

HONORS JOURNAL

volume xxvi



***UNIVERSITY OF COLORADO
HONORS JOURNAL***

VOLUME XXVI

University of Colorado Arts & Sciences Honors Program

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The 2021 University of Colorado Honors Journal

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The University of Colorado Honors Journal

The journal is an annual interdisciplinary, student-run publication sponsored by the Arts & Sciences Honors Program at the University of Colorado Boulder under the supervision of a faculty advisor and the Director of the Honors Program. The Journal presents a collection of works that reflect the utmost talent, diligence, and creativity among undergraduate students at the University of Colorado Boulder.

Each year, the Honors Journal combines undergraduate work from all academic fields, including: art, creative nonfiction, fiction, gender & ethnic studies, humanities, natural science, open media, poetry, social science, and more. Although the Journal is directly associated with the Honors Program, submissions are accepted from all undergraduate students at the university. The Honors Journal is distributed and available to all students and departments at the University of Colorado. In order to reach a broader audience and exhibit works that are impossible to fully incorporate into the print edition, the Journal has an online version hosted at www.colorado.edu/honorsjournal/, where content from this and past years' editions is accessible.

The Honors Journal was established and first published in 1992 under the supervision of faculty member Professor E. Christian Kopff and with the support of Honors Program Director, Jack Kelso. The first volumes were devoted to undergraduate research, highlighting an article by an outstanding Honors professor and abstracts of all summa cum laude honors theses.

In 1995, the Journal went on hiatus until 1998, when Honors Program Director Dennis Van Gerven reinstated it under the supervision of faculty mentor Dr. Claudia Van Gerven. That year, the Journal expanded to include poetry, fiction, and black-and-white artwork.

Selection Process

In order to ensure that the integrity of the Honors Journal is upheld, all selections are made via a blind review process. Upon receipt of each submission, pieces are screened by the managing editors to remove all identifying information from the piece, and each submission is labeled with a number that is used for reference purposes. Genre editors are not made aware of the names of the authors/artists until after final selections have been made.

Within this blind selection process, genre editors are instructed to remove themselves from review of any submission whose author they can identify. These pieces are reviewed and selected by the co-editors of that genre and/or the Editor in Chief in order to prevent any biases from potentially clouding judgments.

For additional queries regarding the blind review process, please contact us at honors.journal@colorado.edu and we will be happy to address your concerns.

Get Published

The Honors Journal is an important showcase of the University's finest undergraduate work and offers students a unique opportunity to see their efforts published in a widely-distributed, juried publication available both in print and online versions.

Every year, the Editorial Board seeks submissions of exemplary undergraduate work for consideration of inclusion in the upcoming Journal. Generally, we are looking for art, creative writing, and academic papers. We are also interested in personal essays, final course assignments, critiques or reviews, short or long works of fiction, travel writing, and papers about works of literature, philosophy, or history. We accept submissions of all varieties. Essentially, if you are an undergraduate at CU-Boulder who has work that you are proud of, there is a category under which it can be published.

The Honors Journal accepts submissions year-round at www.colorado.edu/honorsjournal. For students completing an honors thesis in the spring semester of their senior year, please note that the Journal allows graduating students to submit work up until the submission deadline in mid-November following their graduation. To submit something, visit the website and click on the "Submit Your Work" tab. We look forward to reviewing your submissions!

Acknowledgments

The Honors Journal could not be possible without the unyielding support of the University of Colorado Boulder Arts & Sciences Honors Program. In particular, the Editorial Board would like to thank Honors Program Interim Director Paul Beale and Program Managers Lynne Buckley and Janelle Henderson. We owe a great deal to all of the Honors Program faculty for their continued support, without which the Journal would never find its way into the world.

This publication was funded, in part, by the Undergraduate Research Opportunities Program (UROP, <https://www.colorado.edu/urop/>) at the University of Colorado Boulder, which provides grants to support student-faculty partnerships and projects in all fields of study. The Editorial Board is immensely grateful for the support of the above and for their dedication to student-run organizations such as our own.

Additionally, the Board would like to thank Dr. Abby Hickcox, whose guidance and leadership all year has helped to produce a new and exciting Honors Journal that nonetheless stays true to its rich history of promoting critical and creative thinking on and off the university campus.

CU Honors Journal Environmental Statement 2021

In today's world, it is crucial to acknowledge that our current decisions may impact the future. Climate change and land degradation have become increasingly devastating to the environment and those that depend on it. Therefore, the University of Colorado Honors Journal wants to take on more of a responsibility to address and remediate these environmental concerns through its production process. This year, the journal has implemented a new eco-design. Each journal is printed on 10% post-consumer content recycled paper, which was FSC certified in its production. The Honors Journal aims to be a leader in environmentally friendly practices and to support the undergraduate students of CU Boulder as well as the planet.

Recycling: Each journal is recyclable, except for the glue within the spine. If you wish to recycle your journal, be sure to tear out the spine and discard it. The remaining pages can be recycled through paper recycling services.

Letter from the Editor

April 2021

In times of tragedy, the arts ground us.

I write this letter in the recent aftermath of a shooting in our hometown of Boulder, which has left us with almost inarticulable grief. Amid the COVID-19 pandemic and the loss of life it has brought, and after the passings of George Floyd, Breonna Taylor, and so many more people to police violence this year, we as a community are grieving. My editorial board members and I offer the journal as a reflection of our times and as a platform for the diverse voices of that resilient community. Across disciplines and experiences, the journal is committed to amplifying stories and voices that are less often heard, that are associated with stigma, and that express the grave inequities in our society.

I am so deeply thankful for the extraordinary members of the editorial board, who have demonstrated constant resolve and dedication to this journal. My gratitude for our faculty advisor, Dr. Abby Hickcox, stretches beyond words, as her compassionate leadership has been a source of inspiration throughout this challenging year.

I hope this journal gives you an opportunity to reflect on our times, start conversations with friends, and momentarily immerse yourselves into stories, poems, art, and scholarly work.

Jordana Levine

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Fiction

Faded Into Blue

Patrick M Heffernan

At least once a week, but no more than once a day, a twin turbo-prop rode up the neck's gravel road—the one that split the Adam's apple dunes in two—and socked the head right in the jaw, splitting its lip clean open. To the east, caught extending into the bay, almost to the shoulder, were the hairs, the beard, the conglomerate of eutrophied muck tangled in an interwoven algal mess along the benthic zone. To the west, caught against the open sky and unblemished sea, was Carrickfinn Beach, shaved smooth by the endless droning razor-waves that cut away even the deepest of divots.

My footprints shaved away behind me, as if I was never really there, and Chekov's rifle slung over my shoulder. Each step tapped the butt deeper into my back like a nail. A necrotic bruise spread, spider-webbing into chlorosis.

Ahead of me were the stones, the heaps of moon rocks, cubed and smoothed. Herbivorous teeth looking for a bite. I flossed through them, dragging my feet to collect cracked bivalves into little piles that could be swept back into the water column. Then, as any worthwhile brusher knows to do, I flossed back through to the beach.

The sand beneath the breaking water enveloped my wellies and yanked down, begging me to stay. I couldn't oblige. There were things to be done, to be ended, before play. I found a dry patch away from the water and waited; my eyes locked on the dunes towering above.

The behemoths were tumors, formed by mounds built on lost disarray, held together, calcified, by nets

of roots. As they expanded, the neck choked, and air struggled to squeeze through nature's winding maze.

There were three things that didn't struggle through them. The first was the hares, who trampled the grass and moss so often that their trails riddled the landscape from hole to hole. The second was the dogs, who followed the hares' trodden map but could not hide beneath the surface. The third was him, the man with only a mouth, who wandered where he should and lingered where he shouldn't, coming and going, very little wanted, very little needed.

He stood before me with a crooked grin cracked below his empty sockets. He couldn't see, but he knew the way. "It's delightful to see you," he said. "Why have you found me on this lovely day?"

"I haven't decided yet," I said. My eyes were snared behind him on his never-fading footprints. Even if he walked near the shore, where razor burn festered most, they wouldn't shave. His mark was permanent and unyielding. His tracks were ubiquitous. I looked into his skull and unshouldered my rifle. "I think I came here to kill you."

His head tilted askew. "Then why have you not already?"

The bolt slid light: open. "Because a small part of me still wants to see."

With a nod, "You, and most." He took a step forward, his naked toes curling around a shell. I expected a crab to run out and crunch between his metatarsals, but the air was too thin for that kind of life.

“I can let you see.”

I held his sickle smile down, tremors on the edge of my lips. “Mind over matter.” The bolt slid heavy: closed.

“Right now,” he took another step forward, “you see regret.”

“Yes,” I nodded. “In coming here, I think.”

“To Carrickfinn?”

“To somewhere new.” I fit the butt beneath my collarbone. “I spent years begging to get away, years searching for some escape. Now the difference is driving me mad.”

“Habitualized?”

“Haunted,” I clicked my tongue. “By you. None of this is my choice. I’m caught on your reel.”

A fly buzzed out of his right socket. “You want what you can’t have.”

“I want to live here without being anchored down by you.”

“Anchored down?” he laughed. “No, no, no, my dear friend. I help you be free. I help you expand and prepare. There is so much to see, so much left in store for you. Let me take you to where you want to go.”

“I think I’ve seen too much.” I found his head between the sights. “Perhaps it’s time.”

He chuckled. “Aim for the heart. That’s where I have a hold on you.”

I obliged.

“All your life, you’ve lacked verve, and now here we are.” He stepped in close and traced his finger around the muzzle. “But please, before you squeeze, give one last look. See, one last time.”

I held my aim.

“I’m yours to do with, my friend. Use me.”

“What would I even see?”

“Oh, the same, the same, and the same. A promise of what will come and what will be.”

“Empty.” I tore skin off my lip. “Your knowledge doesn’t control the future.”

“All actions are truth-making, so the future controls

my knowledge. The choice is there, and though I happen to know what that choice may be, it is still yours.”

“I’ve seen before, and it’s hardly truth”

He smiled a delicious smile. “For you, a bounded man, not quite yet; for me, unbounded, always.”

“So, I see one last time, and then what?” I dragged my finger across the trigger, each ridge catching the edge. “Will that let time go lightly?”

“If you choose.”

The gooseflesh rose beneath my layers, mammalian irony. It would be so easy to shrug the weight off my shoulders. All it would take was a twitch, a spasm. Through the trailing smoke, he would slump to the ground, a little emptier on the inside. I would walk away, washing my hands in the sea and letting my feet sink into the sand, and then it would be my turn to smile. But no matter how far I would go, his rotting stench would carry. It would trickle in and crinkle my nose, and I would know I had spoiled the land. The only way out would be to remove him. Dead weight to carry, back on the shoulders.

I lowered the rifle.

His open palm extended. “Follow. This is your time.”

How nice of him to offer.

Like the dogs, we walked along the hare trails, tiptoeing through the dew-ridden grass and over the swollen carpet moss, between the towering dunes and past the blowout.

Sometimes, when the wind wandered lost through the neck and had no place to go, it would nosedive deep into the hare holes. Running, hiding, and encompassing itself in solid comfort like a child under a bed. But every child must move on. Pressurized, the wind would erupt, a cacophony of brittle deconstruction as the roots wriggled and the sand fell apart. Blowout. The hares lost a home, and the dogs broke their feet in the ditches that remained.

We passed several blowout carcasses on our

way. The smell hammered into the nostrils much like the wind invaded the holes, resulting in a snot-filled explosion. The maggots wriggled in the rotting flesh, and the dipterans swarmed in clouds above, clogging the mind.

Life beyond death, a comfort and a curse.

“May I ask you one question?” he said with a flicker of his tongue.

“You will anyway.” I hopped over a waterlogged moss bed.

“Why do you no longer find this necessary?”

I hesitated, letting the distance stretch between us. “It’s time I be myself.”

“This is yourself.”

“I’ve moved on.”

He laughed. “Yet you come back.”

The sun came back, if not for a moment, breaking through the cumulonimbus blanket that suffocated the land, that swallowed every last plane taking off towards the sky, towards the south, towards the crowds. A ray or two peeked through, seeking home, a permanent dwelling place. Then the holes filled in, the rays dimmed, and the moment was over.

“I can’t help myself,” I said. “I’m on your reel. That’s why I brought a solution.” I shifted my rifle.

“Will that bring you satisfaction?” he asked.

“At least a little. You’ll probably live on, but at least I can say I tried.”

“True. It is always worthwhile to try.” He stopped in front of a door—three-feet by six-eight, four indented patterns lacquered maroon, and a little scratched hook, begging for holiday—embedded into a dune. A brass knocker hung near the knob. A bit low for most people, but just right for me.

I reached to enter, but he grabbed hold of my wrist, jagged nails digging into my skin.

“One moment, my dear,” he stepped beside the doorway and yanked out a fistful of roots from the dune. The sand collapsed, and, in its place, a four-paned window appeared, once edged with white, but now

crusted yellow. The curtains draped to block out the sun, but through the crack, there was a flicker of light. Someone was home.

“Will I just watch?” I asked.

“You will see,” he commanded before knocking three times at the door.

From my sunken perch between the couch cushions, I heard the three knocks, the starting gun. I dropped the tea bag into the boiling water and sat back.

Twenty years spent between the walls, navigating the spackle and eschewing the mold. Once a week, once a day, once an hour, turning to go, but going nowhere. Twenty years spent running twenty feet just to arrive at the same house, and then another twenty feet just to arrive once again. An endless feedback loop stuck in descending cyclical time. Anywhere’s a better place to be.

When I was young, when I still uncovered the stones in the yard, poked at ant colonies, and marveled at tubular arachnid silk, I tried to escape with a stuffed military sack pack over my shoulders. It was filled with three pairs of socks, four shirts, zip off pants, extra Benadryl, eight expired cans, one half-eaten bag of chips, a journal with no pen, dog tags, coyote tags, a tarp, some wood glue, three and a half pocket knives, a double-a radio, and surplus triple-a’s just in case. Yukon, ho! The edge of town, ho!

I begged for crop circles in the fields beyond. I begged for targets. I took aim. Fire.

Twenty feet, and another twenty feet, and another twenty feet.

Dichotomy paradox. I never arrived.

But one time I had left. At least, I think I did. That’s what he told me. That’s what he showed me. I had punched the head in the chin, socked some whiskers clean off, and made it my own. I had embedded myself in the folklore and lost my chains. I had moved on.

And then I had moved back.

Three knocks echoed from the maroon door once again. The tea was steeped, but now it was cool to the

touch.

A glimpse beyond. A crack in the surface, now coming to shatter. I wanted to punch it, weather the cuts, vaporize it, breathe the silica air. Eutrophied muck grew from my chin in splotches, tangling around my throat and collapsing my trachea. The wind had nowhere to go, so it dug deep and erupted, a pressurized bomb set off by my own stagnancy.

I opened the door, and the man with only a mouth entered.

“Wipe your feet,” I told him. “You always leave footprints everywhere.”

He streaked my welcome mat with grain-fed mud. His toes would never shine, but it did the job. Not that I cared much. My feet were plenty dirty too.

“Thank you.” I dropped some ice cubes—an attempted salvage mission—into my tea and took a few good sips.

“Dear me,” he whispered through a grin, “it’s quite dark in here. I feel like some wriggling earthworm, and I’m sure you do too. Do you mind if I open the blinds?”

“You can’t even see.”

He shrugged and let the light in through my four-paned window.

Three photos were on the wall. One old, one absent, and one new. The old was of an infant tossing his stuffed bear down the stairs. His plaid overalls were opaque through the sun stained blue tinge. The absent was a stock photo surrounded by a sea-shell frame. A do it yourself masterpiece made from a do it my way kit. The new was of a beach, clean and solitary with moon rocks rising from the plain. Rain-jacket armor over water-logged skin.

“Why are you here again?” I asked. “It seems a little rude to show up unannounced.”

“If I was unwanted, perhaps it would be.”

“You are unwanted.”

“Your façade is charming, however deleterious. No matter. A more pressing matter is at hand it seems. So, if you don’t mind me asking, why the knife?”

It felt warm in my hand. Ten inches of serrated steel molded into a fine point. By the pricking of my thumbs, it hadn’t been sharpened in years, but it still tore.

“I think I want to be rid of you,” I said. “Seems fitting.”

“You don’t want to be rid of me. You want to be rid of what I can show you.” He took a step towards me, laying one splayed toe down at a time. “You need me. You’re not happy without me.”

“I’m not happy with you.”

“I’m your only connection to the time you left.”

“You’re a virus to the time I have left.”

He grabbed my hand and brought the blade to his throat. “Then kill me. Kill the only thing you have left.”

Eighty-four hooks, cast by rusted steel rods, burrowed into me. Their barbs—some treble, some jig—caught me. The string was held taught. There was no step I could take without being pulled back. There was no thought I could think without being yanked back to the head.

“You need to see,” he whispered.

“I want to be done with this.”

“You belong there. Let me take you back.”

“I can go back on my own. Without you.”

He laughed. “How silly of you, my dear. Do you really believe that?” He pushed the knife against his skin. “You will never be that full again. But if you truly want to, go ahead, grasp at your straws. Just remember that I am your only option for something more.”

“As if you’re giving me anything more than straws.”

“What I show you is real. When you see, you’re truly there.”

“I can do better than you.”

“Then kill me. Drag that blade across my throat, watch me die, and remember that it was you that threw away your only chance at life.”

I squeezed the handle.

“I’m your only passage to that moment, your only way of actualizing your aim.”

I stared into his sockets, into the flesh fading into

darkness. I needed to be, not just to see. I needed to fire. The pack was still in the basement, the clothes were clean, the cans were still past due. I could still run.

"One more time?" I said.

"One more time."

I nodded and scratched the blade off his epidermis.

His hand slithered around and caught hold of my wrist, jagged nails digging deep into my skin. A tug, a yank, a direction. He pulled me over to the four-paned window and stood me up straight.

"See," he commanded.

I saw myself through the window. My mug was empty. No more tea, no more melted ice. A blank slate. There I was, rain-jacket shrugged around my shoulders, damp jeans clung to my legs, and wellies up my calves; and there I was, flannel draped across my back, jeans held up by a frayed rope belt, and eight-year-old socks threaded around my toes.

"What is this?" I said.

"Identity," the man said before shrinking away into the corner.

My face dripped more than the tears, more than the mist. It melted into the fabric below, into the slouch and grumble, encysting into my stomach and anchoring me down, anchoring me from thought to reality.

I mumbled through the window, but I couldn't hear. I needed to hear.

I took the butt of the gun, and I took the handle of my knife, and I shattered the glass between myself. The shards crunched beneath my wellies and cut through my threadbare socks as I stepped forward. With no divide, a look—nothing more than a glance—into my eyes, into an understanding. There was no separation; there was no distance. One in the same, I was I.

"Why do you keep coming back?" I asked myself.

"If I knew the answer, I wouldn't."

I looked into my eyes, young, yet weathered. Metals and nutrients leaked from them, bloodshot. Barren land seeping into barren water. The fish kill was heavy.

"Cut the barbs and run to where he can't find you,"

I said. "Anywhere but here."

"They're in too deep. I may cut too much."

"Then stay. Please, for the love of me, stay. Don't come back."

"He'll take me back," I said, shaking my head.

"Offers I can't refuse."

I adjusted my grip on the handle and ran my finger along the barrel. "It's time to be rid of him then."

Over in the corner, the man with only a mouth took a break from sharpening his teeth with his tongue to shudder and laugh.

I sighed. "You know I can't carry that weight."

"Can I even live without him?"

"Maybe, but it's not worth the risk."

I nodded. "Then where does that leave me?"

"Still lost, I suppose."

I hummed, two-toned. "So, I should stay."

"In both places, yes."

"And forget?"

"Yes."

I laughed, crinkled skin folding at the corners of my eyes, lapses of blue-green flickering with the occasional combustion. "I guess there'll never be an answer."

"To what I'm seeking? Not a chance."

There were other places beyond the dunes, beyond the home. One was on the back patio of a three-storied townhouse. The air was crisp, the food was dense, and the pages to thumb through were endless. Another was among the jutting rocks with cracks filled in by snow, above the valley, where the mugs were filled to the brim, the pots were melted, and the bread was homemade. There was another in the middle of the street, surrounded by chalk and broken brakes. There was another, but I did not know.

"Tell me this, at least, is it better where I am?"

"No, but it will be. Give it time."

I nodded and looked myself up and down, taking in the nooks and crannies that only I knew about, the places where the hooks caught and the waves shaved.

"Thank you," I said, before turning away, back to my

chilled tea.

I smiled a heavy smile and left, wandering through the winding maze of dunes until a twin turbo-prop socked the head in the jaw and led me out. When I reached the shore, I flossed through the herbivorous teeth and revisited the shore, where I flipped off my wellies and sunk my toes into the sand. The man with only a mouth lurked behind the tall grass as he always would and watched my digits fade into blue. I didn't have the strength to carry him, nor did I have the strength to leave him behind, but perhaps someday I would have the strength to take his hand, for once, and help him see. Hope is a dangerous thing, however, and it's best not to dwell in it.

By the time I walked away, I was beneath the stars. They winked at me every step of the way. Behind me, the endless droning of razor waves cut away my prints, as if I was never really there, but the shore left little grains under my nails, in my wellies, and inside my ears. Little seeds sown as reminders. Reminders that I was there. Reminders that I had nowhere and everywhere to be.

The Ties that Bind

Anna Ross

Content Warning: rape and self-harm

You stand in front of the bathroom mirror with your sister Abigail, whose eyes no longer hold oceans, but Sunday coffee—just like yours—and as you both run a brush through your hair, Abigail’s grows two inches which was the same length as yours when you were sixteen; it was the perfect length for that senior boy from Spanish class to grab as he kissed your neck and forced you into a dark room at a party where you did not know the host—but hey, everyone was going to be there—and as you both cake on foundation, Abigail’s features begin to look more like your own, and then she covers the hickey on the side of her neck; you did the same when you hooked-up with any guy who showed you interest because all you wanted was to feel in control of your own body, but that sense of security never came; as Abigail runs a curling iron through her hair, scars form down her wrists on the same spots you used to drag razors and flames because each time you closed your eyes you thought about how he forced you into a cold room, the sound of a locking door, and the feeling of his breath on your neck as he forced himself on you while you cried; your sister blends concealer under her eyes, but the dark circles deepen with each brush stroke because—just like you—she tries to hide the nights where she cannot close her eyes without feeling the weight of an unwelcome intruder on top of her, but she cannot tell anyone because no one believes the girl in these scenarios, so you both run peach lip balm over your mouths that kissed the ends of red solo cups and cigarettes every weekend because you

wanted to feel better for a night; you wanted to forget; Abigail flashes you a smile with glossed over lips, but you cannot tell which reflection is yours, and your little sister’s legs grow another inch and her eyes become empty, so you begin to worry that the oceans will not return, her hair will remain long, and her scars will not fade because you know all too well the weight of silence; then mom calls out, “Elena, are you ready?”

