ll c—fro--m th—se--!

“You have to be happy for me! Okay?”

The sound of her rolling suitcase reverberating down the hallway of the apartment building, as if underwater.

He tries to call out to her:

-- !

-- !!

His sentences are melting away.

As if rock climbing, his footing slips, anchor lost, a shredded daisy-chain of elliptical clauses and unhar-
nessed punctuation. He dangles hopelessly, belayed from jagged consonants and unpredictable vowels, grip, grip-
ping, gripped, NO!, not strong enough, “a”s slide, “and”s shake, “the”s give up,

Then,

Falls.

Into a dark and inarticulate canyon of silence.

He’s lost his voice.

Time flows.

She does not appear.

He takes three showers.

He turns off the water and sits at the window, watching the people pass by.

He barely moves.

He is searching for something, trying to understand.

N (as octopus)

Is not so good for ocean mammals, or fish or horses, cats or camels

WHALE

I just can’t remember where I am, have I been here before?

N (as octopus)

What, you got something stuck up your blowhole?

You might as well enjoy the ride
Visions of angelfish and formaldehyde
Soft with chemicals they’ll make our seabed
Oh, extinction lies ahead!

WHALE

For them?

N (as octopus)

For you, man.

WHALE

Where are we going?

N (as octopus)

It’s a secret. And it’s amazing.

The music turns discordant and dark, as N takes the Whale deeper on their trippy journey.

N (as octopus)

Aqua-diphenhydramine-halluc-acetameno-estro-test-synthetic-MAOI with added Yellow #5 (repeats)

WHALE

I don’t want to be this color anymore
Where was I supposed to be going?
I was on my way... I was trying to get to... I was trying to get to...
My head is bigger than my body... my body’s shrinking
I’ve got to get... I just want to... I want it to STOP

N (as octopus)

Slick and smooth, spill that fuel over me
Watch it move, feel it flow
Black as night, and as far as the eye can see
Here we go, here we go!

WHALE

Splish, splash, dip just one fin in
Warm and inviting and strangely exciting
Eyes closed, let it pour over me
Liquorish coating, it’s just like I’m floating

He looks at what people are looking at. He studies their movements, what they're busy with, what they're interested in. How they pass through each other, how they stop, how often they look up, how often they walk on grass...

He is a scientist at work in the field.

He watches feverishly, for hours. He drips with sweat, swims in it. He needs to see something in the faces of these urban strangers. Time, it seems, is running out.

He barely blinks. His pupils become giant black sponges. His perspective bulges and swells. His eyeballs are now, irreversibly, huge.

Time flows.

Today the Boy begins to wonder if he is actually turning into a fish; if it is not merely behind the eyes, beneath the skin, in the membranes of the human mind that his legs are in the process of fusing together, his spine slackening, his throat slit.

He likes to think of his scales as music, like his body is a musical instrument, and those little sharp mirrors of skin are notes. He imagines if he were to press them in certain configurations, he could play a symphony. He's reinventing the One-Man Band! It's all about knowing which scale to play, which ones to leave alone, and which. Ones. To. RIP. OUT!

AHHHH--

Time ebbs.

(Excerpted)

N & WHALE

Let's go on the slip-n-slide
Rollercoaster, obstacle course
A messy dark splash of a ride
From a most unlikely source

N (as octopus)

Slick and smooth, spill that oil over me
Watch it move

WHALE

Oil?!

N (as octopus)

Feel it flow

WHALE

Oil!

N (as octopus)

Black as night, and as far as the eye can see
Here we go, here we go!

WHALE

We've got to get out of here!

N (as octopus)

Don't cry over spilled oil
Look at how much fun it can be
The ocean will wash it away
It's no big deal, comparatively

WHALE

Aqua-diphenhydramine-halluc-acetameno-estro-test-synthetic-MAOI with added Yellow #5

(Excerpted)

FIELD SWEEP RECORDING: *Tracking change in our manmade and natural landscapes with sonic rubbings*

BY SUSANNA BATTIN

SURFACE

The surfaces around us indicate where we are in the world. We form mind maps in our memory using both surface and sound. This sensory information reinforces our connections to the places we call home. Toes on carpet, hands on a cool faucet, fingertips navigating the books on a shelf—these sensations strengthen memories as they establish sense of place in our lives and histories.

ROUTINE

When routes become routines, we tend to stop noticing. Do we really observe the places we most often travel through? How can we be aware of change in our environments when we are distracted by the traffic in our brains?