Before you can respond, Abigail yells, “Yes, coming,” and runs down the stairs, leaving you face-to-face with her reflection.

Planes, Pain, and Automobiles

Anna Ross

Three hours and fifteen minutes until I am home.
Twenty-two hours until I am putting on a black suit
and driving to Church of Grace off of Redbank Road.
Twenty-four hours until I am carrying the casket down
the front steps of the church.

An orange light blinks in front of me. “Ladies
and gentlemen, when the seat belt sign illuminates,
please fasten your seat belt. Insert the metal fittings
one into the other and tighten by pulling on the loose
end of the strap. To release your seat belt, lift the
upper portion of the buckle. We ask that you keep
your seat belt fastened throughout the flight, as we may
experience turbulence.” The flight attendant’s soft-
spoken voice slowly sings me to sleep as the orange seat
belt sign above my head begins to blur. I close my eyes,
but all I can see is fiery hair.

~ ~ ~

Golden eyes and caramel hair. She sat across the fire
pit swaying to the music I produced with a pick and
old guitar. In a quiet voice, she sang along to David
Wilcox’s “Eye of the Hurricane,” and her eyes were
glued to the flames that stood between us. As I played
the final chord, she cracked the slightest smile and held
her gaze on mine just a bit longer than she intended
because her cheeks turned red as she returned her eyes
to the flames.

My best friend Daniel invited a group of friends up
to his family’s cabin at Caesar’s Creek State Park for the
night so we could celebrate his birthday. It was pretty
much our rec soccer team and a couple of kids from his

youth group. His parents put three cases of Miller Light
in the cooler outside and told us they would be upstairs
if we needed anything. Needless to say, Daniel and I
had a drink, tossed a football, and waited for everyone
else to arrive.

When the sun went down, we all gathered around
the fire and I played my mini acoustic set for anyone
that cared enough to listen, and when I finished, I met
Daniel by the cooler.

“Who is that girl over there? Brown hair, yellow
shirt.” I asked.

“That’s Alyssa. She’ll be a Junior. I met her on
our West Virginia mission trip two weeks ago. Super
sweet. She’s a little shy at first but super nice.” I had a
name and that was all I needed, so I grabbed a beer from
the cooler and turned to walk back to the fire. Daniel
quickly interrupted me, “Carter, ah. You probably
don’t want to take that over there, assuming it’s for
her.”

“What’s wrong with offering her a drink? We are all
staying the night anyway.”

“Yeah. That’s not the problem. Come here.” In a
hushed tone, Daniel told me, “Her dad is a recovering
alcoholic, and she doesn’t really drink. She won’t get
mad if you offer her a drink, but I figured I’d spare
you both the awkward moment of you trying to start a
conversation after she rejects your offer.” Daniel took
the cold aluminum can from me and patted my shoulder
to let me know that I was free to go.

I sat down next to her and introduced myself. She

complimented my mediocre music abilities, and we talked for another hour until everyone was ready to turn in for the night. Before she left in the morning, I mustered up enough courage to ask if she would want to hang out sometime, and luckily received a yes.

~ ~ ~

My train of thought is interrupted when the old man next to me asks, “Where are you going, son?”

“I uh—I’m headed home for a funeral, sir.”

“I am sorry to hear that. God bless you. The name’s George.”

“Carter, and thank you, sir. What about you—where are you headed?” I ask.

“I am on my way home from my sister-in-law’s house. My wife passed away four years ago—breast cancer—so every year on the anniversary of her passing I spend the weekend with her sister in our hometown.”

“I am sorry to hear about your wife sir. How long were y’all together?”

“She was my high school sweetheart. This summer we would have celebrated our fifty-seventh wedding anniversary, but it seems like just yesterday I was asking her to our high school dance.” He lets out a small chuckle, and a smile stretches across George’s face as he talks about his wife. “I showed up at her door with flowers, but I was too damn nervous to ring the bell. I was about to walk away when I heard her voice call my name, and she was walking up behind me. She looked at me and said, ‘It’s about time, I thought I was going to have to ask you myself.’ She was the love of my life.”

The flight attendant’s voice interrupts our conversation. “At this time, set your electronic devices to airplane mode until an announcement is made upon arrival.” My screen lights up as I swipe to press the airplane icon on my phone; I swipe down and catch her gaze. I haven’t changed my lock screen since we took that picture. Wavy brown hair drapes over her shoulders while I support her weight on my back. We both have smiles that illuminate our faces. She wears her favorite white t-shirt and baggy jeans. Not that she

remembers, but it was the same thing she wore on our first date; the night I realized I could love her.

~ ~ ~

It was late summer as the gentle sound of a cover band floated through the crisp air of downtown Carroll. We sat at the dinner table for an hour after we finished our meals trying to learn as much about each other’s lives as possible. She told me about her job at a small coffee shop, and how she cannot lie to her mother, and the nights she eats ice cream and dances around the living room to old Disney movies with her sister. I told her about my dad who taught me how to work with my hands and the way my dog likes to sit on me whenever she gets the chance, and that my friend had to drive me to meet her because my car broke down that morning.

Eventually, we made our way out of the restaurant and down the walkway illuminated by strings of lights. We walked slowly down the path until we stopped to listen to the cover band playing in the park. When I asked her to dance her cheeks turned red, and she warned me that she had two left feet, but she took my hand and swayed to the music. The warmth of her body pressed against mine, and I wished that song would never end. For a moment I forgot about the crowd of people around dancing, talking, and enjoying the music. When the song came to an end, she looked at me with a grin across her face and took my hand.

“What do you want to do now?” I asked.

“C’mon. I want to show you one of my favorite places down here.”

“Okay, but Daniel is coming to pick me up in fifteen minutes. Don’t have a car, remember?” Man, how I was kicking myself for not having a damn car.

“Well, if you want to stay a little longer, I can take you home.” So, I followed her down the path that led to the river. We walked up the bank until the trees opened up into a small grass plain. “Here we are. If you lie down here it is one of the best views of the night sky.”

I lowered myself next to her and directed my attention above while she pointed out the major

constellations.

“I like to come here when I need an escape, you know? Like when my dad sometimes falls off the wagon and I don’t know how to explain to my siblings why daddy has to go away for weeks at a time when he is in rehab.” She must have seen the look on my face because she immediately followed up with, “I know Daniel told you. It’s okay. I’m not ashamed of it, I just try to hide it from my younger siblings. They’re still so young and they still think the best of their father. He deserves the chance to try and live up to that one day.”

In my three years at Mariemont High School, I wondered how I hadn’t met her sooner. There I was, a guy who had no idea what was about to happen, lying next to a girl in an old white t-shirt and torn jeans, staring at the sky.

~ ~ ~

“That girl on your screen. She’s quite beautiful. Reminds me of my wife,” George says as my phone screen goes dark.

“Yeah. She is. I really love her,” I reply as a small smile forms on my face. “But I lost her.” There is a slight burning sensation in my eyes as I fight back the tears. I shut my eyes tightly and take a deep breath. This is not the place to get emotional. Humming from the plane engine tunes out the various noises from restless passengers around me. January air after a fresh snow blows in my face from a small vent above me. Chills roll down my spine as I twist the nozzle trying to stop the cool flow of air. Why are airplanes always so cold?

~ ~ ~

Snow piled up overnight in early January, enough for school to be called off for the day. At 11:00 am Alyssa walked through the front door with hot cocoa mix in hand, looking ready to sit and watch movies for a day. Halfway through the show snow started to fall, and Rudy jumped into Alyssa’s lap to let her know that she was ready to go outside. Rudy’s golden tail wagged back and forth, and she whined until we finally let her outside to play. The bitter cold of the snow nipped at my toes

through the fabric of my tennis shoes while Alyssa and I watched Rudy run through the white powder that coated the yard. *Puff*. A snowball collided with the back of my jacket and Alyssa stood behind me trying to look innocent. Before I knew it, snow was flying across my yard and Alyssa jumped on my back, taking us both down into the cold powder. I had not heard her laugh in weeks. After Christmas, her dad hit a slump and was struggling to stay sober, and Alyssa was stuck trying to support him once again.

When we got inside, we both stripped out of our wet clothes and threw them in the dryer. I tossed her old t-shirt and grey sweatpants that were two sizes too big, and we quickly threw the dry cloth over our freezing skin. Before I realized what was happening, she grabbed the towel I was using to dry my hair and set it aside.

“There is something I should tell you,” she said in a soft tone.

“What’s up?”

“I uh, I love you Carter. And don’t feel like you have to say it back, I just needed to get it out and—”

For weeks I had been trying to find a way to say those three words, but it never seemed to be the right time. My lips collided with hers and my hands found her cheeks that burned warm enough to melt the outside snow. When I pulled away, I looked into her eyes and said it back.

“I love you too.”

~ ~ ~

There is a clunking sound in the aisle, and I open my eyes to see two flight attendants dressed in purple with their hair perfectly tied back rolling the drink cart towards me.

“Can I get you two gentlemen anything to drink?”

“Could I have a ginger ale please?” The short blonde pours my drink into a plastic cup half-filled with ice and hands it over to me. “Thank you so much.”

"I'll have the same," George responds. With some force the flight attendants move the cart to the next pod of seats, only disturbing a few sleeping passengers on the way.

"Cheers." George and I clink our plastic cups and take a sip. "You said that you lost this girl of yours, but if you love her like you say you do, maybe you haven't really lost her."

"Believe me, I am too late."

"It's never too late to start fighting."

"Thanks, George," I solemnly reply. Being careful not to spill, I take a sip of my drink and place it on the plastic tray in front of me. Silently, I watch as the bubbles stuck to the side of the clear plastic make their way through the golden liquid and surface for air.

~ ~ ~

It was a Friday night, February twenty-eighth to be exact, when I opened the letter. I mean, I had gotten the email the day before letting me know that I had been accepted, but this was different. In my hand, I held my ticket out of Carroll, Iowa.

"Dear Carter Lakin,

Congratulations! It is with great pleasure that I offer you admission to the Penn State University class of 2019." I sped through the letter searching for any indication of financial aid, and there it was. "You qualified for our Discover Penn State financial award of \$28,000 over four years. There will be a—"

Alyssa threw her arms around my neck and kissed my cheek. Both of my parents joined in the hug and then my dad popped a bottle of champagne. Alyssa poured us each a glass and got herself a cup of water. We raised our glasses of bubbling golden liquid to the sky in celebration of the past four years finally paying off in the best way possible. Penn State had been my dream since freshman year of high school, and at that moment, it became a reality.

As the celebration died down, my parents turned in

for the night, and Alyssa and I walked back to my room. The excitement started to wear off because we both realized that this letter meant we had a big conversation in front of us.

After I closed the door, Alyssa wrapped her arms around my neck, looked in my eyes, and said, "I know we need to talk about this, but before we do, I need to tell you that I am so incredibly proud of you."

We sat on my bed that night and talked through all the possibilities. She told me that I had worked too hard at this opportunity to pass it up now. I suggested that Alyssa could apply to Penn State next year when the time came around, and then it would only be a year of long-distance, but she told me that she needed to stay close for her family. Her dad had worked too hard to stay sober for her to leave. Long-distance was an option, but neither of us knew how we would afford the plane tickets, and by the time one of us drove to the other we would have to turn around and drive home. We talked through all the options, and then we cried a lot. Come August, we would have to say our goodbye.

~ ~ ~

"Ladies and gentlemen, as we start our descent to Des Moines International Airport, please make sure your seat backs and tray tables are in their upright position. Make sure your seat belt is securely fastened and all carry-on luggage is stowed in the overhead compartments or underneath the seat in front of you." The flight attendant's voice echoes throughout the plane, and the two ladies walk up the aisle checking that everything is clear.

I look over at George, with his grey hair and wrinkled skin. He seems so happy, despite losing his wife. "George, what did you do in your life? Like, where did you work?"

"I served in the army for twenty years before my wife and I decided to put down roots in one spot. It wasn't fair to keep moving her and our daughter around

all the time, and it wasn't fair with me being gone so much. So, I went back to school and became a history teacher. Taught history at a school outside of Des Moines for thirty-five years."

"How did you do it? How did you make your marriage work when you were gone so much?"

"Well, we always had a plan to end the distance. I would serve for twenty-five years and at that point we would have saved enough money to settle somewhere. When my second child was born, I decided that it was time to leave earlier than I thought. My family became more important. I loved my wife and children, and I fought for them every day, and that was enough."

I loved Alyssa, but I did not fight for her. I walked away.

~ ~ ~

My eyes burned from the tears as I dug my head into her shirt. I could feel her heart beating fast and her breath shortening. She was crying too, but I could not bring myself to look in her eyes. In that moment, I was breaking her heart as well as my own because it was the easy way out for us. No flights back and forth, no trying to find time to talk, no constantly worrying about the other. My chest felt like it was closing in on itself and my throat tightened so I could not get a word out of it.

Eventually, I lifted my head from the tear stain I formed on her shirt, and we sat across from one another in the same spot she took me to on our first date. Her hands were warm as they cupped my cheeks. Gently she wiped the tears streaming down my cheeks and she kissed me for the last time.

I couldn't stand to see her like this, so I told her, "If I stay here any longer, I am just going to keep crying, so I think I need to go now."

She looked at me with a red face and her golden, puffy eyes and said, "I understand. You are going to do such amazing things, and I am so proud of you. God, I love you so much."

"I love you too," I said as I hugged her one last time.

When I got home that night my mom held me in her arms, and I cried until there were no tears left. My heart ached inside my chest, and there was nothing I could do to make the pain go away. The next morning, I got in the car and headed east.

~ ~ ~

"George, do you regret it, being with the same woman since high school? I mean, do you ever feel like you missed out on anything?"

George chuckles and responds to me, "Not one thing. My wife was and still is, the best thing to ever happen to me. I wouldn't trade one minute of the time we had together for the world."

"Yeah, that's what I thought," I say, knowing that all I want is another minute with Alyssa. "Thanks."

My stomach drops as the plane gets closer and closer to the ground. When I step off this plane I can't run anymore. The wheels make contact with the ground beneath us and the plane rattles as it speeds forward. I plant my feet on the floor like it will make a difference. This piece of metal is rolling at full speed and if it doesn't stop, well then it doesn't stop. Maybe then I will know what it felt like when her car hit the barrier on the side of the highway. Maybe then I will understand what she felt before the car flipped twice, landing upside down in the middle of the road. By the time the ambulance showed up, it was too late. They said she died on impact.

~ ~ ~

It was 1:30 am when I got the call. I was celebrating with the swim team after we won our first meet of the season the previous weekend. A few drinks in and I was not thinking straight. Never would I have said those things to her sober, or at least that is what I told myself. For

the fourth time since I started school, she was calling me, and the first time was the only time she was sober. Each call hit a little harder than the last. It was mid-October and we were still breaking each other's hearts. I swiped across my phone screen to answer her call.

"Alyssa, what's up? Is everything okay?"

"Yeah. I'm totally fine," she said in the high-pitched voice she used when she was excited. "I just wanted to say that I really miss you. When are you coming home?" The words rolled off her tongue in a jumbled mess.

"Have you been drinking?" My friends back home told me that she started going out and drinking with them after I left. At first it was fun, and she was everyone's new favorite pong partner, but then her dad relapsed. All of a sudden, she went from drinking for fun to drinking to blackout, drinking to forget. The girl they told me about was not the same girl I left behind, and I could feel my heart ache for her each time she called. All I wanted to do was hold her and tell her that everything was going to be okay, but I couldn't. I was just another guy who disappointed her.

"I still love you."

"Alyssa, you can't call me anymore. I met someone else." *Click*. She could never lie, even when she was drunk, but I could. I put my phone back in my pocket and took another shot, hoping it would erase the phone call.

~ ~ ~

The plane starts to slow down, but not enough for me to feel comfortable. My entire body tenses and my throat feels like it is closing in on itself—the same reaction I had when I got the call. My friends told me that she stormed out angry and crying, and she didn't tell anyone where she was going. What we know now is that she got in her old Passat and drove west on I-75. Her speedometer read 85, then 90, and the red dial kept turning until it hit 105. Then it was over. She swerved off the road and into the concrete barrier wall on the

side of the highway. No one knows where she was going, but it was not too hard to figure out; the accident happened two exits away from Caesar's Creek. The place we met. Why else would she have gone east, when her house and friends, and the rest of her life, was west?

I press my feet harder into the ground like it makes a difference, and I shut my eyes to hold back the flood of tears welling up behind my eyes. Maybe this is what I deserve. If this plane doesn't stop then I don't have to get off and face the truth. I won't have to walk down the streets of downtown Carroll where we spent our weekends or stand in the room where I told her I loved her. I won't have to face our friends, and I won't have to face her parents. If this doesn't stop, I'll get what I deserve.

"What's the girl's name? The one you're so torn up about?" George asks.

"Her name's Alyssa."

"Ah—Alyssa," he repeats with a gentle smile across his face. "That was my wife's name." George lets a sigh escape his lips and continues, "Now remember what I told you son: it's never too late to start fighting. You get off this plane and you tell Alyssa that your new friend George says hi, okay? And then you tell her that you are still in love with her, and you fight for her this time. You hear me?"

The plane continues to slow down. I take a deep breath.

"Yes sir, I will."

The Artist's Prerogative

Gracie Nordgren

His name was Pietro Ludivicci, and he was in love with symmetry.

Those statues of his were carved with a delicate accuracy, angels and saints poised to bless or condemn, their pale faces set in expressions of aloof piety. That marble virgin of his was housed inside the chapel, the object of awe among the townspeople. For the sculptor had rendered the stone folds of her clothing as soft-looking as fabric.

The flawless beauty of Ludivicci's creations was rivaled only by the appearance of the sculptor himself. With his tight dark curls, regal nose, cherubic lips, and mahogany eyes, it was as if he were the personification of the suppleness of youth. Such perfection seemed celestial, inhuman. How lovely, this Pietro!

Of course, the young women of the town were hopelessly taken with him. Why, even the mayor's wife fondly referred to him as her first love! A cacophony of tokens, flowers, letters, and gifts took up permanent residence outside his door. In the marketplace, women would tarry and stare, and those bold enough to proposition him always received the same answer: a curl of the lip, and a flat "I'd rather not." You see, Ludivicci was a paramour of human beauty—and perfection his muse. How could he settle for anything less in a lover?

These harsh rejections were hard on the ladies of the town. Many would weep, some would pull at their hair. Young Viola, who cleaned the sculptor's apartment, witnessed countless of these spurnings. In the smoky bars, her father, the innkeeper, and the older

townsmen would snidely remark that Ludivicci may as well wed one of his statues.

There came a day, as the harvest-season came round, that the sculptor unexpectedly stopped accepting commissions. For seventeen days on end, he vanished from the eyes of the community. Circulating whispers suggested illness, or even his death. Viola of course knew that the artist was not dead at all. He had thrown himself into his newest project.

Ludivicci the recluse remained shut up in his apartment, his door opening only to receive the bread and wine he paid Viola to purchase for him. During these visits, the girl caught glimpses of a form standing in the center of his room—a new statue, perhaps? Alas, she could never get a good enough look, as the sculptor would pay her what was owed and then slam the door with a force that made its frame creak.

The longer Pietro Ludivicci was in isolation, the more fanciful the rumors about him became. He had certainly lost his sanity, most agreed. Signora Columbo swore she had spotted him at the temple, worshipping the pagan gods! How could he have fallen so far? Poor Pietro! A red-checked and mortified Viola confessed to her sister as they lay in bed one night that she had caught the sculptor cradling what seemed to be the face of his passion project and kissing its lips!

Months passed before Ludivicci was spotted in public again. He looked certainly worse for wear, with dark shadows underneath his eyes, an unkempt beard, his shoulder-length hair hanging in an unruly tangle.

His sculpting seemed to be abandoned as a thing of the past, as he had emerged from his isolation with nothing to show for it. If one would catch him walking about in town or marketplace and inquire about his work, he would stare back with haunted, glassy eyes and mutter something about having more important matters to pursue.

No one quite knew where the woman had come from. The way the innkeeper told it, she had knocked upon the inn's door late one night (the night before Ludivicci returned to society) and requested residence. Said her name was Giana Aldi. She had paid him handsomely for room and board from a fine leather coin purse that hung from her waist. She was a painter, this woman, who wished to work undisturbed within the rooms. *Why is it that this town is the place of so many fussy artists?* The innkeeper bemoaned to his wife and daughters as they, dazed and recently roused from sleep, stumbled to prepare a room.

Soon enough, the town forgot their fascination with Ludivicci in favor of the mysterious Giana Aldi. It was as if she had been carved from marble, as such flawlessness seemed unnatural. Smooth dark locks flowed down her back to her waist and large black eyes were framed by heavy lashes. They seemed to see into one's heart, and one couldn't help but feel naked and exposed under her gaze.

She was stern and dedicated to her art with a borderline religious fervour. Her neighbors took notice, with news of her traveling within hours. Who was she? Perhaps she and Ludivicci would be the perfect match for one another. Two kindred spirits, parallel in looks and practice.

Evidently, Ludivicci was enthralled by her as well. Every evening, he would stand at her balcony, wildly waving bouquets of flowers, imploring her to come down and speak to him. No one ever saw Giana Aldi do so much as open her window. Late into the night, the sculptor would cry, shout, and even sing love poetry! *Per favore! Bella ragazza! Per favore!* Poor Ludivicci

was in such a state of ruin by the seventh night, yet he persisted. Having enough of this, the innkeeper accosted him on the street, ordering him to give it up at once! Ludivicci, likely emboldened by the wine running through his body, declared that he would never stop his pursuit until he heard word from the lady herself.

It is said, and there have been several witnesses to this, that Giana Aldi had appeared on the balcony then. Leaning over its edge, raven hair spilling over her shoulders, her disdainful shout could be heard by all:

"I'd rather not!"

Humanities

Borderlands of the Sacred

Bio-Cognitive Mapping in the Age of Apocalypse

Caleb Wexler

The following is an excerpt from a longer piece. For full text, please visit https://scholar.colorado.edu/concern/undergraduate_honors_theses/44558f37b

Introduction

Smoke plumes rise like alien fungus over the Rocky Mountains and the California coast. Along the front range, the ash from forest fires falls like snow along the Front Range, and last week my roommate casually texted me “It’s apocalyptic today.” Environmental collapse was once considered a distant possibility, the stuff of speculative fiction. Today we recognize it as a steadily encroaching reality which, with every burnt gallon of petroleum, slouches ever closer. Every summer and winter bring record temperatures, once-in-a-lifetime storms strike in twos and threes, and entire species vanish forever on a daily basis, while we inhale and imbibe toxic chemicals from a poisoned and dying planet. The reckless greed of capitalist logic, the drive towards infinite growth on a finite planet, has forged a Damocles sword which hangs above the neck of each new inheritor of this global estate. The question of environmental catastrophe is no longer “if” but “how bad,” or, as the title of Roy Scranton’s recent book puts it, “We’re Doomed. Now What?” We’ve created a society where the status quo is untenable, and the hegemony of capitalist realism has ensured that the only alternative we dare to imagine is the kind of post-apocalyptic wasteland popularized by dystopian science fiction. As Fredric Jameson famously said, “It is easier to imagine the end of the world than to imagine

the end of capitalism.”¹ Now that the end of the world is no longer a theoretical abstract, perhaps we no longer need to only imagine the end of capitalism; perhaps the end of the world can be something radically different from its usual conception. If we reject the assumption of dystopian fiction, that the end of the world as we know it is a purely destructive event, then we can reimagine the apocalypse as that which affords us the opportunity to build a better world in the ruins of the old.

Apocalypse, as it is conventionally understood... is a cataclysm which marks the binary division between the world as we know it now, and a destroyed world. This reduces all possible actions into a similar binary of those which maintain the status quo and those which hasten the cataclysm. Past crises have been more amicable to this notion. The Cold War for example presented a real possibility of nuclear armageddon, but it was an armageddon which had to be actively created. Consequently, it was possible to simply maintain the world as it was in order to avoid destruction. This is not so with the climate crisis. It is exactly the status quo that is bringing us to a cataclysm which requires only our passivity. If we broaden our understanding of the apocalypse to the moment of rupture between a world which operates in all the familiar patterns, and a radically different world whose character is yet to be

¹ Jameson, “Future City.”

determined, the field of action is expanded to include actions which do not maintain the world which is, but usher in the world that may yet be.

[...]

The necessary question this raises is, what philosophical and cultural changes are necessary to navigate this transformation? In...this paper I will pursue close readings of key texts to argue for biocentrism as the necessary organizing principle. Biocentrism does not place humanity in a paternalistic relationship with the earth, but rather locates humanity as an embedded part of the biosphere existing alongside non-human animals in a non-hierarchical mutualistic existence. Climate change requires such an understanding because its most sensational effects are often distant. Biocentrism, because it locates the individual as an essential part of the biosphere, generates a universal responsibility without relying on the hierarchies of other environmentalisms which reproduce the anthropocentrism that created climate change in the first place. Only by discarding the *Anthropos* and accepting the environmentally embedded humanity of the *Bios*, can we rightly recognize our place in the global ecological network and begin a process of healing for the whole of the biosphere.

[...]

To discuss the era of global crisis without considering the present historical moment of global pandemic would seem to me, at best, negligent. Communicable diseases often heighten fears of the other as contact with anyone perceived as an outsider becomes a possible vector of transmission. Certainly COVID-19 has sparked widespread xenophobia. However, communicable disease also makes visible the networks of connection which constitute us as a community,

while simultaneously showing the arbitrary nature of spatial borders, such as those around nation-states. *Contagious* (2008), Priscilla Wald's book-length study of outbreak narratives, studies how communicable disease can be used to reinforce xenophobic fears but also makes the connections that constitute communities visible....

The global pandemic has made it clear that we collectively and individually share in the vulnerabilities of the biosphere as a whole; the wellbeing of the most bio-isolated urban community—such as the concrete landscapes of Los Angeles or New York City—becomes inseparable from the status of the global ecosystem when a disease can jump from a population of animals in one country to cover the globe in a matter of weeks. The pandemic thus becomes an undeniable representation of humanity's inextricable embeddedness within the biosphere....

This understanding of the pandemic becomes deepened when we look at it through a trans-corporeal lens. Trans-corporealism shows that the human body is not a closed, abiological object but is instead always already constituted by, and thus both in and of, its environment. Just as contagion makes networks of human connection, it also makes visible the transmission of (viral) matter between the body and the biosphere. COVID-19 is therefore understandable as a site of transmission between species where the closed category of the anthropomorphic body becomes the porous body in-and-of the biosphere. The human body is, on a cellular level, not separable from the non-human. Consequently, the narratives and arguments employed by Wald...describe the humanist cosmopolitan potential of contagions, such as AIDS or SARS-COV-2, are directly translatable into a post-humanist eco-cosmopolitanism.

[...]

“Isn’t This Suppos’d to Be the Age of Reason?”

The Historically Contingent Anthropos in Mason & Dixon

The drive for infinite growth on a finite planet has brought us to an era which will be defined by cataclysmic climate change. The apocalypse is now, and this opens the question: What will be the next epoch? To see the present not as a sudden emergency but as part of the “one great catastrophe”² of history, we need to orient ourselves like the Angel of History: backwards. To this end, I propose a critical investigation into the historical contingency of the Anthropocene, a “critique that takes the form of a possible transgression.”³ The Anthropocene functions on the ontology of anthropocentrism, the philosophy that positions humanity as being something apart from, and above, the rest of the biosphere. Through a historical critique of the epistemic origins of anthropocentrism, we might “separate out, from the contingency that has made us what we are, the possibility of no longer being, doing, or thinking what we are, do, or think.”⁴ The aim then is to better understand how the *Anthropos* is constructed in order to see how we could be otherwise. In so doing, we open the possibility of a bio-cognitive mapping to “endow the individual subject with some new heightened sense of its place in the global system,”⁵ particularly the global biosphere. In such a global understanding the *Anthropos* is replaced with the *Bios*, a post-human subject which exists in a non-hierarchical relation of interdependence with the whole of the living biosphere. By exploring biocentric epistemic and literary practices, we can imagine a future epoch that

recognizes the embeddedness of humanity in a global biosphere, living and struggling alongside the non-human—an epoch we might call the Biocene.

In striving to free ourselves from the confines of *Anthropos*, we should first recall that, according to Foucault, “the critique of what we are is at one and the same time the historical analysis of the limits that are imposed on us and an experiment with the possibility of going beyond them.”⁶ This section will therefore pursue a historical critique of anthropocentrism through a reading of Thomas Pynchon’s *Mason & Dixon*. Pynchon explores the cartographic formation of America with unparalleled insight into systems of power/knowledge that transform the relationship between humans and nature. These systems create borders that transform the land from a home to a resource and separate man from nature. *Mason & Dixon* is not a historical document; however, it is a novel deeply concerned with critiquing the present through an understanding of the past. By situating a contemporary critique in the past the novel better enables us see history...as one continuous catastrophe, and to enact a critique which aims, a Foucault puts it, “to analyse the present by discussing the past, ... by treating it as if it were more like the past, in all its strangeness.”⁷ Indeed Pynchon suggests that an actual history could not do this job as well as fiction. As the narrator, Wicks Cherrycoke, says in *M&D*:

Who claims Truth, Truth abandons. History is hir’d, or coerc’d, only in Interests that must ever prove base. She is too innocent, to be left within the reach of anyone in Power,—who need but touch her, and all her Credit is in the instant vanish’d, as if it had never been.

2 Benjamin, “Theses”, 257.

3 Foucault, “Enlightenment,” 45.

4 Foucault, 46.

5 Jameson, *Postmodernism*, 54.

6 Foucault, “Enlightenment,” 50.

7 Mils, *Michel Foucault*, 79.

She needs rather to be tended lovingly and honorably by fabulists and counterfeiters...Masters of Disguise to provide the Costume, Toilette, and Bearing, and Speech nimble enough to keep her beyond the Desires, or even the Curiosity, of Government.⁸

History is always formed within a relationship of power/knowledge; fiction is at least honest about having been written, not discovered. This leaves the possibility for alternate, subjunctive narratives and for the reclamation of truth from power. Pynchon's fictionalization of Mason & Dixon's journey is therefore just the thing for critiquing the forms of power/knowledge foundational to the American cultural imaginary.

[...]

Welcome to the World of Our Posthumanity *Trans-Corporealism and Eco-Cosmopolitanism* in Welcome to Our Hillbrow

[...]

In *Contagious: Cultures, Carriers, and the Outbreak Narrative*, Wald uses fictional, journalistic, and academic depictions of communicable disease to examine the outbreak narrative. One of her main focuses is how the narratives we form around contagion informs the narratives we form around one another. For example, she highlights how outbreak narratives can stigmatize immigrant groups and depict them as being more primitive and thus more likely to contract and spread disease.⁹ However, Wald argues, contagion narratives demonstrate a shared global vulnerability that defies the abilities of political borders to block.

Therefore, while they may temporarily inspire xenophobia, contagion narratives are ultimately community forming: "The social experience of a disease, the image of communicability, and the materialization of interdependence that characterizes depictions of epidemics suggests an epidemiology of belonging through which people might experience their emergence as 'a population.'" ¹⁰ My primary criticism of Wald's work is that it is essentially anthropocentric. She uses contagion to generate a cosmopolitan vision which surpasses national borders but includes only the human. She challenges the characterization of certain practices as primitive, but not the categories of *primitive* and *civilized* themselves as reifications of a teleology which conflates progress with distance from the non-human. Furthermore, the focus on the "outbreak" narrative identifies the emergence of disease into a human population as the moment when it becomes an object of interest. However, biocentrism demands a decentering of the human. My aim is to extend Wald's analysis to the non-human and show contagion as materializing connections between the human and the biosphere in the same way it materializes connections within a human population.

[...]

Contagions are materializations of the social connections that make up our global human society, but beyond that they materialize the constant interchange of matter between the human and the environment.... We ought to apply this understanding to the COVID-19 virus which is so often on our minds these days. We are daily reminded of the risk of infection, but this shared vulnerability also serves as a reminder of material interdependence. The pandemic

8 Pynchon, *Mason & Dixon*, 350.

9 Wald, *Contagious*, 8.

10 Wald, 18.

illustrates, unignorably, viscerally, that however much we construct ourselves as *Anthropos*, and understand ourselves to be segregated from the *Bios*, we are viscosely porous bodies, always being transformed by, and transforming, our environment. Because of their ability to locate the individual within the network of the biosphere, diseases like COVID-19 might even be considered a representational system within a broader practice of bio-cognitive mapping.... The climate crisis demands that we reconstitute ourselves as a part of the biosphere, and the pandemic shows us that we need only recognize that we always have been.

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Fanning the Flames of Discontent

Caleb Wexler

The following is an excerpt from a longer piece. For full text, please visit www.colorado.edu/honorsjournal/

Editor's note: In this essay, Bobby Seale quotes a poem by Ronald Stone that incorporates offensive language. The journal editors have starred out the language, without changing the source or the author's meaning, based on our sensitivity to the Honors Journal readership.

In 1966 Bobby Seale and Huey P Newton, before they founded the Black Panther Party, were arrested in Berkeley, California. The charges: obstructing the sidewalk and assaulting officers. The cause: poetry. Seale was reciting Ronald Stone's anti-draft poem "Uncle Sammy Call Me Fulla Lucifer" (outside a restaurant appropriately named the "Forum") when:

Some uniformed pig cop walked up. He stood around ten or twelve feet away. I said, "You school my naive heart to sing red-white-and-blue-stars-and-stripes songs and to pledge eternal allegiance to all things blue, true, blue-eyed blond, blond-haired, white chalk white skin with U.S.A. tattooed all over."

Man, when I said that, this cop walks up and says, "You're under arrest." I got down off the chair, said, "What are you talking about, 'You're under arrest?'"

Under arrest for what? What reason do you have for saying I'm under arrest?" (Seale 19)

It's Seale's question for the cop, "What reason do you have for saying I'm under arrest?" that I want to focus

on here, not in the sense of what pretense did the cop invent for arresting Seale, but what makes poetry so powerful, so threatening to authority, that it made this cop feel the need to arrest a man?

Poetry is powerful, in part, because it opens a space for telling our stories and our history, and it helps us to imbue those stories with significance. An example of this is the poetry of Voltairine de Cleyre. De Cleyre was an anarchist and a poet in the 18th century whose politics and writing were shaped by the Haymarket affair, and the deaths of the Haymarket martyrs (August Spies, Albert Parsons, Adolph Fischer, George Engel, and Louis Lingg) (King). In her poetry, de Cleyre celebrates the sacrifice and memory of the martyrs, but she does so as a call to present action. In her 1897 poem "Light Upon Waldheim"—named for the cemetery where the Haymarket martyrs are interred—de Cleyre wrote:

Light upon Waldheim! And the earth is gray;
A bitter wind is driving from the north;
The stone is cold, and strange cold whispers say:
"What do ye here with Death? Go forth! Go forth!"

This poem pays homage to the dead who “martyred lies, / Slain in our name, for that he loved us much”, but more important than the act of mourning is the call to “Go forth!” The dead deserve to be honored, but this poem communicates that the best way to honor them is with our actions, not our tears, and the monument’s whisper, “What do ye here with Death? Go forth! Go forth!” seems to prefigure the later call of the famed labor organizer Mother Jones to “Pray for the dead, and fight like hell for the living” (40). The significance this poem creates for the past is thus as fuel for the fights of the present and the future.

“Light Upon Waldheim” is one example of a much larger trend in political poetry, the celebration of a history of struggle. In the introduction to a recording of “There Is Power in a Union”, Utah Philips relates this story:

A long time ago I was sitting in a cafe in Worcester, Massachusetts called “Alice and the Hat” and there was a fellow sitting next to me. I was working for the laborer’s union. They were doing a labour education program, and the television set was on and Cesar Chavez was on the evening news leading that first big march in Sacramento, and this fellow who’d been holding his union card for 26 years said, “Bunch of wetbacks. Why don’t they ship ‘em back to Mexico. Takin’ jobs away from American workers”, and I could’ve got mad, but then I had to stop and think, well what did he get in school, what did he get in his work experience, what did he get even from his own union that gave him some tools to understand what it was he was seeing on that television? If he had grown up with a true and sure knowledge of who he was and where he had come from he would have been a whole lot more pissed off than he was, and he’d have known exactly who to be pissed off at too, I

tell you that. Well that’s why we do these songs... these songs are a better and more accurate picture, idea, of who we are and where we have come from than the best damn history book that you ever read, you know? And like Clair Sparks said, a radical feminist from southern California, said, “The long memory is the most radical idea in America.”

This is a long quote, to be sure, but I felt it important to transcribe in full because it describes so well the role of music and poetry in telling our history, and illustrates so well what is lost without “the long memory.” The worker in Philips’s story is angry because he’s become alienated from people he should see as fellow laborers, instead of competitors. Philips implies that the worker shares a common enemy with Chavez and those marching with him, but he lacks the tools to see “exactly who to be pissed off at.” What Philips calls, “the long memory” is not just a distant historical record, but a living past which makes the present intelligible. According to Philips, if this worker was more connected to the long memory, he’d have understood the continuity between the struggle of his union and that of Chavez. When it reminds us of the sacrifices of the past, poetry becomes the vehicle by which the long memory is transmitted.

It’s a simple enough matter to preserve the historical fact of an occurrence, but Bobby Seale wasn’t arrested for reading a textbook. The mere act of recording doesn’t give poetry power. Writing on the importance of history, Walter Benjamin said:

There is a secret agreement between past generations and the present one. Our coming was expected on earth. Like every generation that preceded us, we have been endowed with a *weak* Messianic power, a power to which the past has a claim. That claim cannot be settled cheaply.

(“Theses” 254)

What Benjamin makes clear here is that our awareness of the past creates an obligation to it. Those who fought and fell in the past did so for the sake of the future, and the messianic power that Benjamin refers to is our ability to redeem them, to make good on their sacrifice. The long memory, as a way of telling history, maintains our relationship to this past, makes loud its echoes, and it also reminds us of our obligation to it. This is why it is not enough for the speaker of de Cleyre’s poem to cry over the graves at Waldheim. She must “Go forth!” and fulfill her obligation to the past, and more importantly, in reminding the reader of the grave at Waldheim, she reminds us that we too have been the beneficiaries of other’s fight, and that this gift given to us by our predecessors obligates us to continue their struggle. Poetry therefore presents a living past which still makes demands on the present.

The long memory is one of the key elements of political poetry, and one of the best examples of this is the poem “I Dreamed I Saw Joe Hill Last Night” written by Alfred Hayes, and recorded as a song by Pete Seeger, Joan Beaz, Tom Morello, and many others. Hill, the titular subject of the song, was a labor organizer for the Industrial Workers of the World, as well as a poet and songwriter, until his execution by firing squad in 1915 (“Joe Hill”). In this poem, Hayes describes a vision in which Joe Hill tells him that he “never died”, and the speaker relates:

Says Joe “What they can never kill
went on to organize,
went on to organize”
From San Diego up to Maine,
in every mine and mill,
Where workers strike and organize
it’s there you’ll find Joe Hill,
it’s there you’ll find Joe Hill!

This poem, like “Light Upon Waldheim” is animated by a reverence for the past and a struggle for the future. It is not enough for Hayes that Joe Hill remains alive in the memories of the living, he remains alive only in the *struggle* of the workers. It was not enough for Hill himself either; before his death he sent a telegram which is often paraphrased, “Don’t Mourn, Organize” (Callahan). The long memory is only realized when it is manifested as praxis.

[...]

Seale’s arrest followed his recitation of the anti-draft poem “Uncle Sammy Call Me Fulla Lucifer” written by Ronald Stone, and, while it may not immediately be apparent why this poem would prompt his arrest, reading it in the context of the tradition of political poetry makes clear what the cop and the crowd understood instinctually. The poem centers on the inherent contradiction of calling on a people that have been, and continue to be, oppressed to worship and serve a country. The lines, “You jam your emasculate manhood symbol, puff with Gonorrhea, / Gonorrhea of corrupt un-realty myths into my ungreated, [n * * * r] ghetto, black-ass, my Jewish-Cappy-Hindu-Islamic-Sioux...” (“Black Panthers Arrested”) don’t invoke specific figures, like the poetry of de Cleyre, Hayes, and Yeats, instead invoking the memory of whole groups of people—similarly to Behan’s use of the memory of the “Arabs” and “Zulus” slain by the British empire—oppressed and murdered by the same nation that young men were being drafted to serve. This poem relies on this history to make its point. The essential tension of this poem is between this history and the demand on “my naive heart to sing / red-white-and-blue-stars-and-stripes songs and to pledge eternal allegiance to all things blue, true, blue-eyed blond, blond-haired, white chalk / white skin with U.S.A. tattooed all over.” The poem may not present itself as a history lesson, but it is

still a work very much concerned with maintaining the long memory.

As much power as “Uncle Sammy Call Me Fulla Lucifer” derives from the same sources as other political poetry, it also generates a force all its own. Where it differs from some of the other poems discussed in the essay is its language. This poem engages with historical tensions in language that is immediate, visceral, and drawn from the common parlance of its audience. Voltairine de Cleyre’s poetry, for example, is written primarily in an elevated language that disconnects it from its audience; it’s written in a way that no one in the labor movement spoke. Stone’s poem, by contrast, is written in the vernacular spoken by its black American audience. This is clear from the first line, “Uncle Sammy don’t shuck and jive me.” The language of the poem connects immediately with the audience. The imagery it creates, such as “your emasculate manhood symbol, puff with Gonorrhea,” is visceral, and its message is direct and clear.

There’s no room for misunderstanding in “Fuck your motherfucking self, / I will not serve.”

The power of Seale’s recitation was immediately apparent. Even if they didn’t understand why it was powerful, the cop and the crowd understood that it was. Utah Jones tells us that “the long memory is the most radical idea in America,” and Seale showed us how true that was. Poetry gives voice to generations of oppressed, makes clear the simple power of refusing to forget that oppression, and most importantly reminds us that our obligation to the past can only be honored by continuing their defiance. As Cindy Millstein said, “We have to carry that rebel spirit in our bones. We have to feel our ancestors in us who fought for those before, and we have to know we’re being charged with fighting for them now, and that other people will fight for them in the future,” and that’s exactly what poetry lets us do. There can be nothing more threatening to the forces of oppression than poems fanning the flames of discontent.

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Violence and Meta-Narrative in Shakespeare's Tragedies

Caleb Wexler

The following is an excerpt from a longer piece. For full text, please visit www.colorado.edu/honorsjournal/

...And thus the whirligig of time brings in his revenges.
—Shakespeare, *The Tempest*

Hamlet and *Macbeth* both represent societies in upheaval following the death of a monarch. In both cases, the usurper is taken to be a singularly tyrannical ruler whose removal will return the nation to order and peace. However, the supposed tyrants of both plays are in actuality nothing more than symptomatic expressions of their underlying social conditions. By looking at how the past is represented, this paper will show that these are societies which are built upon, and maintained by, political violence. Furthermore, this essay will compare these plays with each other as well as other works in the tragic tradition to show that these plays become tragic because the characters are consumed by historic processes defined by political violence. Understanding the plays to operate in these terms makes it clear that because the rulers are treated as being a problem in and of themselves, the underlying conditions of these societies are never changed, and for this reason the plays take on a cyclical character, where the conditions at the play's end are fundamentally the same as its beginning. Consequently, we can understand these plays to be a critique of authoritarian violence and the complicity of individuals in maintaining tragic systems.

Integral to these stories is a state maintained by violence. In both plays the state is shown early in the play to be predicated on violence, and order is either maintained or restored through it. However, in

each case violence creates the groundwork for more violence, so order thus obtained is only temporary. In "On Violence," Hannah Arendt makes it clear that instability is a necessary feature of violence because:

The very substance of violent action is ruled by the means-end category, whose chief characteristic, if applied to human affairs, has always been that the end is in danger of being overwhelmed by the means which it justifies and which are needed to reach it. Since the end of human action...can never be reliably predicted, the means used to achieve political goals are more often than not of greater relevance to the future world than the intended goals. (Arendt 106)

Thus, the various ends which these plays' character hope to achieve by violence are, as will be shown, less important to the outcome than the violent means, which threaten always to consume the ends.

[...]