SOUND

Our hearing extends 360 degrees around us and brings the sensory world closer to us. Heard through the resonance of a vibrating object, how might the textures of a landscape sound out?

CHANGE

What is lost when familiar surfaces change? Surface texture and sounds can track the changing biography of a place. This performance operates as a field recording to track the transformation of the landscapes we inhabit.

INSTRUCTIONS

Materials needed: a long resonant object, a map of the area you live in, rubbing materials (pastels, charcoal, or crayon, and paper).

Players/musicians: 1 to many (30+ for a grand sweeping of place).

ACT 1

On the map of the place where you live, trace an everyday route you take (a trip to the grocery store, to work, etc). On foot, travel meaningfully through the traced path. Pass a long, resonant object across the surfaces of the path—drag the object along the ground, wall, fence, architecture, tree, foliage, stairs, etc. As the object vibrates in your hand, focus on the rhythmic qualities of the textures beneath it. If you feel compelled to diverge from the intended route, follow this impulse into unknown or unfamiliar places.

ACT 2

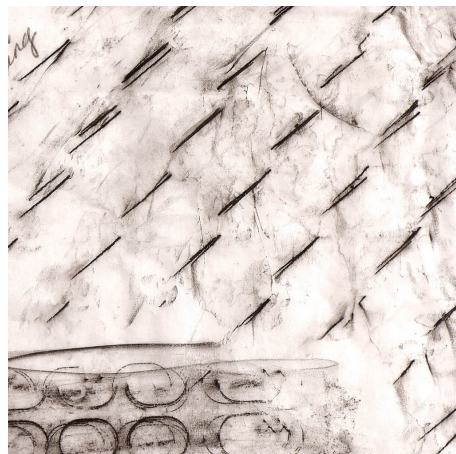
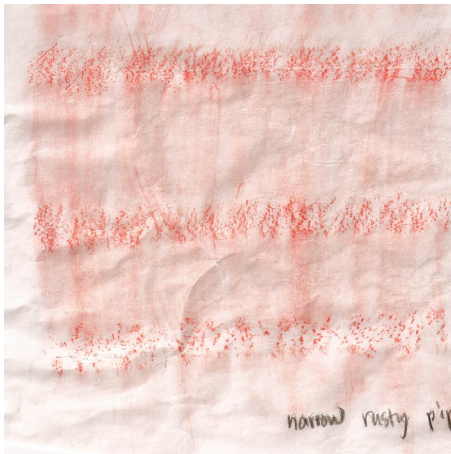
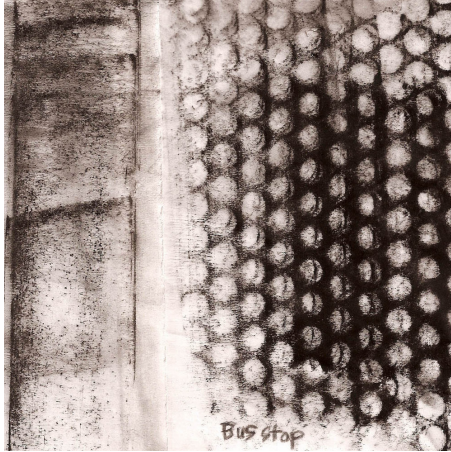
After completion of the first walk-through, retrace your path with rubbing materials in hand. Place paper over each sounding surface and rub a pastel or charcoal on it to document the texture. Keep these recordings as an archive of your route.

ACT 3 (OPTIONAL)

The resulting rubbings may be chronicled into a graphic score and performed with instrumentation. See page 30 for an example of a graphic score drawn from memory of the first *Field Sweep Recording* performed in Santa Clarita, California.

ACT 4 (ALSO OPTIONAL)

Repeat this activity, documenting the same route each year. Compare your new sonic rubbings to that of the previous years. Observe audible and visible changes.



Documentation of the first *Field Sweep Recording*:
Performed by Eliot Eidelman and Susanna Battin in
two Southern California locations: near a Val Verde
industrial park and at the Valencia Marketplace
shopping center.

ACT 3 of 'Field Sweep Recording'

A Memory Map Score: Moving from Val Verde, CA to the Valencia Marketplace, Santa Clarita, CA, written for woodwinds, percussion, brass, stringed instruments, and the human voice.

The score is to be projected on and read from a large wall. Each musician is assigned a surface texture excluding the clarinet. All the musicians begin playing the melody by following the orange pathway, reading left to right. The starting note is 'e'.

North to South indicates pitch, and raises and lowers at the discretion of the musicians. East to West signifies time, a time signature is agreed upon by the musicians/conductor.

Notes may be sustained or broken, again, relying on the discretion of the musicians and conductor.

Excluding percussion, all of the musicians begin playing the melody (notated by the orange line) and as their assign texture appears on the orange line, they individually break from the melody to play their 'texture' sound. They repeat the texture sound until the melody is complete. The texture sound is played as interpreted by the musician.

The Clarinet, or a comparable woodwind instrument, is not delegated a texture and instead plays the melody line from start to finish.

The percussion section is assigned the textures of the Bus Stop (notated on the score as BS). The percussionists begin playing individually and in succession once the melody instruments arrive at the bus stop.

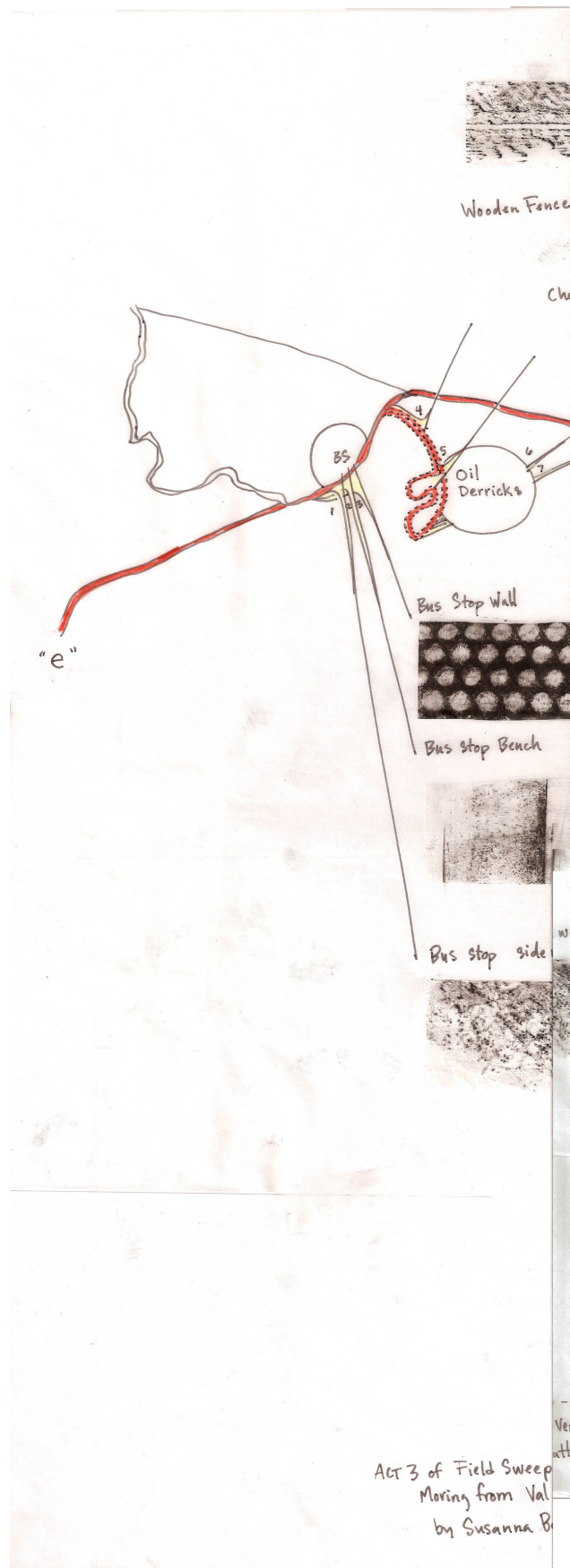
The instruments that are assigned to a texture within the Oil Derrick area diverge from the central melody to play the Oil Derrick loop counterclockwise, departing from the loop at their assigned texture sound.