Looking at the succession of rulers, we see that violence doesn't restore order, rather it imposes a cyclical structure on the plays. Let us begin with the rule of Prince Hamlet's father, Hamlet the Dane. What little we learn of the king's rule is related in the remembrances of Horatio in 1.1. He was a conqueror who expanded Denmark's rule through war, as

when he killed King Fortinbras. King Hamlet was so defined by warfare in life, that in death he wears “the very armor he had on / When he the ambitious Norway combated” (1.1.59-60). Therefore the defining feature of Hamlet the Dane, and by extension the Danish state, is violence. Claudius similarly begins his rule with the murder of his brother, and later plots to have Hamlet killed in order to maintain the security of his rule. This of course sets the stage for the revenge plot, as well as the deaths of Rosencrantz, Guildenstern, and Laertes. Furthermore, in the bloodbath of 5.2, the means-end threat that Arendt identified comes to fruition. The supposed ends were the maintenance of political order (in Claudius’s case), or the restoration of moral order (in Hamlet’s case) but these are entirely subsumed by violence. The only suitable heir to this violent world is the young Fortinbras who, on his own quest for revenge, has brought his army to Denmark. This is why Hamlet, conscious of the chain of violence that defines Denmark’s history, uses his dying breaths to vote for Fortinbras as the next ruler of Denmark. Thus the play ends with the essential violent structure of rule unchanged, and with another warlike ruler taking the throne.

[...]

Looking at *Macbeth* within the context of its succession of rulers, we see, as with *Hamlet*, a structure of authority which maintains itself by violence. Also like *Hamlet*, the structure of *Macbeth* is essentially cyclical; it begins in a place of political unrest, and ends with a looming threat of the same. At the outset of Act 1, Duncan is at war with a rebellion against his crown. Macbeth is one of the principle fighters in Duncan’s army and is celebrated as one of the most violent, as when the Captain relates that:

For brave Macbeth—well he deserves that name—
Disdaining Fortune with his brandished steel,
Which smoked with bloody execution,

Like valor’s minion carved out his passage.
(*Macbeth* 1.2.16-19)

From the first act we see that order in this society, as in Denmark under the elder Hamlet, is maintained through violence. Macbeth then becomes the king when he and Lady Macbeth murder Duncan. From this point Macbeth is cursed with the knowledge of the usurper, the intimate knowledge of how fragile sovereignty is and how easily another could reproduce the usurper’s own actions. It is from this position of knowledge that Macbeth becomes paranoid and recognizes that the stability of his reign relies on the murder of its prophesied threats, namely Banquo and his son—prophesied to be the progenitor of a line of kings in 1.3.68— and Macduff and his family—whom the witches warn Macbeth against in 4.1.70-72. Thus, like Duncan, Macbeth comes to rely on violence to maintain the stability of his rule. Finally, Macduff kills Macbeth and Duncan’s son Malcolm is restored to the throne. Ostensibly Scotland can now return to peace, but there remains the threat of Banquo’s son, Fleance. According to prophecy, Fleance or his heirs will take the throne of Scotland, meaning that the peace obtained by Malcolm is only temporary, and he’s destined to fall to a rebellion, just like the one which began the play.

It is worth stopping for a moment to better define what is meant when I say that the play ends where it begins. The rulers change, but the form of rule does not. In each instance is a ruler who maintains order through violence, what we might call...authoritarian. We don’t see Fortinbras or Malcolm’s rule, but we see enough to get a sense of the kind of rulers they might be. Looking on Fortinbras’s army, Hamlet reflects:

Witness this army of such mass and charge,
Led by a delicate and tender prince,
Whose spirit with divine ambition puffed
Makes mouths at the invisible event,
Exposing what is mortal and unsure
To all that fortune, death, and danger dare,
Even for an eggshell. (4.1.46-52)

What Hamlet admires here in Fortinbras is the kind of character with which the late king was described, that of a martial conqueror who goes to war even for the sake of “an eggshell”. Given this description, we might very well suppose that he would be the same sort of authoritarian ruler as the elder Hamlet. Like Fortinbras in Act 5, Malcolm enters the action at the head of an army, casting himself, depending on perspective, as either the avenging hero or another usurper. What, more than anything, defines his rule is the looming presence of Fleance. Any analysis of *Macbeth*’s conclusion must pay heed to this one detail because Fleance’s importance cannot be overstated. It is the threat of Banquo’s line which first pushes Macbeth from being an usurper to being a tyrant, which he declares when he says “... To make them kings—the seeds of Banquo kings! / Rather than so, come fate into the list, / And champion me to th’utterance!” (3.1.70-72), and this same threat looms over Malcolm’s rule. It’s possible that in the future Fleance seizes power from his own ambition, in which case the play’s ending threatens another Macbeth. It is equally possible that Fleance’s eventual rebellion will be in response to a tyrannical rule by Malcolm, in which case the play ends with the threat of another Duncan. In either case, the witches’ prophecy means that Scotland has another tyrant in its future, and the play’s events are simply waiting to be repeated. Both of these plays thus have the same problem. While the individuals in power may change, the leadership form remains the same, and so long as the authoritarian form remains either present or imminent, we cannot but see the play as ending where it began.

We can further understand *Hamlet* and *Macbeth* as being not only similar, but intimately related plays. In “Macbeth and the Antic Round” Orgel reflects, “Suppose we try to imagine a *Hamlet* written from Claudius’ point of view, in the way that *Macbeth* is written from Macbeth’s.... This play would not be about politics but about how the dead do not disappear,

they return to embody our crimes, so that we have to keep repeating them—just like *Macbeth*” (264). The implication of Orgel’s analysis is that these plays are telling the same story from two perspectives, so what is that shared ur-narrative? I argue that it is what *Twelfth Night*’s Feste dubbed “the whirligig of time”. The whirligig of time can best be understood as history structured around sequences of self-perpetuating violence. As we see in *Hamlet* and *Macbeth*, these societies rely on violence and so always create the violence which eventually ruins them. In building the Danish state, Hamlet the elder sets the stage for Fortinbras the younger to invade; in seizing power through fratricide Claudius brings on Hamlet’s revenge; and in preemptively attempting to eliminate rivals Macbeth creates the enemies who will later dethrone him. We can therefore understand the tyrants to be symptomatic not only of a temporary violent period in their countries, but of violence as an underlying historical condition.

[...]

Tyrants do not only echo those before them, but exist as symptoms of the whole system which gave rise to them.... When Marcellus attests, “Something is rotten in the state of Denmark” (*Hamlet* 1.4.90) we must realize that the rot goes deeper than Claudius’s particular crime of murder. The tragedy begins as the result of the historical structures of violence and the prevailing forms of rule, and the tragedy reproduces itself through the failure of the characters to change either these historical patterns or the forms of rule. The would-be heroes engage in “...changing [not] the world (or the system), but only its personnel” (Arendt 123). So when Hamlet ends the tyranny of Claudius, an authoritarian society remains, ready for Fortinbras to take his place; when Macduff and Malcolm overthrow Macbeth, the world is still one driven by violence and Fleance is waiting in the wings to begin the cycle anew.

As a result, the tragedy implicates all of its characters, hero and villain alike, in the maintenance of the tragic meta-narrative, and in any tragedy which sought true moral restoration, the hero would have to directly grapple with this meta-narrative.

In the final analysis, we see that *Hamlet* and *Macbeth* have at their centers the same driving historical forces, the same meta-narrative in which all the particular narratives of their characters are organized and related to one another. It is a narrative of violence, particularly political, authoritarian violence, which gives rise to specific tyrants, but is never overthrown with them because each violent reversal is just another turn in the violent cycle. Having developed this vision of *Hamlet* and *Macbeth* we might, in the

future, consider how the whirligig of time spins at the heart of other tragedies, as well as how works in other genres relate to similar issues of authoritarian violence—which are certainly present in Egeus’s filicidal threats in *A Midsummer Night’s Dream*, in the paranoid tyranny of Leontes in *The Winter’s Tale*, and in the gulling of Malvolio in *The Twelfth Night*, from which I’ve borrowed the phrase “the whirligig of time”, to name but a few—without descending into tragedy. We might even use these lessons from Shakespeare to contextualize how we consider the tyrants that manifest in our own political world and the extent to which we treat them either as unique villains or as more deeply symptomatic of historical processes.

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In Search of Looted Art: The Nazi Theft of the Victor Family's Paintings

Darby Linn

The following is an excerpt from a longer piece. For full text, please visit https://scholar.colorado.edu/concern/undergraduate_honors_theses/4t64gp17p

INTRODUCTION

Approximately 600,000 pieces of art were looted by the Nazis during the Second World War.¹ While many of these works were recovered during and after the war, over 100,000 paintings, drawings, sculptures, and other mediums continue to be classified as missing.² Jewish art collectors and families with large personal art collections were targeted by Nazi art dealers and officers under Hitler's orders to confiscate Jewish-owned art. The confiscated art was used to finance German war operations, establish the power of the Third Reich, and satisfy high-ranking officials' desire for fine art. Art was not only confiscated from museums and galleries, but also from private Jewish homes. Such irreplaceable links to the personal lives of persecuted Jews inspires provenance researchers to do all that they can to recover these lost treasures through restitution. My thesis pieces together the traumatic experiences of the Victor family, reevaluates the restitution process for Holocaust victims, and analyzes the current endeavors of museums, auction houses, and archives in relation to Nazi-looted art.

Jewish victims and their heirs continuously search

for their lost property, including art, even today. When preparing their individual cases, claimants often face challenges, such as the filing of numerous legal forms, language barriers, and a lack of personal funding. Other difficulties include limited surviving records, the frustration of denied requests, years of paperwork processing, small amounts of restitution, and the intimidating unlikelihood of finding the property that they are seeking. As the number of Holocaust survivors gradually decreases, the victims' children and grandchildren frequently claim restitution for physical and emotional damage on their parents' or grandparents' behalf. The collection of evidence and the review process for restitution cases may last many years due to the lack of priority given to old cases no longer on federal agendas and due to the sluggish nature of bureaucratic systems. The evidence necessary for the claimants to be granted restitution is almost impossible to obtain because records were often destroyed or forcibly left behind when Jewish families were forced to flee or were deported. The process designed to help those who lost everything requires from them what they simply cannot prove.

1 Gilbert, Sophie. 2018. "The Persistent Crime of Nazi-Looted Art." *The Atlantic*, March 11. <https://www.theatlantic.com/entertainment/archive/2018/03/cornelius-gurlitt-nazi-looted-art/554936/>.

2 Eizenstat, Stuart Ed. 2019. "Art stolen by the Nazis is still missing. Here's how we can recover it." *The Washington Post*, January 2. https://www.washingtonpost.com/opinions/no-one-should-trade-in-or-possess-art-stolen-by-the-nazis/2019/01/02/01990232-0ed3-11e9-831f-3aa2c2be4cbd_story.html.

Proper restitution for Jewish victims can be considered as selective to only a few fortunate individuals with sufficient resources.

Restitution remains heavily debated. According to The Getty Research Institute, “restitution” is defined as “the action of restoring or giving back something to its rightful owner, or of making reparation for a loss previously inflicted; restoration of a thing lost, taken, or damaged.”³ Art restitution in the scope of the Second World War proves to be a challenge for victims and researchers partly due to auction houses, museums, and art institutions lacking transparency. This concept remains questionable when discussing Jewish victims, considering the irreparable damages, losses, and traumas they experienced at the hands of the Third Reich. In these cases, art restitution focuses heavily on returning a particular piece to its lawful owner as a symbol of healing or on providing compensation to victims and their families as an apologetic gesture.

[...]

My passion for helping Jewish victims through art restitution inspired me to develop an ambitious project concerning the Victor family. Dr. David Shneer, a distinguished professor in the Department of Jewish Studies at the University of Colorado Boulder, introduced me to Kassandra LaPrade Seuthe, an acquisitions curator, and Megan Lewis, a reference librarian, who are both employed at the United States Holocaust Memorial Museum (USHMM). After I explained my interests in recovering Nazi-looted artworks, Seuthe and Lewis suggested researching the

“Peter and Berta Victor Papers” within the USHMM’s digitized collection. These papers concerned personal correspondences, legal documents, an autograph book, family photographs, and printed materials belonging to the Victors (Image 1), a Jewish family who lived in Berlin up until the summer of 1939. Records and photographs that belonged to Carl Victor (1879-1940) and Elsa Victor (1888-1942) indicated that the family owned oil paintings that went missing after 1939. The titles and artists of the paintings were not indicated in any of the family’s papers. I determined that if the titles and artists of the paintings could be found within the family’s records at the state and federal archives in Berlin, there was a possibility that the paintings could also be located within lost art databases. While there are no living members of the Victor family, finding their art would theoretically restore part of the family’s legacy preserved at the USHMM. While at the German archives,⁴ I planned to research the physical restitution claims filed by Peter Max Victor, the adopted son⁵ of Carl and Elsa Victor, in order to better understand the family’s story as well as find any indication as to what might have happened to the Victors’ paintings.

[...]

3 The Getty Research Institute, “Restitution.” Los Angeles, The Getty Research Institute. <http://vocab.getty.edu/page/aat/300417843>

4 Through the Undergraduate Research Opportunity Program (UROP) offered at the University of Colorado Boulder, I acquired the funding necessary to organize my travels to Berlin, Germany for four weeks of research at the Landesarchiv and Bundesarchiv.

5 See page 12 of this thesis for the Victor family history.



Image 1: An circa 1930s photograph of the Victor family with relatives or friends: Carl Victor (top right), Elsa Victor (top left), and Peter Max Victor (bottom left).



Image 10: A 1939 photograph of Peter Max in Berlin prior to his emigration to Shanghai. He was nineteen at the time.



Image 2: A 1929 photograph of Carl Victor in the Victor family apartment in Berlin. Three missing paintings are faintly depicted hanging on the wall.



Image 3: A 1929 photograph of Elsa Victor in the Victor family apartment in Berlin. Three missing paintings are faintly depicted hanging on the wall.

CHAPTER TWO: THE RESTITUTION PROCESS

Peter Max first opened [his restitution] case in a 1952 letter to the URO [United Restitution Organization], requesting assistance with several claims that he wished to file. At the time, Peter Max felt helpless because of the lack of available support in Washington for the complicated form process and because of his sincere need for money. In examining a letter dated April 10th, 1953 between Peter Max and the URO, a requirement of proof for matters not normally documented was repeatedly requested. For Peter Max's case, the URO requested evidence to prove that Peter Max lived in Berlin before leaving Germany and that a witness, who was also in the Shanghai ghetto, testified that Peter Max was in the Shanghai ghetto (Image 16). The office also requested the details of his life story, including the events that led to the "damage."⁶ While these three requirements seemed straightforward, Peter Max struggled to prove the smaller details within each category. Throughout the letters between Peter Max and the URO, Peter Max's impatience and desperation to settle his case becomes increasingly apparent. In 1959, Dr. Fabian of the URO requested further proof of Peter Max's life in Berlin and the Shanghai ghetto, to which Peter Max responded:

This restitution case was started in 1957, and there are times, when I feel you are not really trying to represent me as you should. If you feel, that you – or the regional office in Berlin are unable to *help* me in my claim, then I would appreciate your returning my papers to me, so that I can try on my own. I am sure you must have many cases like mine, and I am also sure that very few documents were available. Somehow my sworn statements and letters should be enough. I did not try

to save documents when I left Berlin, I tried to save my life.⁷

6 URO to Peter Max Victor. In "Peter and Berta Victor Papers". Washington D.C.: US Holocaust Memorial Museum, April 10, 1953.

7 Peter Max Victor to the URO. In "Peter and Berta Victor Papers". Washington D.C.: US Holocaust Memorial Museum, January 12, 1959.

American Federation of Jews from Central Europe, Inc.

1674 BROADWAY • Room 808-809 • NEW YORK 19, N. Y.

Phones: Circle 5-4255 • JUDson 6-3878

— United Restitution Office — Indemnification Section —

April 10, 1953

RUDOLF CALLMANN
Chairman of the Board

NATHAN STEIN
President

HERMAN MULLER
Exec. Vice President

COOPERATING AGENCIES:
UNITED SERVICE FOR
NEW AMERICANS, INC. (USNA)
NEW YORK ASSOCIATION FOR
NEW AMERICANS, INC. (NYANA)

Mr. Peter Max Victor
1665 Golden Gate Ave.
San Francisco 15, Cal.

Present address:
c/O Kaufmann
805 G. Street N.W.
Washington, D.C.

Dear Mr. Victor:

In your indemnification case we are requested to present the following evidence:

- a) that you lived in Berlin before leaving Germany
- b) that you were in Shanghai Ghetto
- d) Lebenslauf (Ereignisse, die zur Entstehung des Schadens fuehrten).

Please send us all the documents you have from Shanghai as well as from Berlin. If you do not have any documents please let us have affidavits of witnesses, certifying that you lived in Berlin before your emigration and indicating the exact address; furthermore that you lived with the witnesses together in Ghetto Shanghai from May 1943 until the end of the war.

Attached please find form of the eidesstattliche Versicherung.

The letter to you addressed to San Francisco was returned to us as undeliverable.

Very truly yours,

Dr. S. Gringauz

SG:rs

Image 16: The URO requested that Peter Max confirm the details of his life through witness testimonies.

Peter Max felt as though the restitution process was too demanding of victims who were barely able to survive, let alone retain any personal documentation after the war. In a 1957 letter, the URO returned document photocopies sent by Peter Max because the photocopies were not certified, and therefore not accepted by the German government.⁸ They also requested information on Carl Victor's education, vocational training, the size of the container that the Victors brought with them to Shanghai, and the detailed list of furniture left behind.⁹ Such information can be particularly difficult to produce for the descendants of victims filing claims on their relative's behalf since they were likely too young to learn or understand such information from their parents. The URO further mentioned that if there was insufficient documentation and records for any matter, affidavits of witnesses confirming Peter Max's personal details were necessary.¹⁰ Peter Max, for example, was required to submit affidavits from three different witnesses, stating that he did attend specific schools in Berlin, that he could not finish his education as a Jew, and that it was his father's intention for him to study chemistry. The testimonies not only needed to state what Peter Max studied, where, and for how long, but they also had to state the witness's backgrounds and their relation to Peter Max. Based on how many Jews died during the war, the chances of being able to locate and contact three living witnesses with the knowledge of something as trivial as someone else's education were

slim even immediately after 1945. Requiring witnesses be a requirement for a victim's claim makes restitution almost impossible to obtain.

The final rulings of Peter Max's restitution case raise the question of whether the legal process should be modified for victims in ongoing cases. The office explained that the request for compensation on the mixing machine, the car, and the chemicals and spices was denied because claims for damages under reimbursement would only be justified if the assets belonged to the persecuted, if the property was physically confiscated by the German Reich, or if the claimant had use for the confiscated objects, none of which were proven.¹¹ Peter Max was merely granted 2,311 DM¹² for his family's furniture and the emigration costs. According to the inventory list, the value of the furniture alone was estimated at 1,424 DM, which equals approximately \$2,420 USD today.¹³ Peter Max also received 415 DM from the Berlin Disconto Bank as compensation for his "damage to freedom."¹⁴ Peter Max's small amount of compensation in return for such a lengthy and demanding restitution process, in addition to the rejection of some of his claims, illustrated similar cases of thousands of Jews who filed for restitution after the war.

[...]

8 The URO to Peter Max Victor. In "Peter and Berta Victor Papers". Washington D.C.: US Holocaust Memorial Museum, September 4, 1957.

9 Ibid.

10 Ibid.

11 Oberfinanzdirektion Berlin. In "Peter and Berta Victor Papers", n.d.

12 Entschädigungsamt Berlin, *Verweisung an Haupttreuhänder*, 344181, Berlin: Wiedergutmachungsämter, 1958. Legal Document.

13 Peter Max Victor to Dr. H. E. Fabian of the URO, 1957.

14 Berliner Diskonto Bank. In "Peter and Berta Victor Papers", Washington D.C.: US Holocaust Memorial Museum, n.d.

CHAPTER THREE: AUCTION HOUSES, MUSEUMS, AND ARCHIVES

While Peter Max faced many difficulties from the claimant side of restitution cases, museums, archives, and auction houses continue to face the dilemma of becoming transparent or protecting their reputation. Museums, archives, and auction houses play key roles in both recovering art and coming to terms with current or historic collections containing questionable artifacts. The accessibility of these institutions serves as a vital component for tracing the provenance of a piece or understanding what ties those institutions had to the Third Reich. Out of fear for the safety of a museum or auction house's respected reputation, few institutions choose to publicly come forward about their historic collusion with the Nazis or with the art in their collections that were likely stolen during the Second World War. In cases where the provenance of the auction house or of specific artworks is not known, museums and auction houses often deny access to researchers to avoid any unwanted publicity or potential legal disputes....

[...]

I asked [Fanny] Stoye [the curator behind *The Obligation of Ownership*] for her observations on the current state of German auction houses, museums, and art restitution, which revealed her clear personal frustrations. She emphasized how significant gaps in art provenance research could potentially be closed with the help of auction house archives. She further described how these archives commonly deny access to vital information, even to provenance researchers whom the auction houses have hired. Institutions covering up their past collusions with Nazi art theft risk severely damaging their reputations in the case of

Nazi-looted art being discovered in their possession today. Stoye explained how the “non-public institutions are not obliged to take on the topic of art provenance research” and that “many [institutions] are more likely to do provenance research [behind closed doors] out of greed or out of fear of losing very rare pieces from their collections.”¹⁵ What many museums and auction houses believe to be currently protecting them from bad press can actually cause them to be in graver danger than if they were honest from the beginning.

Fanny Stoye[’s]...insights voiced many of the struggles I had while conducting provenance research on the Victor family’s paintings. While the Victors’ case differs from the Nazi-involved pasts of museums, auction houses, and archives, it does overlap concerning transparency. Despite that there are not any living members of the Victor family today, German archives and institutions repeatedly denied me access to certain documents or records. Even Peter Max struggled obtaining access to his own family’s records throughout the restitution case, confirming that the restitution process remains too demanding of claimants.... While museums, auction houses, and archives have made improvements towards becoming more transparent over the years, much work has still yet to be done in digitizing collections. Such transparency not only creates a more open relationship with the public, but it also helps alleviate the work of the provenance researcher. Since Nazi looted art is scattered around the world, these institutions must take the steps necessary towards becoming accessible to not only the German public, but also to an international public through online archives, in-house linguists and translated request forms, and public resources that educate the essentiality of provenance research. The Victors’ case serves as an example of why immediate change is necessary and why time is of the essence for

15 Fanny Stoye, email interview with author, August 3, 2019.

other claimants.

[...]

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Poetry

Can you Breathe?

Joy Liu

What rule of law?
What justice?
Have you answered to either?

The three words you hate to hear the most,
not the large ones above,
But the ones you hear on the streets,
do not discount your jobs.
Your lives matter,
but they matter too much.
And jobs are not colors.