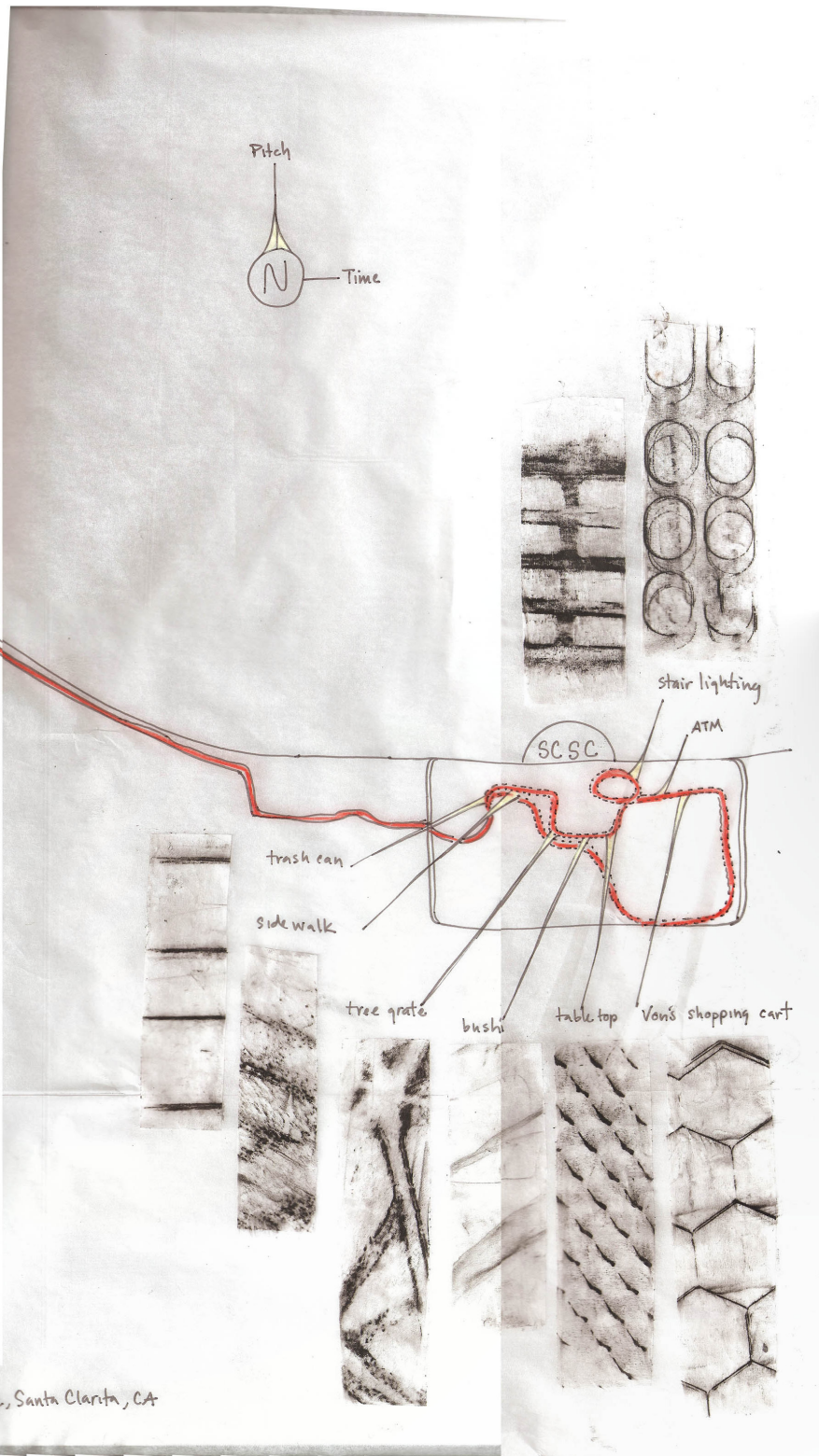
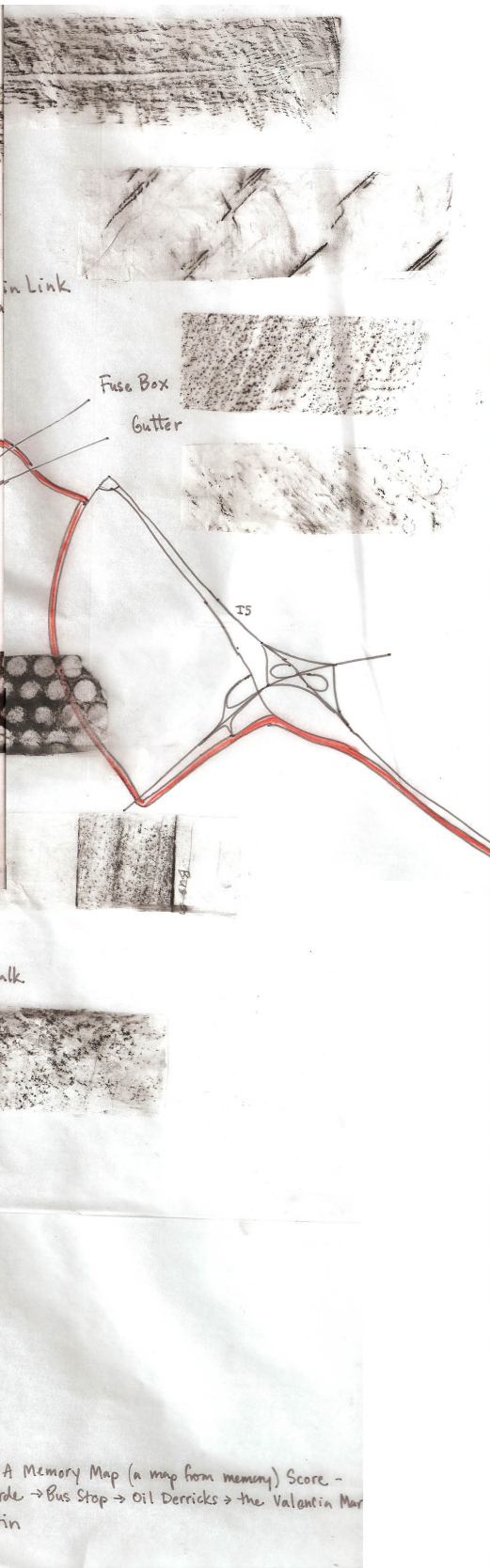
Ignore the I-5.

The musicians and the conductor may feel inclined to agree upon certain sounds and coordinating textures prior to performing the piece.

When the melody instruments arrive at the Santa Clarita Shopping Center (notated on the score as SCSC), they should follow the orange melody line clockwise.

Susanna Battin is an artist, designer, and illustrator, based in Los Angeles, California. She received her BFA from the California Institute of the Arts studying theatrical design, performance, and new media. Susanna also studied at FIT in New York and Italy to receive a degree in International Fashion Design. Today she works in interdisciplinary forms—mixing traditional painting, drawing, and sculpture with experiments in performance and composition.





Wrongfully Accused

BY RACHEL LEVY

As I walked out of the *Avatar* 3-D movie theater, I kept asking myself two questions. One, how could I teach myself to *see* the world the way the indigenous Na'vi race did? I would gladly give up my Prius and 650 sq. ft. apartment on the outskirts of Los Angeles to fly through the sky on enormous bird-like creatures and sleep in hammocks as they did in the movie. The other question was how long would it be before the "sky people," (i.e. the insensitive human race) returned with more troops and bigger machines to finish the job?

There was one line in the movie that made me particularly unsettled. Jake Sully, the main character tries to explain to his alien love interest what type of world he is from. He says something like, "There is no green on the world I come from." For someone who loves color, especially green, this is a very disturbing thought.

Maybe I'm over-simplifying the message of the movie, but, in addition to the blatant "down with imperialism" theme, there was a strong "balance and nature equals good, while greed and machines equal bad" theme.

Are we, the human race, suffering from a serious case of solastalgia? How else do I explain my now overwhelming desire to wear nothing but a loincloth and swing from tree branches? Not to mention the millions of dollars made by *Avatar*, *Lord of the Rings*, and all the other good-and-beautiful-nature-overcomes-the-tyrannical-evil-machines movies? Do they reflect our sadness about no longer being at home on our increasingly technological planet?

The more I thought about machines and their context within films, the more I began to feel that machines have been wrongly accused (and this is coming from a person who still gets excited when she copies and pastes a word document successfully). It is not machines that have destroyed wildlife and torn families apart. Behind every piece of technological progress are a human developer and user. Yet, machines are constantly being portrayed in a bad light. Why aren't the good guys in movies these days the ones with the monstrous machines and the bad guys the ones with bows and arrows and nature on their side? Good guys use allied animals, magic, bows and arrows, swords, maybe even a bad guy's gun momentarily, but they rarely have a surplus of MK47s or tanks that are indestructible against everything except giant, hammer-head rhinoceros. Nor do you often see good guys using computer tracking devices to track their enemies. No, good guys use eagles or hypersensitive hearing that you can only obtain from having lived in the forest for many years.

Maybe we should make machinery more colorful. In movies, why do futuristic, technologically advanced societies always seem to be endless tunnels of black,

grey, and maybe white metal? What happened to carpet in these future worlds? Would I feel as repelled by those metal walkways or big machine guns if they were pretty blues and purples or even breast cancer pink?