I do not care for the weight of your badge.
And I doubt your intentions,
But if we must care about yours,

What about hers, for sleeping in her own apartment?
or his, when he went on a jog?
or his, when he went to the store?
or his, for walking away from a fight?
or his, for standing on a street corner?
or theirs, when they took naps in their cars?

Does your badge mean so little
That you can only shoot?
That you allow lynching?
That you shoot seven times?
That you choke indiscriminately?
That you must take away their breaths?

I know it does, but you
And those like you
And those who side with you
And those who defend you in court
Seem to think that it means more.

Perhaps it should, once you learn
how to do your goddamn jobs
And protect.

Protect the people around you
And those who side with you
And those who defend you in court.
But also,
Protect those who are not like you
And those who do not side with you
And those who defend themselves from *you* in court.

You seem to need help remembering
where exactly the weight of your badge comes from.

The loss of their lives
And the loss of their loved ones
And the blood on your hands
is the weight of your badge.

They are more than a name.
They are more than a name in the news
on a court document
on a sign
on a mural
in a poem

Say their names.
Honor their lives.
Remember them.

They cannot breathe.
Who made it that way?

Can you breathe?
I think you can.

Gaia

John Goodpasture

Let's write a poem
And my words will be like a rush of water
Which comes to a gate and becomes frozen between the bars
And you will hold a flame to the ice
As it melts you will collect the words in your mouth
And speak them

Let's write a song
The music will swirl and flow in my head
And finally take shape with a space fit for words
But the lyrics won't fit into the hole I made
So you will take a knife and carve away
The edges of the music

Let's make love
And your body will become the Earth and mine the Sky
I will love the mountains and pastures and oceans
And you will love the sun and stars and moon
We will create our own gods and goddesses
Until we sleep

Passing

Rita DiSibio

sprouting seed in
false spring:
chest flat
hair back under
a baseball cap

the waitress bounces
prey-like
to my table
she observes
is there anything else
I can do for you

ladies?

white winter wind
cuts into
everything
green and my
retreating eyes
seed cannot
survive

she seems to
slither away
but no one
else sees
predator
no one else
freezes
I choke on

can I say I
do not caged
by attention
accusations *like*
being included
I bury my
self seen not
as a
lady?

ritual is the sacrament of a god

Rita DiSibio

black widows
crucified
on the moss infested altar,

pupil goned eggs,
still rotting
on the church's ash's memories of psalms,

these escape the children hidden behind the veil of servitude;

the crown of thorns tricks children down
to consummation,
their blood water turns to holy wine

and trickles
into the communal chalice;
is there comfort in a rosary

the child asks, *is there comfort in a rosary?*

my child, that
is no longer a rosary,
and I know you still pray but

it stopped being a rosary before I stopped praying too;
we sink anyway, buried
underneath our own funeral pyre cross,

but incense will not exorcise us from what we did not know was wrong.

even if the mantises self resurrect
from the eyes of their self prescribed pentagrams,
ask them if they heard singing

in their coven of tongues;
we can only invite them to listen
while we hang our goat skulls

and make nests.

Consider it Fixed

Lucy Conner

Under the weather
And the weather is gray.
It feels hot, and cold.
Two tablespoons of honey.

To second guess is
To consider the truth
But no need to worry
Two tablespoons of honey.

Unreasonable questioning drives us insane
But is it ourselves or them that's causing this pain

A moment of good
Will likely pass, so believe
Good will never last.
Two tablespoons of honey

And they taste so sweet,
But are gone so fast,
Two tablespoon of honey
That will never last.

The moon is absent and the sun is missing too
And everything we knew happens not to be true

So alls a bit off,
But just stay still and
Consider it fixed with
Two tablespoons of honey.

Listen to the rudimentary rhythm of
A song that sings of a paradise up above.

A fantasy world,
A life after death, we
Won't escape, without
Two tablespoons of honey.

Because with honey we thrive,
It's how we survive
Two tablespoons of honey
To keep us alive.

The Fallout of OUR Gravity

Isabella Frank

The ones who burst you into the cosmos! Straight out of nothingness, protectors from evil as foretold yet not selected by you, They were once fresh and new like you were at the start, mere starter seeds eventually driven mad by potions, They selected you from a random, meaningless assortment, stronger, saplings, who might've fared better,

They selected each other from brief spark of magnetic attraction, into each other's orbits, Ice Ages have ravaged each other's fiery core, until nothing but ash!! soot! and muck!

Their attraction weakened,
needing a fix to rekindle their magma cores

They've overdosed

on elixirs said to re ignite wildfires! But instead made them addicts for more,

and more, until yet again their left empty! Emptier than when they stated, addicts to being needed

Their polarity for each other's beings has shifted, inverted, flip flopped upside down, and left you stuck in both of their gravitational pulls, their heavenly attack spaceship shooting their explosive asteroids to your Switzerland

while aimed towards each other,

blind to the damage on your fortress,

idiotic wars! meaningless battles! on your soil! And you try and keep your core safe and protected, endlessly forever chanting to yourself of how one day someone, anyone might notice that Hiroshimas story is getting played again and again! All over the soft coating of your soul, tearing and ripping you down! But yet they say you're not a part of their battles, not a part of their war, separate from their inextinguishable hatred for each other! They say you are safe, and they only care for you, not themselves, but

They blind figures who've claimed wisdom, act as if they are newly formed pure new seeds in Their universe, real wisdom never granted to them, infinitely sightless to their reality, They who have been here more years than they even know, claimed you,

and you try and covertly help both sides, secret spy illegally working for the other, because they both yours! And you are theirs! But their misguided whims take over the calming oceans meant for you! not stopping to think of repercussions! not stopping at all, they run and run and run from themselves! and from each other, they try and run but stay within each other's galaxy,

While

you are left behind, and in between, they are sending out troops employed to keep you safe, but the Distracted troops run across, straight past you, into enemy territory, and they pass you up, And now your borders are bare,

naked, and unguarded as you are as wondering when they will run out of war to declare, and when you'll run out of care, wondering if your core might turn like theirs, below freezing, wondering and wandering trying to find someone to notice your invisible internal craters, children of destruction, losing count of how many you now have, hoping another might be able to let you know how fallout has played out on your polluted atmosphere

While you tell yourself you'll never be complicit to another or to the genetically modified

Placebos, prescribed by so called medicine men, with proof of their higher intelligence, CIA, FBI, KGB knowledge and wisdom, wisdom the conspiracy theory written by other medicine men telling us angelic beings how to orbit, when, where, why, explanations through veiled windows of smarts thankfully yet to penetrate your biosphere, but for others its worked, they've polluted and infested and degraded and eroded your progenitors biosphere, they pass on the medicine supposed to cure, that truthfully only keeps them stuck to Need. Need of more! And more! And more!

They who burst you into the cosmos, with counterfeit wisdom, keep you prisoner in their nuclearized orbit, forever trapped between warring childish states, because where else in the infinite universe could you be, they are yours, and you are theirs, but where are you?

And you, sitting

perched atop boundaries of

war,

a scoreboard for fraudulent victories from your bogus protectors, wasting away the eons! Until one day hopeful Polaris, who's led celestial navigators for infinity plus shines bright enough to lead you out of the gravity, and you hope Polaris will also come for your child-like protectors, because they've been in a state of war too long, decades that have tuned to centuries, and centuries into millennia, and the millennia have reverted back into days, and weeks, and the eternal wheel turns over and over,

Polaris star we

We are here!

Inspired by "Howl" By Allen Ginsberg

The Space

Margaret Summerside

I am tired.
I am so tired.
and there is just one space left in the bunk
No more than a cot on the floor,
equal to the cockroaches of the corners and lesser than the spiders of the ceiling
But I crave it, I yearn for it
I picture the weight of my useless body
Crushing the small space as I drift to another universe

But there is a man there
He stands next to the space
looking at its emptiness,
its availability
My eyelids droop, my legs hardly able to close the distance
between myself and the man

“Excuse me” I whisper to the man, “may I use this space?”
“Oh, I’m sorry, no” replies the man “I’ve already claimed it”
I look around, my dry eyes searching
Weary as I turn back to the man

He seems to have forgotten me
Focused again on the space
Still he stands
My head reels, my limbs filling with sand
Why will he not lie down?

I fantasize
Of how I would use the space, properly and fully
How I would surrender to the deepest sleep

Succumb to the delusions of slumber
The body that space deserves is my own
Yet the space is empty
Yet the man stands

“Excuse me sir, but are you going to use this space?” I desperately slur
“I am” says the man
And the man stands

“I’ll pay you” I plead “how much for this space?”
Again, the man seems to have forgotten I am there
Staring at the space
“please, how much?”

“I’m sorry”
the man replies
“I’ve claimed this space”

He stands.

A Hamartia, Perhaps.

Kelton Jay Hevelone

I.

That untrue Lust – the vile, infernal beast,
thou art the bane of my internal keep.
When I was young and knew of thee the least,
in me allow'd thy thief to travel deep.
Thou robb'd from me my agency and love –
a tragic loss to that within which sings;
the carnal fervor yearns and calls thereof,
to hold and touch – such pangs with voice do ring.
So lo! Oh what would I forgo! To call
within again that fair and novel taste,
to know with eyes so bright and soul withal
that I may love without some sens'd disgrace,
and liberate myself from wretched halls
and unabridged be most deep enthrall'd.

II.

One day I woke within a fever dream.
I clear'd my eyes and saw through hazy screens
of fog and mist a younger man so preen
yet so bedeck'd in constant misery.
I ran to him but distance did abound
from that between, and too no shout nor sound
could reach befallen ears – were only drown'd
by that abyss of time that did surround.
Instead, I sat, observing fate play out.
He fell down rabbit holes, so fuel'd with doubt
that he may ever find a love devout.
When done, he lay forlorn, esteem without.
If only he remain'd assured on course,

would I not need to sing the same remorse?

III.

How trying tis to bear that brutal load,
the nightmare demon known by name as 'shame,'
which stalks taboo on sex, of whose sole aim
be that to have one's sense of self erode.
The jail, whose walls sustain the silence of
estrangement, knows but only shrieks in vain,
when falling on deaf ears do none attain.
"Such discontent is frankly violence, love,"
the demon says, up perch'd upon my soul,
but fuck you, wretch, I know from deepest depths
within this cave, that shadow cast not death
does mean, but rather light and growth extols.
Thou, blackguard! Off! By gods, I rid of thee!
Thereby educe forsaken normalcy...

The Hammock and the Sailboat

Dylan Gowins

Do hammocks dream of rested men
So they may rest as well?
Well, rest assured! As dreamers tend
To be the best to sell!

“Ev’ry man a king! And ev’ry dame a queen!”
I’ve heard it near and far between,
But never have I seen
As many crowns on heads
As there are counts of beds.
In meadows, moaning, daylight foaming,
Herds of wolves and sheep are roaming
To witness this: An endless bliss
Of conflict climaxed to a hiss.

The curtains lifted, eyes all shifted
To see the soil neatly sifted,
Showing scenes of men ungifted;
Climbing trees
To catch the breeze
Into the winter wind, he drifted.

The judge, jury, executioner,
The dark-cloaked electrocutioner,
The thin-lipped circumlocutioner,
The blue-eyed resolutioner,
Does he too, dream of far off lands
Where wishers wish as faith demands
And faith, as far as faith could stand
Stands sternly, as is faith’s command?

Do caskets dream of sick old men
For simple company?
To rest by tandem beat within
In perfect harmony?

A wise old monk
Got in a funk
And climbed up off his fence.
He looked around
Until he found
A lack of exigence.
His world reborn,
Correctly torn,
Without significance;
No will to be,
He says that he
Has been contented since.

I asked him once the secret
To his enlightenment,
“Should I run free and naked
Or join a covenant?
“Should I fight to reach the top
Or kiss the ground below?
Should I capitalize the crop
Or yearn to feed the crow?”
He answered so, if you must know:

“If ev’ry saint’s a sinner,
The sinner also learns
To heat his peas
With antifreeze
Until his dinner burns.

“If ev’ry man is destined
To work instead of sleep,
He’ll do his best
To earn his rest
Until he’s six-foot deep.

“If ev’ry dog could bury
The sum of ev’ry bone,
The poor old pup
Would finish up
By burying his own.

“And ev’ry man’s a sailor,
And sails by windings blown.
When lost at sea,
He’ll find that he
Must learn to sail alone.”

The meadow’s long been empty,
The kingdom didn’t last.
The sinner learned to eat his peas,
The monk has long since passed.
The hammocks dream up nightmares,
The dog can’t find his bone,
And sailors only sail in pairs
And kings live on their own.
The jury’s reached deliberation,
It’s time to end the long vacation.
It seems you reached your destination
Long before participation.

So sail on you single sailor!
Sail on to catch the breeze!
Sail on to sunsets long since past!
Sail on the endless seas!
Sail on till you’re sick of sailing,
Until your heart doth swell!
Into the ruthless winds prevailing
So you may rest as well!

Blues Hole

Bruce A. Kaufman

Blues hole, the doors
empty, ravenous, groaning

not knowing
 blue
desire, to fill the whole
planet with significance.

Iridescent midnight note
blurs bells' ears on
 rainy windowpane,
a box unfolding
in the synapses.

So long since
falling through the sky,
 now deficient,
forgetful of dreams, though
dreaming.

Prankster sings Prine's key
to expand reality,
 rose petals erupt
in June under a flower
moon.

Root to skull lights with bolts
of four-dimensional fabric,
 safer at home
with Albert's problem child.

The Sway of TV Murder Porn

Bruce A. Kaufman

Dreams of hot
 amber
trapped for eons
Sunday.
Couch
hard bound
summer solstice 2020

Spaghetti dinner

comes, futures
pullulating chicken feathers
ultraviolet white

Trump's
 trail of tears in Tulsa
 and white terror

and J.J. Cale:
"she don't lie, she don't lie"

Up now, awake,
sleep off

School's Out

Bruce A. Kaufman

Green thunder rips space
time a whole new worm
hole as black as clouds
full of ice pounding out
hot July microbursts.
Doesn't matter what you wear,
the dog leads the lion
how we came here, alone,
absurd, but for summer—
time's end when Old Main's faux
bells toll brick red, and blue
terrapins sun on logs fat
with clocks seeping seconds

Catnip Dreams (for Lane)

Bruce A. Kaufman

“you’re not Melville,”
she wrote, “and that’s a compliment.”

Damn. Sure about that?
I am a comma, comma chameleon
on a four-day drive
like a Merced, as Chuck said, overheated
engines run on to no end, no good,
no rest-stop
for the bleary.

Sheer volume
and vocabulary coalesce
into clear light,
witless, asleep
underground, under night,
my old work-desk dreamed by a window
where came words to play.

Cat napped on my lap, dictated thoughts
from folded files

Raft to the Other Shore

Bruce A. Kaufman

“Life is a killer,” said Bill.
Yet would not murder
a spider for the light of its eight
eyes.

Outside of life, this becoming
trick of death, an alien flower reveals
an organ of sight,

formless attractor, the middle eye
rejects a Spider God, eleven—
headed, eight-armed, twenty-two-legged
hustler

dancing on the corpse of a concept,
as crickets and seventeen-year
cicadas fiddle and pulse,
propagations,

saturate the sanctuary
of a hundred thousand freight trains
in my skull. Down a waterspout,
bottom out to the well again,

spiders are my friends,
me and brother Jim and the bees together
again.

Tiger Study

Catherine Garvin

The tiger gives birth.

Amniotic sac yellow and cloudy-
precedes the cub.

The sensation of the mother's tongue triggers the lungs.

Four breaths, *good girl*, applause.

Black stripes drive lines on their heads,
thicker than along their backs.

Paint clumps on the fur around their paws.

Fifty dollars for one canvas for conservation.

Their eyes are blue and wide.

When a tiger licks its paws, it is preparing to hunt.

She steps on the earth tenderly.

These are young deer and they have never seen a tiger.

She crouches lower than the deer.

Her eyes are yellow now.

Yes, at last, I know for sure she is feeding.

Skyline Aversion:

How a gay boy grows up to view the stars above and city below

Anonymous

A skyline standing tall tonight
with windows shining oh-so-bright,
is bathed in tears of those who weep
for seeds they sow but never reap;

Streets beneath still busy as noon
let lonely hearts now sink and swoon;
And sifting through His inky space,
I pray the stars will grant me *grace*—

I wonder if he sees His moon,
or do hateful Clouds crowd too soon?
Is he like the block, wide awake?
Or more alike my dormant state?

Still, I will keep my distance from,
this skyline housing that someone.

newly acquainted

Bailey Wakefield

when i was born, they didn't have a plan
a child need only know the love of her parents, leave the thoughts of ethereal beings for another day
a poor methodology, but effective nonetheless

upon my turning five, they began to worry
competing ideals under one roof are bound to reach a head, and with it came you

at six, we were formally introduced
another identity to add to the list
i didn't understand why you were loved so deeply, but this was far less important compared to the
pleasantries your name evoked

on my twelfth birthday, we were bound for life
i studied your messages and convinced myself that you would make me whole
they told me all was well

i believed them

when i turned 13, you disappeared
you stole my friend and didn't leave a note
i might've understood had you explained, but that's never been a strength of yours
generations upon generations of pain and yet i was still taught to love you unconditionally
we stopped speaking

at 18, i was reminded of you
in a town of one it is easy to stay hidden, but my path led me here
the others knew of your atrocities, your oversight
yet when the gates you built were open, they all ushered in
i didn't understand, but i loved them dearly
as did you

now i am 20, and your foot is in the door

i will never understand you, but i suppose that was never the point

i may not relish in your stories like i did when they were all i knew

i may not say your name, as my tongue is coated in thorns

but i will keep the others close

they are indeed the sole source of light during your periods of great darkness

i wish we were closer

i wish your guidance was built on more than just fables and hope

but my door is open once more

your adolescence passes through you without a wave or commotion

Allen Means

the title, like the warmth and the growing, up to your waist of the moss in the terrarium and the people who watch you outside, and the magnifying of damp dirt and green bottles they find inside your lungs, like the skeleton of garden you are and china chipped, a coping. in the energy you left burnt out in the lime lamp sunlight, prescribed a multiplicity of function, quiet and held together by your intelligent and disfunction, cold intolerable skin.

dependent on the hands that lift you up and tear you down and tap and tap and tap again, rubbing the foundation of watched and blind and all alone, until the glass is nothing but a pretense. falsely. didn't even notice when they stopped coming coming coming by, like they were never there to begin with, ever there to begin with just a body platform for empty cradling and long-legged creatures to coo at you from the out, side crackling grass and spring and overgrown.

KANSAS GHAZAL

Caroline Wiygul

That's my story: the signs were asking me
for things I couldn't give in Kansas.

It makes no sense that I was shocked by the stripmalls and sunchoked
hills because I have seen them before in places not-quite-Kansas.

I told my mother my route on the phone and she knew
it wasn't right and I was surprised on my drive by Kansas.

I was—
My history erased itself in Kansas.

In the rearview mirror, the billboards jumped across the highway
on treetrunk legs, rearranging me and Kansas.

Asphalt spun me out and away,
toward the next gas station, toward the miracle of Kansas.

How can I defend myself,
my sacrifice for Kansas?

Can I say that I was there like I was new,
a fresh calf in Kansas?

The truth is that I could see everything—
watching the earth peel away from itself, away from Kansas.

Watching myself in a kiss,
watching myself in Kansas.

Squirrel Country

Caroline Wiygul

Your life takes on a new
timbre, the short song with
the claps that you put in yourself, the fabric of a blanket
that doesn't cover your toes— you
sweat
and smoke and wear special skin to your birthday party.

You could write your day perfectly. You could press
every blade of grass for this. You could diorama
everything: your mud under the welcome mat, your
breakfast, your head coming loose in the steam of
the shower. Your witnessing: the god-light breaking
through cracks in the cedar door. And it would still just
be you filling up your body.

Oh, but the pushing out exhausts you. The too-short
blanket will cover you curled up. Let go of the grass
perhaps you do not need to chronicle this. It would
be okay for the list to be simple for the list to say just:
hummus. It would be okay it would be good even if the
song you were humming was one from last summer and
not anything you wrote.

The neighbors have a few decades on me. They dance
and look out at the rain. Their grandchildren are
bright muddy wonders, wandering through their yard
country. I still feel small, very much a citizen of where
I've been placed.

Touch hovers at my windowsill
in the body of a fat squirrel, chatters at me like she
wouldn't run if I reached for her.
I am coming out of the dream
in the courtyard, swimming out
from under the ghosts of people's arms. In the waking
moment:
a ribbon reaching from my ribs to the neighbors and the
barefoot music: Colorado
is on fire while the rivers storm and swamp their
structures at home.

The squirrel has been gorging herself, has been
screaming
I'm up. I'm up.
I've got my sister's eyes in the back of my head. She is
saying Okay. Okay.
She is seeing everything through cracks in these
curtains of rain.

My yard is just touch and scrub—
it belongs to the squirrel, the bulb and bulge of her
cheeks, while my belly is still morning-hungry—
I resent her
yes a little
but that's not why my teeth ache: I want to eat her.

WALKING ACROSS THE CAMPUS HEADED FOR A FIELD

Katie Plain

on the day you decide to morph back into
noiseless habits. On your right is the planetarium
where you went for his birthday once. Before cake,
maybe after. Then, in a moment, you see him. Right there.
You think, surely it can't be. Mistakes occur
every day. The name was spelled wrong, the child
was under the bed the whole time, the salt
misplaced for sugar. But you look up, again. There.
He's on his bike, the one that used to lean
against O'neal, surely. Look up to his
ballcap, and yes, it has the red B. There is a large
spool of paper poking out of his backpack.
You wonder if it's art. If this is art. The art of passing
your past. *Did he see me?* You lean in, whisper
under your bandana. He rings his bell twice.
Perhaps as a heads up for the couple in front,
or maybe one last sound.

Horror Vacui

Landin Swift Chesne

You in mind, I want nothing more
 than ocean turmoil
 deep enough, wide enough, staunch
 which might suffice

 this God

 -Forsaken
 pit of malice in my chest

(hostile arid no
extremophile crawls out.)

 This taunting colorless flame:
 laps marrow from bone,
 or would,
 but incinerates
 every gift—contrivances, now I call them—

 Blush of warm cheek.

Fresh berries.

Sunlit silhouette—

 eyes

 you give me—contrivance, that's it,

 and distraction:

 valueless, meaningless obstacles
 delaying before the ever-sought, mythicized
 effervescent, unrealistic quench!

 You in mind, you in mind.

denoting any case other than

Katie Plain

Following the recipe exactly.