Is it that machines have gotten a bad wrap from legends such as HAL from *2001: A Space Odyssey*, Darth Vader from *Star Wars*, and the Terminator from, well, *The Terminator*? After all, if all it takes is for one mechanical hand to push the greatest Jedi into becoming the horrible Darth Vader, then imagine how easily a machine could overtake the everyday man. However, let us not forget all the really amazing and moral robots in history (okay, movie history). One of the first famous robots is the Tin Man from the *Wizard of Oz*. The Tin Man travels a far distance to ask the great Wizard for a heart, only to understand that even without the blood-pumping organ, he has more compassion than most beings. Then, in contrast to Darth Vader, George Lucas created C-3PO and R2D2. These two droids are probably the most moral characters in all of *Star Wars*. Even terrified C3PO only wants his friends to be safe. My favorite robot is Data from *Star Trek Next Generation*. Data longs to feel human emotion and when he finally does in the fourth *Star Trek* film, he sacrifices his own life to save the hundreds of "inferior" crew members onboard the starship USS Enterprise. And most recently, there is Wall-E. Wall-E spends his life cleaning up the humans' mess on earth, longing for a friend. In the end, Wall-E saves the day by helping humans to reconnect with each other and rediscover what it means to live. The Tin Man, C-3PO, R2D2, Data, and Wall-E are just five of the great machines of our time.

However, maybe Hollywood isn't exploiting our vulnerable solastalgic sentiments. Instead, Hollywood is capitalizing on our unquenchable thirst for more and our so-called solastalgia is actually a desire to imagine fantastical scenarios. Possibly, these box office hits demonstrate just how comfortable society and film industry have become with technology, explaining the contradiction between movies that are highly critical of technology but also technically state of the art. Moviemakers are just so good at making nature look good. If nature is all it is cracked up to be, was it really necessary in *Avatar* that the forest ground light up with every step or that all the Na'vi women, young and old, have perfectly perky breasts that never seem to hurt as they are flying through the air? The answer, I think, is *yes*. If I'm going to hand in my bra, then I want assurance that my boobs won't hurt. Has our "give us more" mentality been interpreted as give us more special effects?

One would think that the film industry, being a largely technological industry, would promote all the good that has come from technology. I suppose technology does not need to be on the good-guy side to be well advertised. Many people will still think those computer



screens floating in mid air are really cool, regardless of which side is using them. Maybe technology has, in fact, become the fall guy for the human race. If you can't or, I should say, if it's inconvenient to save our home (meaning earth), let's blame technology. Ultimately, it must be technology's fault that I'm not one with nature. In moments of technological frustration, I, for one, have definitely been known to make comments along the lines of, "One of these days, machines are going to take over the world." But maybe machines taking over the world would not be so bad. Conceivably, if computers, or robots, had emotions, their conscience combined with their supreme computing skills would be the perfect blend the world (or at least the environment) needs. A conscientious computer might have the good sense not to blow up the Na'vi "tree of souls" or realize that alternative fuels may obtain greater wealth and happiness for a greater amount of people. Imagine if Data were the President of the United States and how he might handle global warming.