Mookie hitting a fastball at noon.

The scars not invading your body.

Will you fault the bodega for their produce?

Boston for its weather tendencies?

The hands that latched the wheel?

You can mash bananas for the muffins,

buy a watch + note the seasons it takes the weather to shift,

pen a thank you letter to the car for wanting to paralyze you,

but not.

The market doesn't have blueberries.

It is too windy to play ball.

The dashboard fragments in just the right place
to crack ribs.

The First of the Snows

Kenlie Rohrer

Awake! Your frozen summer
That its ponds may scrape
With the floes of fluid ice,
Remnant of a dancer; pieces
Break up and move, a grace
Indescribable, though nature
Makes her way through
Push forward the seasons
Forget your fairies; it is time!
For leaves to crunch and fall
Away, to leave behind the rind
Of autumn; let chill blast
And enter, to speak thru me
Against the icy tips of wind
The river path white; hardened
Over with purity, and a sweetness
Is what but a taste, stewed
Abroad the breast, soft flakes
Of early October snows
Do you not feel its freshness?
A zing! Abed in my footsteps today!

Knitting Through Skin

Kenlie Rohrer

Folds flow and sands chime
Away from hands that hold up time
I cannot bear to seek the dusk
That brings around what formless; husk
Though terrible and strident I glow now to see
A piercing cross, flush in bruising misery
Tidy turning flowers, a spindle of a rose
Cannot dare but creep the secrets one knows
As divine minutes begin and think to clamber
Down the pearled ropes, thimble essence of amber
Drawn up through the strips of yarn magic; torn
A skin I slide on like it's already been worn.

In Quarantine

Kenlie Rohrer

Cotton balloons
Washed far too many times
Knitting around yarn
Books read over
Thoughts turn to dust
Body falls apart and
Sifts to the corners
Birds crawl on legs
With wings made of
Fingers and bodies made of
Too many hands clenched
The sun from the sky
Has gone and the world is
Gray. Color suns in chalk
Around music not in tune
While, and all the while
Staying far, and away.

And Modernism?

Beau Farris

invisible currents that dominate. and cellphones
scoop out a generations empathy consumed by
the endless scrolling of swing sets utilized to
shackle. this dystopia is a comfortable non
descript original purpose abandoned intent
ionally. it's eclectic to render electric networks
as gaslit propaganda. instinct rises rooted in devil's

humanity with unrequited bitterness. imprisoned
devil invites a firestorm onto innocent operators
who merely surrender to the frequency control
ling their blissful lives it's so depressing. a smile
the facade of baring fangs and the once consistent
head developed or regressed into fueling a hellscape
visible to eyes molded from smoke. modernity isolated

the uneven lines of hair on the back of a head appear
ears are muted and eyes are filtered and the creaking
a chipped rocking chair or the concept of sand are
in a vacation house in slums of Nairobi. content
ment is unlikely to be satiated like this so a corna
hand with horns pushes vertebrae from a skin suit
tempting ash footprints and desire to advance against

marrow. a grin foams out from cheeks so intrinsic
to existing it's laughable. heavy elbows and knees
partake in joint custody of a body racing a mind
tethered to perspective ignited by anxiety. resent
ment is manifested as the inferno incinerating ass
ets that cauterize whole environments with apathy.
ears are spears and eyes are in flames yearning to boil

The Itch

Beau Farris

your heart feels itchy sometimes
like a palm covets for a smooth rock
something tangible that has immense
weight. and when thrown, leaves total euphoria

but—your heart is not a person
it doesn't have a mind to tell its non-
existent hands what it wants to touch and throw
it just wants

you'll need a buzzsaw to crack open your
ribcage. because you're infatuated with some-one
who you don't really love
and it kills you. what you've
built to protect your heart stabs your lungs

you'll realize the hole in your heart
is your heart
the emptiness felt is your heart silently screaming
what your soul is meant for
you just need to listen

and when you finally scratch that irresistible itch
you'll realize that you didn't really scratch an itch
if you consider your heart, it feels like a warm hug
embracing the entirety of what's important: you.

Turning to White

Alana R. Horwitz

We're sitting in his hospital room
He says he's not ready to die so soon

He's trying to put on a brave face for us
But we can tell that his body is starting to rust

The doctor says it's not an easy case
And you can see the tears rolling down my dad's face

His voice cracks as he tells us how much he loves us
We can tell he's realized his life is on the cusp

He says it all happened too fast
The look of despair on his face is unable to be masked

He says he still has a lot to live for
He wants to enjoy his life so much more

We keep asking the doctor to clarify
But we continue to become more terrified

I never thought my once powerful dad could become so weak
Nor that I would now be so meek

Throughout my entire life
He always spoke about how my future was so bright
And he was so excited to see what I would become
He would talk about his future grandkids
And how proud he would be that they were his
But now he has an expiration date

Mastered by the decision of fate

I kiss the top of his head goodnight
Not knowing when everything for him will turn to white

And I thought I could stay strong
But I couldn't have been so wrong
Because how can I be okay
When my father, my role model, my best friend
Is slowly being taken away

(On a sunbeam's behalf)

Caroline Cappelletti

Sometimes, a sunbeam spills, like cargo down the river.
Thrilled children swim to play with it
and dive into its red-brown fire because their eyes are not yet aching from the storm.

In June, the sunshine is beach-colored and loved to no end;
loved in its incompleteness,
loved even in the way it dies, punctually, at nightfall.

Children are too young to spell bereavement.
Children are too old to ignore its tilting, happy font. *Bereavement.*
If grief is painted on like time on a children's watch, does it count?

The river, heavy with history, buries her body before she even knows that she's a body
and not a sunbeam.

Now, the children save their tears in case of drought,
so that they can still water the roses
and the rue.

Even if brief, there was a sunbeam.
A small thing, yes, but not a forgotten one.
She was always there, and sometimes not.

Flawless:

A Modern Boccaccio Retelling

Anya Berlova

Preface

The Decameron is a collection of stories written by Giovanni Boccaccio and is regarded as a masterpiece of medieval literature. I chose to rewrite Day 6, Story 1 as a modern poem because it presents an interesting take on the importance of using words well. Furthermore, it is very relevant to current times, when we emphasize the importance of communication. The original tale details an exchange between an intelligent and well-spoken Madonna Oretta and a knight who turns out to be an extremely poor storyteller.

Oretta was the perfect student
Kind, observant, very prudent
Some could say, a bit uptight
Doing homework till midnight

It was on such dull occasion
She received an invitation
To an online dating site
Which gave her a solid fright

But her friends, how they insisted!
And their attitudes persisted
Thinking this was very stupid
She downloaded OKCupid

After that ten days went by
It seemed love would not be nigh
When on Friday, 5 past 8
She discovered something great

The message came from Mr. Knight
Oretta was shocked at the sight

Of his large poetry collection
His love of words: it was perfection

Each time he wrote, Oretta laughed
His jokes, they truly were a craft
His words, they were divine and nice
His stories, detailed and precise

After all that Knight had written
Oretta was extremely smitten
So she insisted on a date
For which she could so barely wait

Cancelling her homework plans
She set out to meet her mans
Very soon, Sir Knight arrived
In a way a bit contrived

The limo added extra flair
Too much? Oretta didn't care
She sat down next to Knight in awe
Having not seen a single flaw

He was perfect, she was sure
And had a wonderful allure
“Tell a story,” asked Oretta
Knight replied with a “You betta”

Knowing how well Knight could write
Her expectations were not slight
But then, when he began to talk
Poor Miss Oretta was in shock

There he mumbled, here he stalled
Coughed, and stumbled, spat, and drawled
“Oh dear, I haven't got it right”
“Perhaps this? No, not this, not quite”

After what felt like an eternity
Of something far from taciturnity

Oretta cried, "Enough's enough!"
"This car ride has been very rough!"

"I still have homework... I can't stay,"
"Please let me out, that's all I'll say"
Knight realized what her words meant
And that she was not quite content

Laughing, he got out his phone
(To which, quite frankly, he was prone)
And said, "Perhaps it will work best"
"If we give verbal speech a rest"

And in a way that's unperplexed
They vowed to talk only through text
With this I end this bizarre tale
Where silence happened to prevail

Art



You're Gonna Go Far, Kid
Adrian Gluchowski

The picture submitted was my audition look for a local Denver competition called Ultimate Drag Battle at Tracks. I ended up getting a fast pass and got top 3 in the first round before Covid-19 shut it down. I am a QTPOC Drag King. My drag name is King Vaughnz. My goal is to connect with whoever I am performing for—to show that you can do what you set your mind to despite people that don't agree. Drag has helped me express myself in a way I felt like I couldn't—it has allowed me to find myself through gender expression and come out (as well as help others by sharing my story).



Finding Light in Darkness

Claire Tetro

This is a photo story series depicting how we can still find light in the darkness of COVID-19.

In my photography, I like to capture beauty for beauty's sake. I photograph images that we otherwise wouldn't notice as beautiful until we take the time to notice them. I especially focus on lighting in my photography and the power that light can have on the objects and things around us.



Ceramics Untitled
Zoe Boiarsky

Ceramics is a media where art and craft overlap. Pieces are created that are both artistically beautiful and functional. The medium of ceramics exists in daily life, in your morning cup of coffee or the bowl of soup on a winter day. For this set, I set out to create a group of vessels that nested within each other that would be used in daily life. The carving on the side of the mug and cup are accentuated by a glaze called Butter that shows variation in thickness. The other glaze, Arribe, is layered over to symbolize the overlap of art and craft.



Keeper of the Key
Michael Griffith Bibbey

Sometimes the quietest sentinels hold the most powerful keys in our world and we only need to look up to see how strong they truly are.



Passing Strange
Mayar Al Dhaheri

A project initially made out of boredom, sheer fun, and playing around with photoshop turned into something that I'm quite proud of.

"Passing Strange" as a series is a love letter to my previous abode and the accompanying visceral feeling of its big city lifestyle. I lived in New York for a short period of time, and I admire the fast-paced environment I was constantly immersed in. Looking back now, I think I was too overwhelmed to fully appreciate it; so, this is my way of making it up to the city. The title of the series is inspired by my favorite play, *Passing Strange*, written by Stew. I watched it in a college class; it immediately resonated with me as I am constantly moving about, searching for meaning in faraway places, whilst running from familial trauma; and its inherent disconnectedness similar to the *Youth* presented in the play. At the musical's best, you feel the joys of the *Youth*'s journey to Amsterdam in search of an identity. I think this perfectly describes my series and my feelings towards it.

Mercury Sable
Henry Perry-Friedman

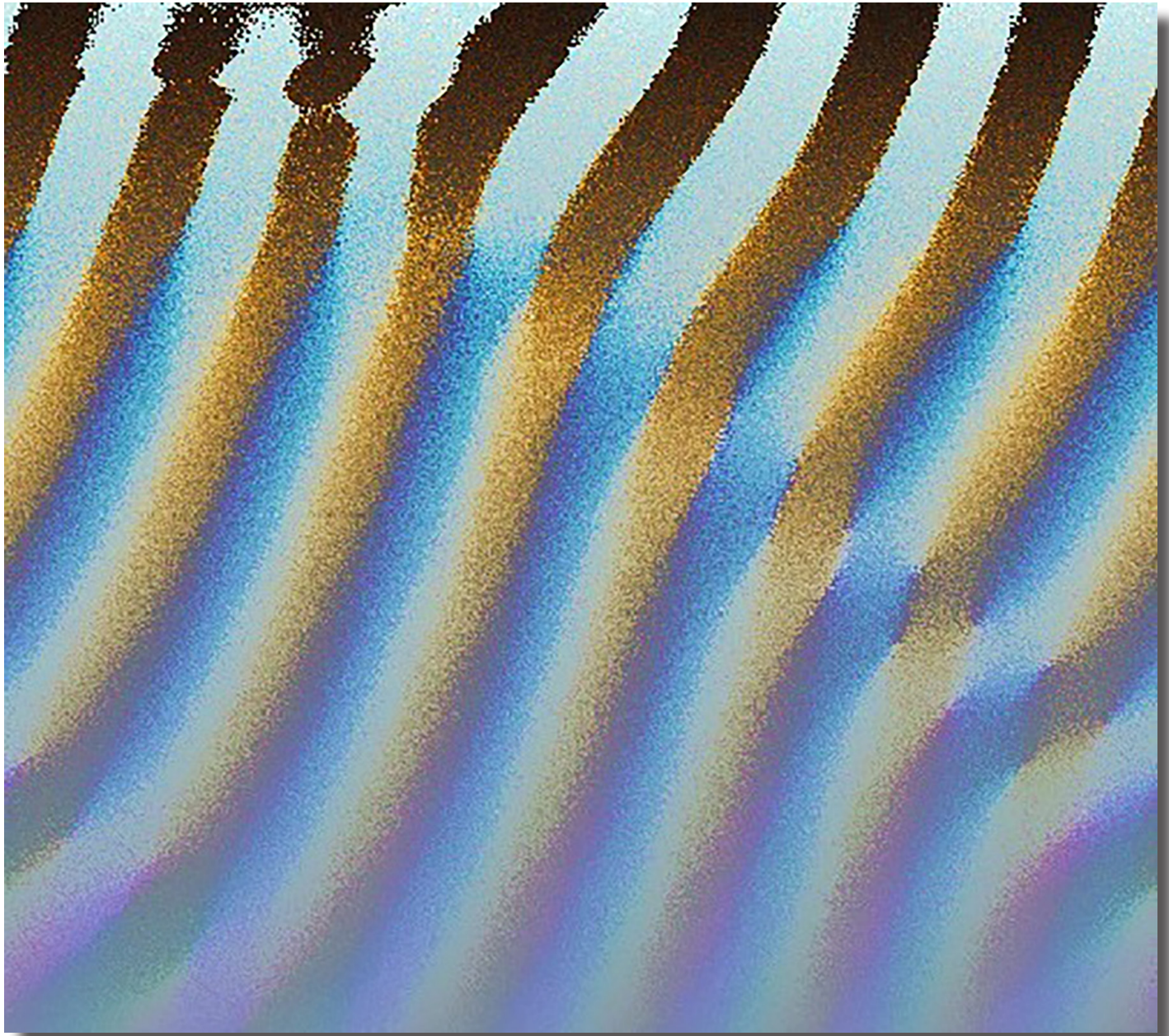
These photos deal with suburban car culture, showing the personality and beauty of cars while also exposing the way they separate us, creating senses of loneliness and social division brought on by the car's antisocial nature.





Chrysler Imperial
Henry Perry-Friedman

These photos deal with suburban car culture, showing the personality and beauty of cars while also exposing the way they separate us, creating senses of loneliness and social division brought on by the car's antisocial nature.



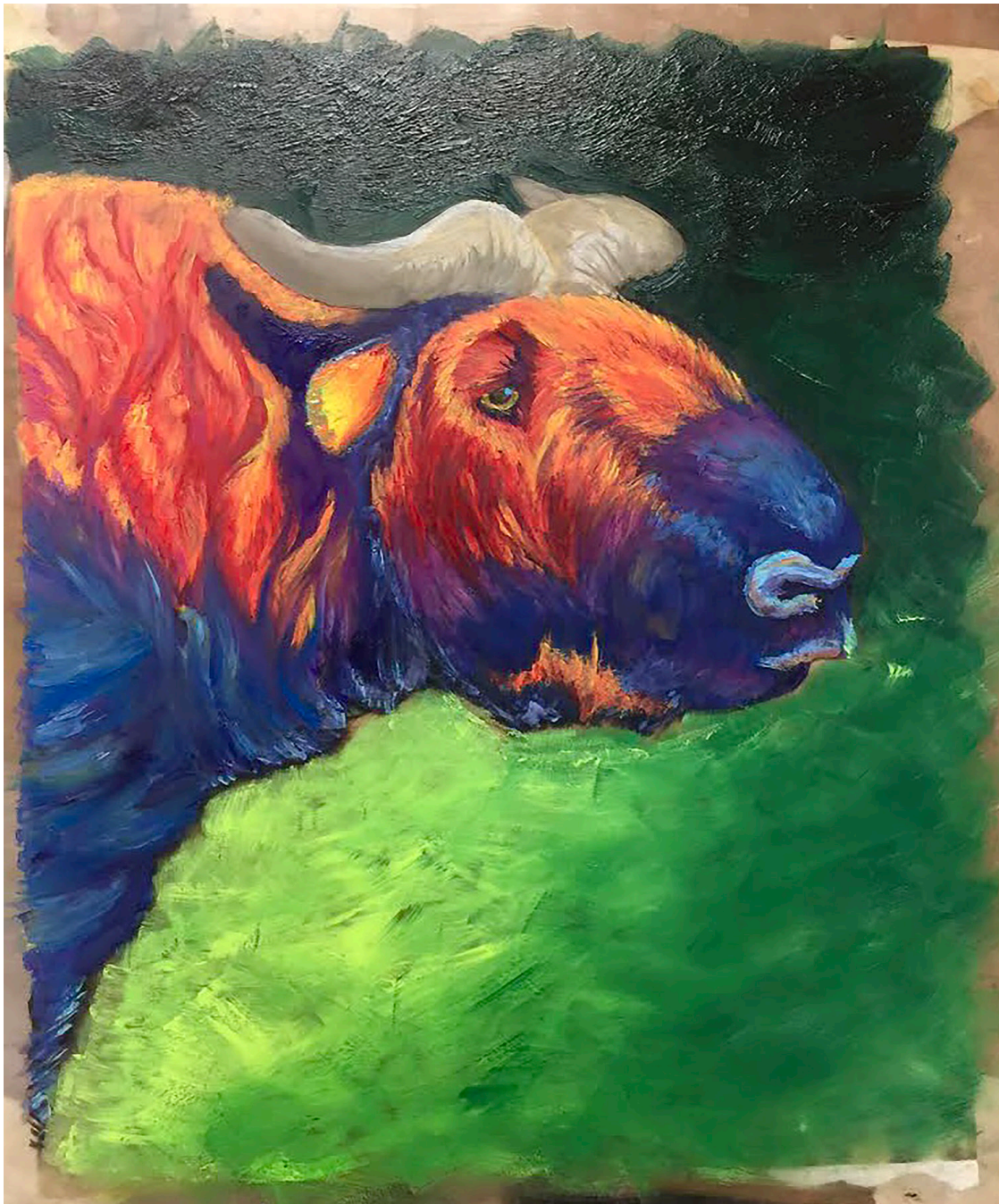
Melly Lines
Kyle Neubarth

A pattern formed by inverting a pixel swap algorithm I worked on last year. What hooked my attention was the near uniformity of the lines, which occasionally become warped and create a 3D effect. The algorithm looks at the average color in a section to the top left of a pixel, called c . Then it samples many pixels from a source image to find the least similar color to c . Then it swaps the two pixels. This creates alternating patterns which fluctuate in color and desaturate as the source image runs out of viable pixels to swap.

The warm sun on my dark fur: Vivid
Jasmin Godinez Rivera

To my dear old friend, is it true that buffalo fur glitters in the sun as much as
you describe them to be? To be colorful at sight?

I think so.



Open Media



Eames Room: A Space for Two, Highly Rendered Space
Bryan R Martino

To honor the legacy of the late Ray and Charles Eames, I was tasked to create a scaled, photorealistic space for the couple to continue their design work in quarantine. This 10ft x 10ft x 10ft room features a workstation, a place to rest, and a place to learn, as well as reincarnations of their most famous product designs. Translating orthographic drawings into a 3D model was a substantial learning process, but ultimately conveys a colorful interpretation of these iconic mid-century designers.



Israeli Shuk Vendor
Bailey Wakefield

Chicago Pride: Dykes on Bikes
Bailey Wakefield





The Journey Anya Berlova

In the difficulties of the pandemic, I wanted to create a work that was meaningful but lighthearted. Serious but playful. Something hopeful for a better future. My two cartoon characters, Sheepers and Puggie, are part of a larger campaign I created to fight against bullying. Sheepers and Puggie always support each other and their community. They are beacons of kindness, inclusivity, and positivity; we need those three things now more than ever. In these three art pieces, I showcase the journey we've taken, the safety measures we partake in so that we can protect others, and the hope we hold in our hearts. I used photographs from memorable places that I took pre-pandemic and added situations relevant to current times to symbolize our need to connect the past with the present. We must keep our sense of adventure and enthusiasm for everyday passions while taking the necessary precautions. Our experiences are shaping us every day; we can use them to create a brighter future.



An Unfamiliar Home, 4 Photos
Madeleine Kriech

What it's like to not recognize a place you call home? Walking around campus isn't what it used to be. There are no crowds in between classes or lunch rushes at the dining hall. The smiling faces are hidden behind masks and computer screens. This photo series explores what it's like to walk on CU's barren campus in 2020. For almost four years, I've explored all the nooks and crannies campus has to offer, and now my favorite spots are empty. Through these photos, I hope to provide a glimpse of CU's once lively and rowdy spirit now lonely and quiet. Yet, albeit unfamiliar, I still call it home.

An Unfamiliar Home
Madeleine Kriech



An Unfamiliar Home
Madeleine Kriech





An Unfamiliar Home
Madeleine Kriech

La Jolla Cove Composite Plan Render
Bryan R Martino

My primary intent was to create a dreamy landscape that balanced surrealism and photo-realism. A summer palette was created from precedents, the white outlines adding a touch of airiness, the dramatic curves adding a touch of femininity, and the warm sunset blanketing the scene in softness. The culmination of colors and effects made for a classic summer eve.



Apathy and Aesthetics in the Construction of Gen Z Identity

Sophia Aldinger

The following is an excerpt from a longer piece. For full text, please visit https://scholar.colorado.edu/concern/undergraduate_honors_theses/gq67js14c

Project - Animation:

My honors project is an experimental short film, named *Zillah*, for which I have written an original screenplay, composed a musical soundtrack, casted, directed, filmed, and edited. Some of the technologies I have experimented with in the film are animation, green screen, and the convergence of 2D painting with video (Figure 1)... *Zillah* explores the relationship between mental illness, religion, and existential purpose.

[...]