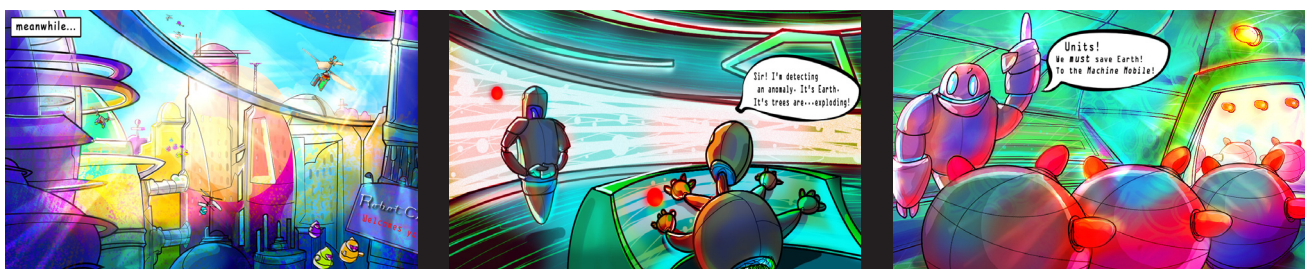
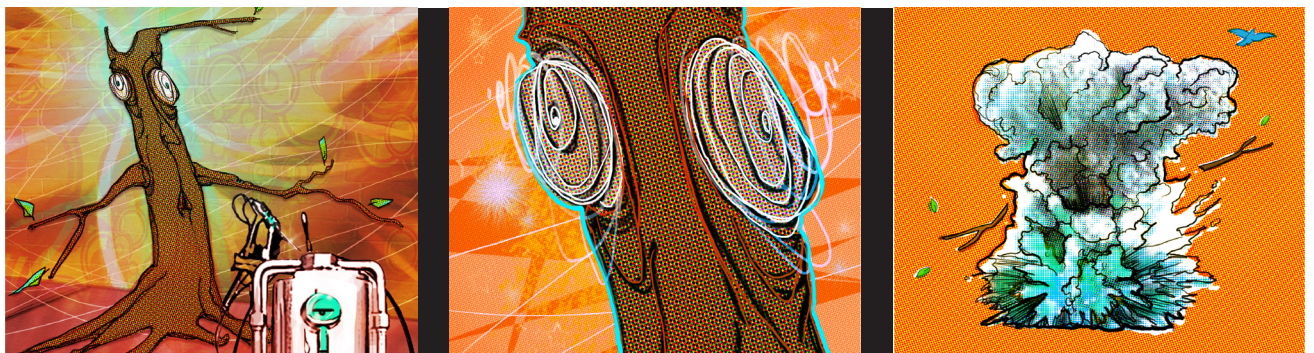
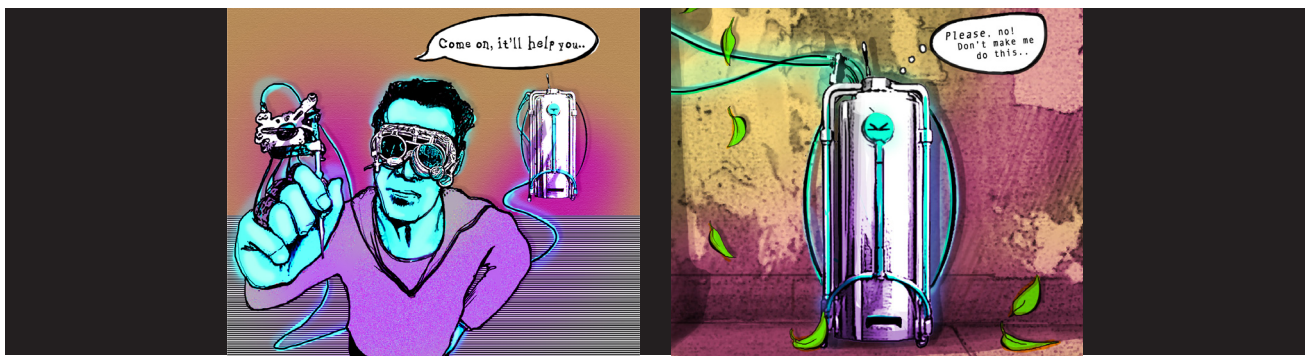
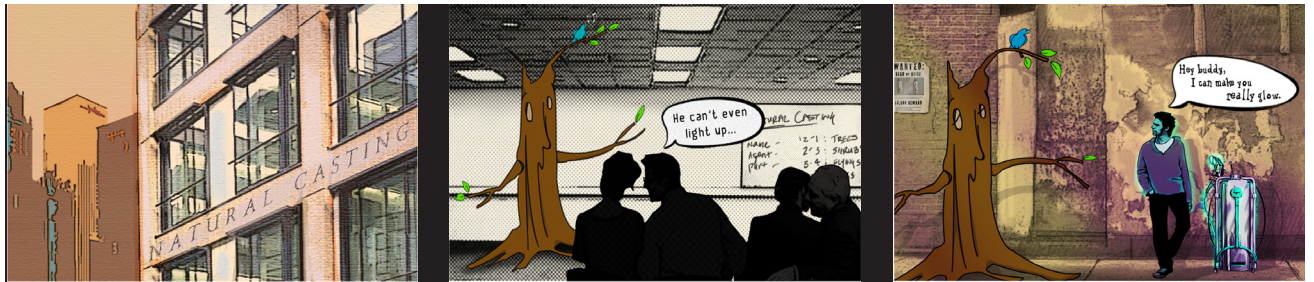
Is technology inherently cold, hard, and offensive steel that is pushing our home into extinction? Or, is technology a warm, soft, and comforting blanket within which to cuddle up as we willingly and perpetually

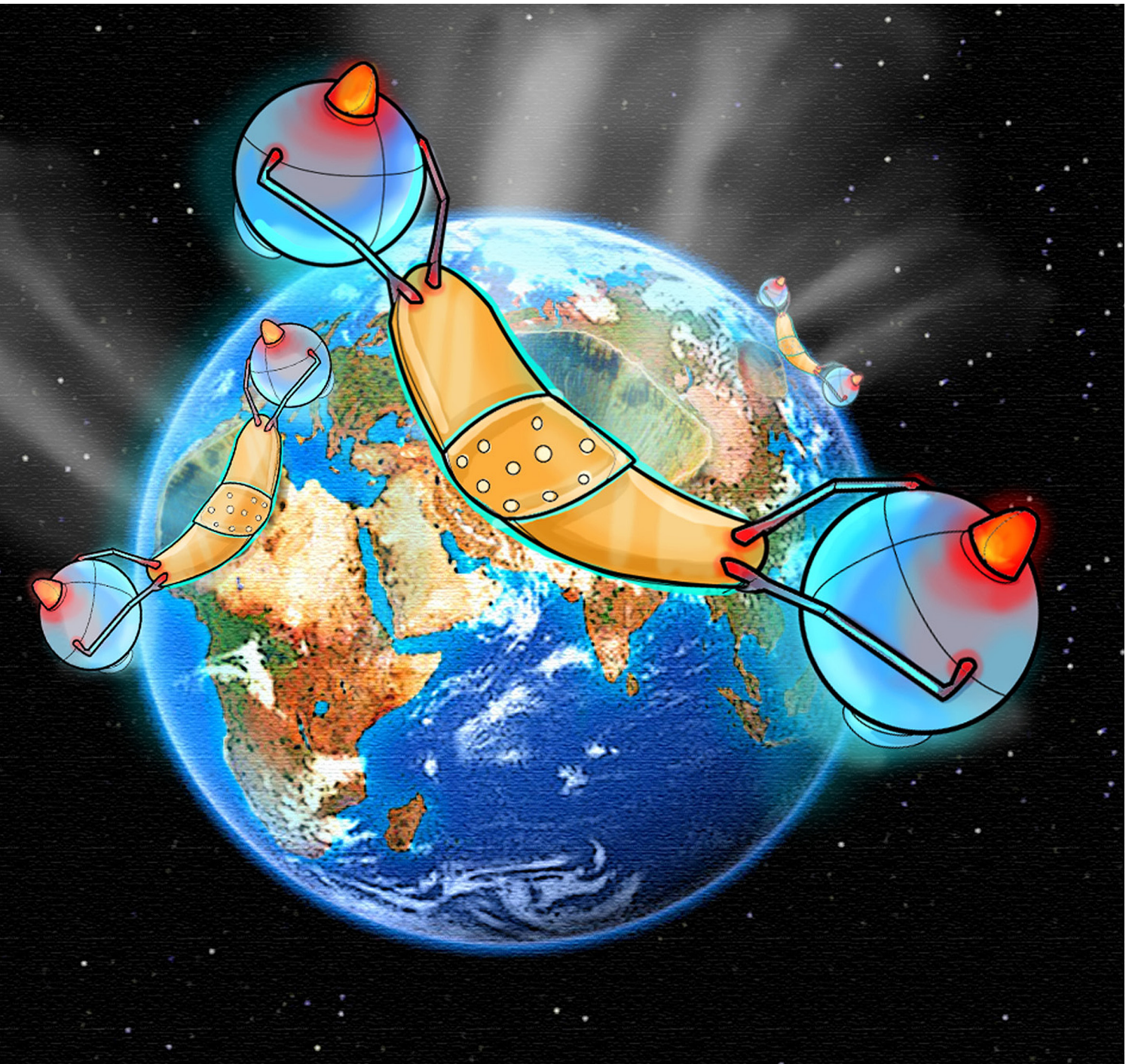
reshape our desires and therefore, our world? I suppose I ask a lot of questions without finding many answers. However, there are at least three certainties. One, *Avatar* rocked my world! Two, I will always love the color green. And three, if there is money to be made the sky people will return.

Rachel Levy received a BFA in Dance from Tulane University and is currently a MFA Lighting Design student at California Institute of the Arts. Outside of the performing arts, Rachel enjoys designing treasure hunts for Tailored Treasure Hunts and writing.



Comic strip written by Rachel Levy. Graphic art by Logan Wince.





Logan Wince works primarily in concept design and creative development for stage, film and themed entertainment. She earned a BFA in illustration from the Ringling School of Art & Design and an MFA in scenic design from the California Institute of the Arts.