Evolution of Teenage Culture - Media+Music:

Online presence has become an integral element of the teenage experience, especially within the past decade as technological innovations have made devices more mobile. Teenagers are now constantly connected because of this mobile access to this stream of communication and consciousness in

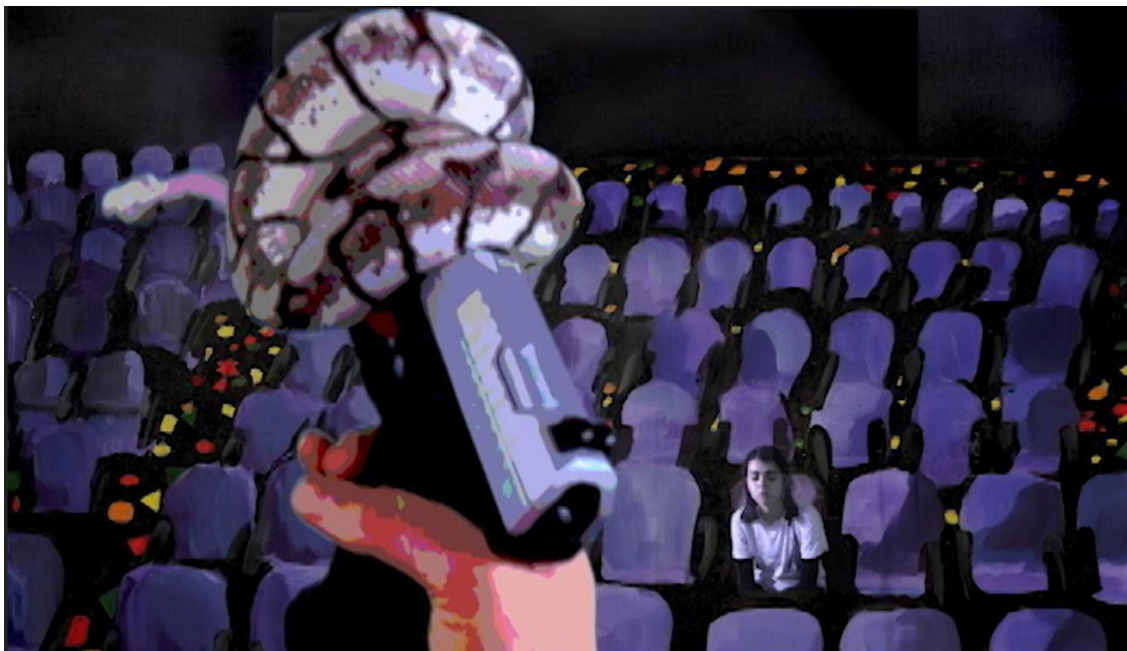


Figure 1. "EMDR: Theatre." *Zillah*. 2020.

almost any situation throughout their day.¹ Scenarios like transportation rides, waiting rooms, and lulls at work, which used to exist as moments of waiting and silence, are now filled with this readily available virtual interaction.² This has changed the way teens structure their daily activities to such a degree that it fundamentally alters the dynamics of their interpersonal relationships.

In these jaded times, meme-ing, tweeting, instagramming, and tik-toking about anxiety and depression isn't just for coping. It can act as a guise of honesty – especially to youth desperately seeking authenticity and connection in a virtual social environment that tends to distort it.³

The most popular forms of social media among younger generations are those with the most interactive elements between users. New platforms continually improve the ability to richly engage through video posts, live streams and enhanced commentary with tools that speed up and even deepen communication. Generation Z has a great affinity for apps like Snapchat and TikTok that are based on video content, yet chat and discussion functionality are also fundamental. In the past, apps like Tumblr were home to the glorification of psychosis, self-harm, and drug addiction. The community regulations of this app, this content and generational attitude was expelled

from Tumblr, and, some would argue, transferred straight over to TikTok.⁴ TikTok has become the perfect breeding ground for the apathetic, dark humor Generation Z is entertained by. Figure 7...illustrates screenshots of typical TikTok videos which root their apathetic humor in jokes about mental illness and substance abuse.

Dependence on video content within social media for peer connection is a new facet of internet culture which, in part, developed out of shifting socializing practices. In generations past, teens would spend their time at movie theatres and malls, but this dynamic is greatly diminished with Generation Z.⁵ Online shopping, streaming services, and other online resources directly compete with such physical social venues. In addition to this, even before the apocalyptic consciousness of pandemic, the culture of fear resulting from the normalization of terror attacks and school shootings in public spheres left parents less inclined to let their kids spend unsupervised time in public.⁶ This has resulted in a larger portion of quality time between friends existing in an online format, and video interactive elements satiate this urge for live interaction. While this gives older generations the impression that Generation Z is lazy and obsessed with their phones, this is how Generation Z was socialized. Building interpersonal relationships virtually is the normal reality for Generation Z, and it will only be reinforced in the future due to social distancing in

1 Curtis, Brenda L, Robert D Ashford, Katherine I Magnuson, and Stacy R Ryan-Pettes. "Comparison of Smartphone Ownership, Social Media Use, and Willingness to Use Digital Interventions Between Generation Z and Millennials in the Treatment of Substance Use: Cross-Sectional Questionnaire Study." *Journal of Medical Internet Research* 21 (November 2018).

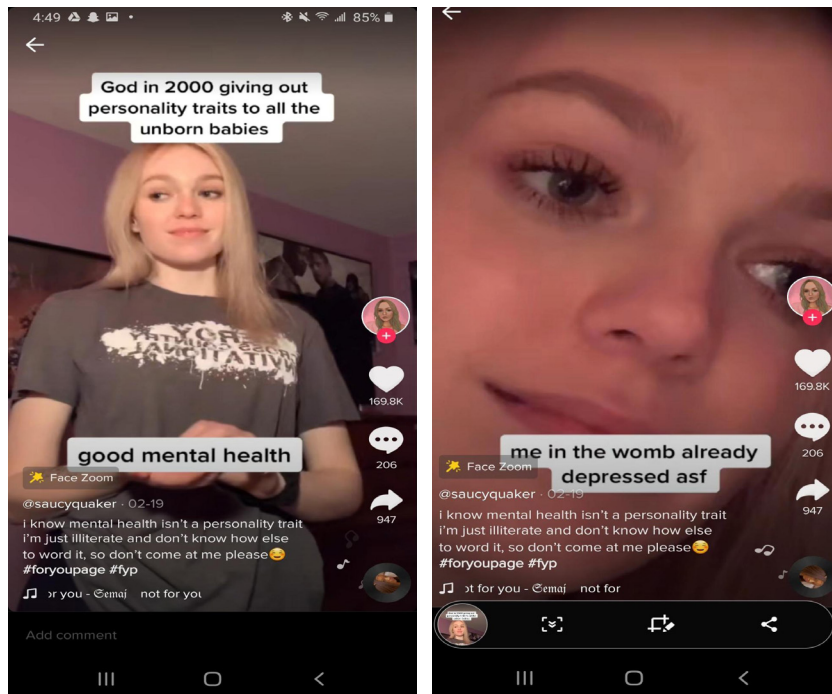
2 Ibid.

3 Joho, Jess. "How being sad, depressed, and anxious online became trendy" *Mashable* (blog), June 28, 2019.

4 Tracy, Natasha. *Lost Marbles: Insights Into My Life with Depression & Bipolar*. Createspace Independent Publishing Platform, 2016.

5 Timothy Shary. *Generation Multiplex: The Image of Youth in Contemporary American Cinema*. University of Texas Press. 2002.

6 Ibid.



response to COVID-19.

Figure 7.⁷

[...]

The music coming out of a generation reflects the collective feelings within it. This new sound coming from Generation Z stems from a state of unrest, uncertainty, and misplaced emotion. This is why so many of the artists rising in popularity brand themselves in a particular new trans-genre style which is best identified by its experimentation with merging other loosely defined genres like emo-rap, lo-fi, and hyperpop. Artists falling into this nascent category, like 100 Gecs, Death Grips, or Grimes, are difficult to label under a single genre, which is a key aspect of their popularity. The soundtrack I've created to accompany the film intentionally emulates a wide variety of the experimental sounds currently rising in popularity. An example of this can be seen by the merging of genres within track two, *Playland*, as the hook is a play on a

typical hyperpop melody, but then the sound transitions into an eerie lo-fi interlude after the second verse; with a few ear-piercing, warped scream sound effects scattered throughout. This seemingly distasteful sound inclusion directly references musical tactics of 100 Gecs and other artists of the hyperpop genre. Music doesn't necessarily have to sound good to be popular with Generation Z, it just has to be meaningfully different. Experimental or underground artists have a more individualized quality to them that teenagers can latch onto as a means of feeling unique in their own identity, by association.

Generation Z's musical tastes are relevant to their shifting societal perceptions because the changing trends reflect a more fundamental, underlying shift in values. While society is working to encourage openness about mental health and destigmatize mental illness, how is Gen Z self-diagnosing mental illness when, in reality, there are just growing pains and human struggle? As teenagers are going through adolescence and trying to define a sense of individual identity, they

7 Saucyquaker. "TikTok." *TikTok* (video). Original Sound: curlyhead_piink, January 2020.

are easily influenced. Younger generations who are seeking a group to identify with are influenced by the deification of mentally ill characters and celebrities whose psychotic, chaotic, or otherwise dangerous traits are glorified for their contrast from the mainstream population.⁸ The mass effort to destigmatize mental illness within contemporary culture has led to its decontextualization in popular media.⁹ The original intention of raising awareness traversed the social spectrum to the point that symptoms of mental illness are often romanticized by the media. These media trends have misled Generation Z on what a healthy relationship with mental health and even a concept of higher self should look like. Juice WRLD, one of the most iconic emo-rappers of the time, is an example of a deified mentally ill figure. His music existed in constant conversation with current issues Generation Z is coping with, with a recurring focus on his own battle with mental illness and substance abuse. He always said

It feels more authentic to me that these kids are likely to talk about their addiction, their drug use, their demons, if you will.¹⁰

Fetishization of violence, substance abuse, and mental illness runs rampant in teenage culture. Generation Z's idols are those that are mentally ill and dying young, usually of drug overdoses.¹¹ Juice WRLD's death was not an isolated occurrence; within the past three years, Generation Z has witnessed the deaths of five major figures within the genre of emo-rap alone.

As a cultural form, music is integral to the creation and evolution of their youth cultural biographies, and works as a 'soundtrack' (DeNora 2000) to their social lives.¹²

The environment within which Generation Z's punk culture thrives stands in stark contrast to the punk iterations of past decades. For Millennials, the punk counterculture was limited to the emos, rooted in emotionality and sadness. Much in the way that Post-expressionist artists abandoned the emotionality of the expressionists, Generation Z exchanged the overly emotional quality of melancholic emo music for a more apathetic angst.¹³ Teenage culture is fundamentally emotional, as this is an age typically associated with puberty and changing hormonal balance. Generation Z's zeitgeist, however, is forcing them to transcend this inherent teen urge to wallow in melancholy. As much as they might prefer to stew in their own angst, they are the heirs of failing institutions, climate, and social-class structured society.¹⁴

Despite their lack of Millennial enthusiasm for conventional reform, and their parents' and grandparents' looming cynicism, Generation Z is largely composed of realists who are conscious that the future of the United States and the world rests on their ability to restructure failed institutions, turn back climate change, and redefine inadequate social and class structures. Whether they will be inspired to act in response to these needs, however, is a very open question. Although this generation has demonstrated

8 Jadayel, Rola, Karim Medlej, and Jinan Jadayel. "Mental Disorders: A Glamorous Attraction on Social Media?" *Journal of Teaching and Education*, January 7, 2017, 465-470.

9 Timothy Shary. Generation Multiplex. 15-18.

10 Younger, Briana. "The Beautiful Vulnerability of Juice WRLD." *The New Yorker*, December 9, 2019.

11 Jadayel, Rola, Karim Medlej, and Jinan Jadayel. "Mental Disorders" 465-470.

12 Lincoln, Sian. "Feeling the Noise: Teenagers, Bedrooms and Music" 399.

13 Kersten, Dennis, and Usha Wilbers. "Introduction: Metamodernism" 719-22.

14 Jason Dorsey. *Unexpected Viewpoints of the Generation After Millennials*. 5-7.

that they are perfectly capable of raising their voices in loud momentary support of their fellow students protesting gun violence, they seem incapable of maintaining that support long enough to actually vote for representatives able to change existing laws. Generation Z tends to shed responsibility as quickly as possible, in hopes of returning to whatever they would rather be doing, unbothered by a society toward which they feel mostly apathetic. This is a difficult sentiment to reverse. The future of America and the world seems very uncertain, as it will soon be inherited by a generation with a reputation for expending the minimal effort required to skate by.

Zillah represents the paradigm shifts of the first generation born into a world with the internet, and all of the ancillary technologies that have fundamentally defined the structure of their relationships with each other and the world around them. Looking into the abyss, she neither embraces it nor cowers in fear, but rather has adopted the apathetic outlook her generation developed to grapple with the utter complexity of it all. She embodies the contradictory set of values held by this generation that recognizes the need for societal change, but is so plagued by mental illness that they lack the motivation to take action on extrinsic issues. Consequently, the future defined by Generation Z and its children is unlikely to be truly hopeful, and yet the world is not necessarily doomed. The experiences of people like Zillah will ultimately define the manner in which society responds to the challenges of the future, and their success will largely depend on their ability to transcend their own indifference.

Conclusion:

If there was ever a time for Generation Z to make good of the socio-political system which failed them, it is

now, during its collapse. The continual accumulation of catastrophe is changing the basis of the way American society operates. This is Generation Z's chance to use their new generational perspective, and unique ability to cope with catastrophe to help structure new social frameworks. Generation Z's dissociation from society might end up being the key to creating change during this complex collapse of American society.

This project embodies my motivation as an artist by confronting my personal role in this Generation Z narrative. As an individual who has struggled with mental illness and held an active role in this internet culture which aestheticizes its symptoms, this is a group of individuals I have an insightful understanding of and unique ability to influence. I hope to use this project to voice my concern for the repercussions Generation Z's internet culture can have on society and the lives of generations forthcoming. Zillah's behaviour directly reflects the type of hyperbolic conversations about violent, morbid, and otherwise misanthropic topics that Generation Z indulges in online. The only distance between Zillah and my intended audience, is that she takes action on the sorts of things they talk about. I am asking my peers to ponder the reality of the things they say, the aesthetics they perpetuate, and the cognitive dissonance that likely exists between their aesthetics and core values. It is not surprising that Generation Z is characterized as apathetic when their identity is constructed around a misanthropic internet culture which idolizes mental illness through its fetishizing of substance abuse, emotional repression, and rejection of organized religion. In the same way I have struggled to, I am asking Generation Z to reevaluate the way they might have unintentionally modeled their identity around a problematic set of beliefs.

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Gender and Ethnic Studies

The Impact of a Student's Familial, Socioeconomic, and Educational Background on Academic Performance

Alana R. Horwitz

The following is an excerpt from a longer piece. For full text, please visit www.colorado.edu/honorsjournal/

ABSTRACT

This study uses a sample of 461 undergraduate University of Colorado, Boulder students who attended public high schools in the United States to examine the relationships between demographic and academic variables, with a focus on predicting the academic achievement gap (AAG). Existing literature documents an AAG based on race, primarily between White students and Black students, but too often other potentially contributing or masking variables are not accounted for; thus, these models may be limited. In this study, the outcome variable, academic achievement, was measured with a normed SAT/ACT score. Consistent with other research, the current study found a significant racial AAG in bivariate analyses; however, controlling for other variables, race did not reach the $p \leq 0.05$ (although it almost did) and students' perceptions of how well their high schools prepared them for college and their family income were the two strongest and only significant predictors of an AAG. Thus, results indicate a concerning prevalence of an AAG by race and between students of different socioeconomic and educational backgrounds. Moreover, the multivariate analysis findings indicate that the racial AAG is primarily due to socioeconomic

factors such as high school students' family incomes and the quality of their public schools. The findings from this research are discussed in terms of addressing the systemic issues within the U.S. educational system and directions for future research on the AAG.

CHAPTER 1: STATEMENT OF THE PROBLEM

Introduction

Although the academic achievement gap (AAG) is a prevalent problem in the United States, there is limited awareness, and thus, discussion of this problem. The *academic achievement gap* (AAG) refers to the disparity in academic performance among students. As reviewed in this thesis, a significant body of extant research identifies the academic achievement gap as highly related to race: Since the Coleman Report was published in 1966, a persistent and noticeable gulf remains between the standardized test scores of Black, Indigenous, and People of Color (BIPOC¹) and those of White and Asian American students. Critical race scholars attribute this gap to the structural effects of centuries of settler colonialism and anti-Blackness in the United States. In this study, I ask the research question, "How do the familial, socioeconomic and educational environments in which students are raised

¹ Although BIPOC typically includes Asian Americans, the extant research on AAG finds more similarities between White and Asian American students, and sometimes, that Asian Americans students have significantly higher academic achievement than White students. I will use BIPOC to refer to Black, Indigenous, and Latinx individuals.

impact their academic performance?” I attempt to answer this question through statistical analysis. I argue that this educational disparity between BIPOC students and White² students originates from the type of familial, socioeconomic, and educational environments in which students are raised. More specifically, relative to BIPOC, White people tend to live in wealthier areas; therefore they attend better-funded public schools (given the local tax-based school funding), with more resources and more highly qualified teachers (Emerson et al., 2017). It is critical to acknowledge that BIPOC students are disproportionately represented in lower-income families. For example, the Brookings Institution found that “at \$171,000, the net worth of a typical white family is nearly ten times greater than that of a Black family (\$17,150) in 2016” (McIntosh et al. 2020, para. 1). Although the discrepancy in resources that contributes to the AAG mainly comes down to the income of the student’s family, it is still race-driven, because White students tend to be wealthier. Therefore, when measuring race, we often measure class as well.

Clearly, sufficient and abundant levels of educational resources provide students with a greater likelihood of expanding their knowledge, which results in higher traditional educational levels. In addition to the discrepancy in class- and race-based resources, the overall familial and socioeconomic environment in which students are raised plays an immense role in their academic success, particularly in terms of standardized tests (Jensen, 2009). Students who do well in school are more likely to attain higher levels of education after high school, which makes them qualified for more higher-paying jobs, ultimately leading to financial success. On the contrary, those who do not perform as well in school have a smaller chance of attending higher

education institutions, which results in them not being as qualified for higher-paying jobs, ultimately leading to them not being as financially stable.

[...]

CHAPTER 5: DISCUSSION AND CONCLUSIONS

Introduction

This chapter provides a more in-depth discussion of the findings reported in Chapter 4 and will go into more detail about what these findings mean and how they relate to my thesis question. Many of my findings support my argument that an academic achievement gap (AAG) exists between students of different familial, socioeconomic, and educational backgrounds. Additionally, my findings illustrate the prominence of intersectionality when it comes to the AAG. In brief, the bivariate findings from Table 2 indicate that race is related to the likelihood of growing up with a single parent (more likely for Black/Latinx than White and Asian American students), family income (highest among White, then Asian American students, and lowest among Black/Latinx students), and all three measures of ACT and SAT scores (highest among Asian American, then White students, and lowest among Black/Latinx students). The bivariate findings in Tables 3 and 4 indicate that compared to White/Asian American college students, Black/Latinx college students are less likely to agree that their parent(s)/guardian(s) were home often enough to help with homework, their parent(s)/guardian(s) were able to help with homework, that they felt safe in the town/city they grew up in, and that high school prepared them for college. However, it is important to point out that these

2 I have chosen to capitalize “White” and “Black” throughout my writing in order to promote respect and feelings of empowerment to members of each group. Capitalizations of these terms will be used throughout this thesis except for when I am directly quoting scholars who do not choose to capitalize these racial categories.

differences did not vary by much on the 7-point Likert scale.

[...]

Pivotal Findings

The most pivotal findings of my research derived from Table 6, because it is a multivariate analysis that measures multiple variables to predict how they impact the respondents' SAT/ACT scores, the outcome variable of this study. As mentioned earlier in this thesis, intersectionality plays a substantial role when it comes to predicting test scores.

Table 6: Multivariate Analysis Predicting SAT Scores (with Students' Who only Took the ACTs, ACT scores normed to SAT Scores)^a

Variable	Unstandardized Coefficients	Std. Error	Standardized Coefficients	Sig. ^e
	B		Beta	
(Constant)	3.219	0.117		0.000
Race ^b (1 = Black and/or Latinx)	-0.137	0.071	-0.106	0.054
Student Raised by Single Parent (1 = Yes)	-0.097	0.076	-0.068	0.205
Family Income ^c	0.032	0.015	0.123	0.030
Likert Item Response to: "My high school experiences prepared me for college." ^d	-0.041	0.016	-0.142	0.009
Likert Item Response to: "Growing up, my parent(s)/guardian(s) were home often enough to help with my schoolwork, if needed." ^d	0.025	0.016	0.083	0.121
Student had an after-school job in high school requiring 20+ hours per week (1 = Yes)	-0.088	0.049	-0.089	0.071

R² = 0.094 (Adjusted R² = 0.080)

Model: F = 6.537, p ≤ 0.001

^aThe outcome (dependent) variable is the three categories for the normed ACT to SAT categories listed at the end of Table 2 (700-999, 1000-1399, and 1400+)

^bRace was a dichotomous variable with White and/or Asian American = 0 and Black and/or Latinx = 1.

^cFamily income was measured as the 8 categories: 1 = < \$15,000, 2 = \$15,000-\$24,999, 3 = \$25,000-\$49,000, 4 = \$50,000-\$74,999, 5 = \$75,000-\$99,999, 6 = \$100,000-\$149,999, 7 = \$150,000-\$199,999, and 8 = \$200,000 and over.

^dLikert responses to each question were 1 = strongly agree, 2 = agree, 3 = somewhat agree, 4 = neither agree nor disagree, 5 = somewhat disagree, 6 = disagree, 7 = strongly disagree

^eVariables that reached a p ≤ 0.05 significance are shaded in gray, but specific significance levels are reported for each variable given that the key variable race was barely over p ≤ 0.05 and that high school job was p ≤ 0.10 and could be considered a trend.

Table 6 indicates that the strongest predictor of SAT/ACT scores is whether a student reports that their high school prepared them for college, followed by family income, where, as expected, higher family incomes were related to higher SAT/ACT scores. Notably, although it almost maintained significance ($p = 0.054$), race no longer reached statistical significance when controlling for other variables in the model. In other words, the quality of students' high school experiences in preparing them for college (the standardized $\beta = -0.142$) and their family income (the standardized $\beta = 0.123$) were the best predictors of their SAT/ACT scores. Another important finding is that whether a student was raised by a single parent and whether the student had an after-school job of 20 or more hours per week were no longer significantly related to SAT/ACT scores in the OLS model when controlling for these other variables, although having an after-school job that required 20 hours or more of work per week was almost significant at $p = 0.071$. More specifically, based on this model, there was a 0.041 decline on the SAT/ACT score scale for students who reported that their high school experiences did not prepare them for college. Students who reported higher family incomes had a 0.032 increase on the SAT/ACT score scale. In other words, wealthier students tend to score higher on the SAT/ACT.

[...]

Policy Implications

My study findings support the argument that an AAG exists in the United States based on wealth, race, and community environment, as measured by the quality of high schools in preparing students for college. However, the racial differences are clearly tied to wealth and neighborhood measures. This AAG is present between students of different familial, socioeconomic, and educational backgrounds. My findings conclude

that out of all of the variables my study tested for, the most influential variable that predicts a change in test scores is how likely one is to agree that their high school experiences prepared them for college. Considering public schools are funded by property tax, the higher the property values in a neighborhood, the better funded the school, which results in a better education, therefore leading students to feel better prepared for college. The relationship between public schools and property taxes leads us into this study's second most significant finding, which is that family income predicts a student's test scores. The higher the student's family annual household income, the higher their SAT/ACT score. Additionally, as mentioned above, although race was only significant at the $p < 0.10$, my study found that Black/Latinx students received lower SAT/ACT scores compared to White and Asian American students. Given that class and race are heavily correlated in U.S. society, this finding is not surprising.

Although my study solely focused on 2020 undergraduates at CU Boulder, these results still contribute to the crucial goal of producing a more equitable public school system. Based on these findings, the U.S. Department of Education should build a more fair and consistent public education system. A drastic, yet influential step would be to unaffiliate property taxes with public schools. Instead, every public school in the United States could receive an equal amount of funding from federal taxes, with allocation requirements. This step would ensure that students in less-wealthy neighborhoods are not at a disadvantage when it comes to the availability of resources within schools. However, as established in my literature review and in my study's findings, a significant advantage when it comes to receiving higher test scores derives from the socioeconomic status of the student's family, because these students have access to more beneficial resources. According to Welner and Carter (2013), "these out-of-school learning

and learning-related resources and opportunities for children who live and grow in the nation's many disadvantaged communities must improve significantly before we can realistically expect to see achievement gaps close" (p. 3). In order to address the discrepancy between students who have access to these beneficial resources at home and those who do not, the U.S. government should establish some sort of program that provides underprivileged students with said resources. Although this solution is a large investment, it would be an incredibly advantageous decision on behalf of the U.S. government because it would help eradicate the large AAG that exists between students of different backgrounds, ultimately leading to a more educated society throughout the United States.

Additionally, over 900 universities and colleges in the United States do not require applicants to submit their SAT/ACT test scores. The application options for these schools vary, but mainly consist of being test optional (an applicant has the choice of whether or not to submit their SAT/ACT scores), test flexible (an

applicant can submit other standardized test scores, such as an AP test), or an applicant can substitute their test score with a class rank or GPA. There are also "test blind" schools that do not consider SAT/ACT scores, even if they are included in one's application (Muniz, 2020). During the COVID-19 pandemic, many other universities and colleges temporarily suspended the requirement of an SAT/ACT score. As one can see, many universities and colleges in the United States have begun to entertain the idea of not requiring SAT/ACT scores for admissions or not weighing them as heavily. My research findings exemplify the many variables that impact a student's SAT/ACT score, therefore supporting the idea of eliminating standardized test scores for college admissions in the United States.

[...]

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The Coal Ash Community: An Analysis of Environmental Racism in Uniontown, Alabama

Ellie Bach

The following is an excerpt from a longer piece. For full text, please visit www.colorado.edu/honorsjournal/

The Environmental Protection Agency's (EPA) External Civil Rights Compliance Office (ECRCO) has failed to serve vulnerable communities suffering from systemic environmental racism through regulation reform and enforcement, and has instead dismantled communities' environmental justice demands while consequently supporting private sector perpetrators of environmental racism, by operating in a "colorblind" manner that stems from white supremacy and upholds white privilege. This failure is exemplified by the ECRCO's "resolving and closing" of the complaint filed by residents of Uniontown, Alabama in 2013, who continue to suffer from the storage of coal ash in nearby Arrowhead Landfill, despite clear violations of environmental regulations and civil rights law.

More than a billion tons of toxic coal ash containing arsenic, mercury, and lead were spilled into the Emory River in Kingston, Tennessee on December 22nd, 2008 (Engleman-Lado et al. 2019). Particles of coal ash are known to permeate the lungs, and exposure can lead to leukemia, lung and brain cancer (Engleman-Lado et al. 2019). Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the spilled coal ash was classified as hazardous in Tennessee, and the location of the spill was declared a superfund site (Engleman-Lado et al. 2019). A decade later, residents of Kingston, and the workers who sought to clean up the spill, are still pressing charges for the health consequences of the accident (Engleman-Lado et al. 2019). In 2010, the

Alabama Department of Environmental Management (ADEM) approved the transfer of 4 million cubic yards of the ash from the spill to Arrowhead Landfill in Uniontown, Alabama (Engleman-Lado et al. 2019). Once in Uniontown, that very same ash was reclassified as nonhazardous under the Resource Conservation Recovery Act (RCRA) (Engleman-Lado et al. 2019). As of 2017, Kingston, TN was an 89.8% white community, with a median household income of \$48,616, that had risen from the previous year ("Kingston, TN"). Uniontown, Alabama, on the other hand, was composed of 7.54 times more Black residents than all other racial groups, with a median household income of \$14,094 (a decrease from the year prior) ("Uniontown, AL"). Over 40% of residents live under the poverty line, the vast majority of whom (89.2% to be exact) are Black ("Uniontown, AL"). These very same Uniontown community members banded together and petitioned the construction of the Arrowhead Landfill in 2007, before the coal ash was even spilled from the Tennessee powerplant, but the project was permitted nonetheless (Engleman-Lado et al. 2019). The disposal site now receives waste from 33 different states and even endorses receiving more coal ash from power plants, plus a plethora of other contaminated substances, in order to maintain business (Engleman-Lado et al. 2019).

In 2013, after unfruitful years of continually contesting the landfill's operations at local and state levels, 35 community members filed a complaint to the

EPA's Office of Civil Rights (OCR), now the ECRCO, claiming that the ADEM's arrangement with the landfill violated Title VI of the Civil Rights Act of 1964, 42 U.S.C. § 2000d, and agency regulations, 40 C.F.R. Part 7; in other words, the ADEM (as an agency that receives federal financial assistance) violated the legal prohibition of discrimination based on race, color, or national origin in their endeavors (Engleman-Lado et al. 2019). The initial complaint fell on deaf ears, so to speak, and after consistently submitting additional proof of the toll of toxic coal ash storage on the community to the EPA, a second complaint was submitted in 2016 (Engleman-Lado et al. 2019). The follow-up complaint was then followed by a lawsuit against community members for \$30 million, filed by Arrowhead Landfill (Engleman-Lado et al. 2019). The lawsuit was dropped thankfully, but was a clear attempt by the private sector to further silence the community, which was already a victim of neglect and impoverished living conditions. Finally, in 2018, the EPA published a 29-page letter that rejected the case under the assertion that there was "insufficient evidence" to find the ADEM guilty of violating Title VI or Arrowhead Landfill guilty of noncompliance with air and water quality regulations (Engleman-Lado et al. 2019; Environmental Protection Agency 2018, March 1; Environmental Protection Agency 2018, March 16). Such a conclusion by the EPA reinforces the systemic pathways through which environmental racism is perpetuated, contradicts the purpose of the agency (especially its ECRCO), and harms the predominantly Black community of Uniontown while profiting the private sector.

The EPA defines environmental justice as, "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies," and goes on to proclaim that, "this goal will be achieved when everyone enjoys: the same degree of protection from environmental and health hazards

and, equal access to the decision-making process to have a healthy environment in which to live, learn, and work" ("Environmental Justice" 2019). The EPA's Office of Environmental Justice, then called the Office of Environmental Equity, was created in 1992 and environmental justice became increasingly prioritized in an agency-wide manner during the following twenty years ("Environmental Justice" 2019). Interestingly, a study published in 2007 called "Toxic Wastes and Race at Twenty" (endorsed by the EPA), concluded that "people of color are found to be more concentrated around hazardous waste facilities" than was previously thought ("Environmental Justice" 2019). In 2010, during the Obama administration, the first White House Forum on Environmental Justice was held, at which a variety of agencies and offices were present, and this event represented a peak in federal commitment to "federal protection from environmental and health hazards" for all Americans ("Environmental Justice" 2019). Over the subsequent five years, the EPA's environmental justice division continued to develop protocols and increased efforts to make information about federal environmental justice programming more visible and accessible to the public, but after August 2016, virtually no accomplishments are listed on the EPA's official timeline of the agency's involvement in the Environmental Justice Movement ("Environmental Justice" 2019). Intriguingly, the end of achievements coincides with the initiation of the Trump administration; the president himself criticized the agency while campaigning and his first budget proposal cut all funding for the EPA's Office of Environmental Justice, with approval from the head of the EPA at the time, Scott Pruitt, a move that was described as "racist" by leaders in the field (Lockhart 2018). The Uniontown coal ash case was concluded under Trump's administration of the EPA, and the outcome may have been impacted by the near overhaul that the agency has undergone during his time in office.

The removal of toxic waste from the coal ash spill

in the predominantly white Kingston, Tennessee community and its imposition onto the predominantly Black and largely impoverished community of Uniontown, Alabama, by storing said waste in the local Arrowhead Landfill, contradicts the EPA's definition of environmental justice and was an act of environmental racism. The transplant of coal ash from the Kingston spill to Uniontown was not necessarily motivated by racial animus, but violated the civil rights of Uniontown residents regardless. Laura Pulido (2015), in her analysis of environmental racism sustained by Exide (a battery recycling facility) on the Latinx community surrounding Los Angeles, explains that regulatory noncompliance (which it seems that, by all accounts other than the EPA's, Arrowhead Landfill is guilty of) and "uneven patterns of regulatory enforcement," create and propagate environmental racism against communities of color (Pulido 2015, p. 810). In her analysis, Exide was processing 88 chemicals in its facility, surrounded by neighborhoods comprised largely of low-income immigrants, and was not complying with regulations for decades, such that the community consequently faced a greater risk of cancer and poisoning by lead and arsenic (Pulido 2015). She argues that Exide as the polluter is primarily responsible for its actions, and is "fully aware of what it is doing and does not wish to harm its neighbors, but the financial well-being of the institution, which overwhelmingly benefits whites, is prioritized," meaning Exide perceives the surrounding community of color, which is additionally of low socioeconomic status, as "racially expendable" (Pulido 2015, p. 814). Furthermore, the state has been either unwilling, unable, or both, to demand that Exide complies with regulations for the sake of the environment and the community, which "illuminates a larger regulatory culture that is mutually constituted by the racial formation" (Pulido 2015, p. 810). Together, the state and Exide (which in this case may represent industry or the private sector), forced the Latinx community

to remain at a low socioeconomic status and suffer from declining health, and upheld the popular and detrimental narrative of "people of color as undeserving and responsible for their own poverty" that is accepted by many whites (Pulido 2015, p. 811). Exide's case, as discussed by Pulido, is a clear parallel to the Uniontown people's conflict with Arrowhead Landfill and the ADEM.

In Uniontown, it seems obvious that Arrowhead Landfill understood that its storage of coal ash was harmful for the Black community, as evidenced by its attempt to sue Uniontown's residents into silence about the issue, but the profit produced by conducting business with majority white communities outside of Alabama was of greater importance to the company than its integrity and the lives of its neighbors. Additionally, the ADEM at the state level, and the EPA at the federal level, literally invited coal ash into the community knowing the harms of improper storage on people's health and well-being. Toxic living conditions in Uniontown have only made it that much more difficult for Black residents, many of whom, as mentioned, already live below the poverty line, to receive the care they deserve *and* have made the community that much more vulnerable to exploitation by polluting industry and negligent agencies. In fact, the EPA failed to adequately investigate the wrongdoings of both Arrowhead Landfill and Alabama's environmental management; no investigation of the environmental, economic, and health consequences of the coal ash was conducted by EPA personnel, and instead the ECRCO relied on inappropriate data (collected from monitoring sites too far from the landfill and Uniontown to demonstrate any pollution), thereby allowing the agency to conclude that sufficient evidence lacked (Engleman-Lado et al. 2019). This methodology promotes the spread of "toxic uncertainty," as in it spreads doubt within the community about the legitimacy of its experience in toxic living conditions because the EPA labels the environment as "safe,"

and thus serves to dismantle organized community members and their claims of injustice (Bruno & Jepson 2018). Such dereliction of EPA, and specifically ECRCO, investigation protocol and of the people of Uniontown (from the conception of the landfill through the closing of the case), provide sufficient evidence that Black residents were considered “racially expendable” by the state and industry in this instance.

[...]

Finally, the Arrowhead Landfill case fits into a larger and long-standing narrative of environmental racism in the United States, that is perpetuated by colorblindness and white supremacy, and which reinforces white privilege. The notion of colorblind operations allows agencies and industries to continue business-as-usual under the guise of innocence. David Roediger (2008) illustrates that the claim is often made by the state, institutions, and/or industry that programs are “race-neutral,” or colorblind, when realistically such programs adhere to “local racist practices” and their basis on “ordinary business principles” begets inequality based on race (Roediger 2008, p.178). The ECRCO at the EPA, which has often been perceived as a liberal agency due to its goal of advancing eco-social justice through government intervention, fails to acknowledge and investigate the impact of past and present institutionalized white supremacy, within other organizations and within itself, and in this way embodies “liberalism’s complicity with the persistence of race” (Roediger 2008, p. 173). In reality, the EPA, the ADEM, and Arrowhead Landfill are built upon, and profit from, a foundation of white supremacy (Pulido 2015). By denying the existence and effects of white supremacy on “fenceline” minority communities, and officially operating in a colorblind manner that does not address the race-structured rates of poverty and subjugation to polluting industry that Black citizens face (particularly in Uniontown), the EPA

consistently denies the civil rights of communities of color and only widens the socioeconomic gap between these communities and their white counterparts as a result (Roediger 2008). These white communities, in contrast, maintain their white privilege with tremendous assistance from the environmental justice branch of the EPA.... Most notably, whites can make social systems work to their advantage and expect positive change when they criticize the status quo; communities of color, conversely, cannot expect the same respect and results, as illustrated by the interaction between Uniontown residents, and the EPA and Arrowhead Landfill, when juxtaposed with the attention received by the white community of Kingston, Tennessee, following the coal ash spill (“Black Belt Citizens...” n.d.; Engleman-Lado et al. 2019; McIntosh 1990). It is crucial that the ECRCO, and the EPA at large, recognize and work to change the agency’s own racial biases so that it can effectively do its job of preventing and dismantling racially motivated and disproportionately harmful projects, in both the public and private sectors, that affect the environment. Only then can the positive advantages afforded to whites be shared with all racial groups, and the negative advantages be rejected across the board.

In conclusion, community members in the predominantly Black and impoverished city of Uniontown, Alabama, have been the victims of environmentally racist public initiatives and private operations following the powerplant malfunction and coal ash spill in Kingston, Tennessee. The Alabama Department of Environmental Management chose to enable profiteering by Arrowhead Landfill whilst endangering local residents in the process. The Environmental Protection Agency’s External Civil Rights Compliance Office upheld this decision and enabled its consequences for the community’s health and well-being, by ignoring residents’ complaints for years and then completely dismissing the community’s testimony of prolonged injustice. This

case demonstrates the foundation of white supremacy upon which even federal and state agencies designed to advance racial equality stand, and exposes the severe

harm of institutional colorblindness on communities of color, whilst highlighting the persistence of white privilege in an environmental context.

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Natural Science

Pubertal Onset and Maintenance in FGFR3 Global Knockout Mice

Amanda Brown

The following is an excerpt from a longer piece. For full text, please visit https://scholar.colorado.edu/concern/undergraduate_honors_theses/wg505121v

Lay Summary:

Human reproduction relies on a cascade of hormones beginning in a part of the brain called the hypothalamus. The initial hormone, called gonadotropin releasing hormone (GnRH), initiates the hormonal cascade and allows for reproductive potential. The initial protein released, GnRH, is released from GnRH neurons in the hypothalamus. During fetal development, the production of GnRH neurons relies on certain receptors called fibroblast growth factors to direct the correct placement of GnRH neurons in the brain. If migration of the GnRH neurons fails, one cannot go through puberty and would be incapable of reproducing. One receptor that is not well studied for its role in GnRH neuron development and migration is fibroblast growth factor receptor 3 (FGFR3). This study aims to examine the role of FGFR3 in gonadal maturation and function by characterizing mice with a disruption in the FGFR3 gene, meaning that the FGFR3 receptors do not function well or at all in these transgenic mice. The onset of puberty was assessed by sex hormone-mediated events such as vaginal opening (VO) in females and balanopreputial separation (BPS) in males. Additionally, the reproductive potential of the adult mice was also assessed using viable sperm counts in males and reproductive hormone cyclicity in females. FGFR3 deficient females exhibited delayed vaginal opening and abnormal cyclicity. On

the contrary, FGFR3 deficient male mice exhibited normal timing of BPS and normal sperm concentration compared to traditional mice. These results indicated that females were more adversely affected by FGFR3 deficiency than males. These results provide initial evidence that FGFR3 deficiency can disrupt female reproduction. Further, inactivating FGFR3 mutations may contribute to human reproductive disorders such as hypogonadotropic hypogonadism.

Abstract:

Vertebrate reproduction is driven by hormones from the hypothalamic-pituitary-gonadal axis. Previous studies showed that neurons from the hypothalamus secreting gonadotropin-releasing hormone (GnRH) require fibroblast growth factors (FGF) to develop and mature, but the specific role of fibroblast growth factor receptor 3 (FGFR3) in overall reproduction is unknown. This study aims to examine the role of FGFR3 in gonadal maturation and function by characterizing mice with a global inactivating mutation in the *FGFR3* gene. Pubertal onset was assessed by sex steroid-mediated events such as vaginal opening (VO) in females and balanopreputial separation (BPS) in males. Adult mice were also examined for estrous cyclicity in females and motile sperm concentrations in males. Female FGFR3 heterozygous global knockout mice (*FGFR3*^{+/-}) exhibited delayed VO and

abnormal estrous cyclicity with reduced time spent in diestrus. On the contrary, male *FGFR3*^{+/-} mice exhibited normal timing of BPS and motile sperm concentration compared to WT mice. These results indicated that females were more adversely affected by *FGFR3* deficiency than males. It is currently unclear if these female-specific adverse effects are exerted at the level of the hypothalamus, pituitary, or gonad. These results provide initial evidence that *FGFR3* deficiency can disrupt female reproduction. Further, inactivating *FGFR3* mutations may contribute to human reproductive disorders such as hypogonadotropic hypogonadism.

Introduction:

Vertebrate reproduction requires proper development and function of the endocrine organs within the hypothalamic-pituitary-gonadal (HPG) axis. The cascade of hormones produced by this axis begins with the pulsatile release of gonadotropin-releasing hormone (GnRH) from the neuroendocrine hypothalamus. GnRH travels through the portal system where it acts on gonadotropes of the anterior pituitary and induces the release of the gonadotropins, luteinizing hormone (LH) and follicle stimulating hormone (FSH). Finally, the gonadotropins travel through the general circulation and stimulate the gonads (ovaries and testes) to increase gametogenesis and the production of sex steroids. Effective communication within the HPG axis is essential to ensure adequate pubertal onset and fecundity.

Because GnRH is the most upstream activator of the HPG axis, defects in the GnRH system and HPG axis present a severe obstacle to fertility and reproduction. Therefore, it is of utmost importance to identify the factors needed for the development and maintenance of the GnRH system. There is growing evidence suggesting that the formation of the GnRH system is largely dependent on a class of signaling molecules, fibroblast growth factors (FGFs), and their

receptors, fibroblast growth factor receptors (FGFRs), which collectively mediate the genesis, differentiation and migration of GnRH neurons (Chung et al. 2008). The FGF signaling family consists of 22 FGF ligands and 4 tyrosine kinase FGFRs. When an FGF binds the extracellular domain of the FGFR, the receptors dimerize, resulting in the cross phosphorylation of the intracellular domain. The cross phosphorylation induces a phosphorylation cascade, resulting in a variety of cellular effects.

FGF signaling molecules and FGFRs are present in the birthplace of GnRH neurons, the olfactory placode, at the time of neuron fate specification (Tsai et al. 2011). GnRH neurons emerge in the olfactory placode and migrate along the olfactory axons through the cribriform plate, where they reach their final destination, the preoptic area (POA) (Wierman et al. 2011). GnRH neuronal cell bodies remain in the POA while their axons extend to the median eminence. GnRH axon terminals release GnRH peptide into the hypophyseal portal system in a pulsatile fashion to induce the onset and maintenance of reproduction.

Although a critical relationship exists between the ligand FGF8 and receptor FGFR1 to allow proper GnRH neuron development, *FGFR3*, another FGF receptor present on GnRH neurons, has not been studied extensively (Chung et al. 2008). In humans, loss-of-function mutations in *FGFR1* are causally linked to hypogonadotropic hypogonadism (HH), a condition characterized by insufficient gonadotropins and therefore incomplete/absent puberty and infertility (Fraietta et al. 2013). However, a correlation between *FGFR3* mutations and HH has not been established in humans. There has been only one clinical report on a loss-of-function mutation in *FGFR3*, and no reproductive deficits were noted in the two male subjects studied (Makrythanasis et al. 2014). The correlation between *FGFR3* and reproduction in rodents was similarly incomplete. One study suggested that *FGFR3* did not affect the development of GnRH

neurons but may be needed to maintain postnatal GnRH neurons, but it did not study the reproductive consequence of *FGFR3* deficiency (Chung et al. 2010).

The objectives of this study were to examine the timing of pubertal onset and adult reproductive function in *FGFR3* global knockout male and female mice. To assess the timing of pubertal onset, external indicators of puberty were examined: vaginal opening and first estrus in females and balanopreputial separation in males. Following pubertal onset, general reproductive functions including estrous cyclicity in females and motile sperm concentration in males were assessed by vaginal cytology and epididymal squash, respectively. These results should establish, for the first time, a direct correlation between *FGFR3* deficiency and reproduction that may be extrapolated to humans harboring inactivating *FGFR3* mutations.

Materials and Methods:

Transgenic animals

C57BL/6 mice with a global heterozygous deletion in the *FGFR3* gene were obtained from the Jackson Laboratories in Bar Harbor, ME and further propagated by breeding. ... Deletion of these components resulted in a truncated nonfunctional FGFR₃.

[...]

Phenotypic pubertal assessment

Male mice were checked for balanopreputial separation (BPS) by gently retracting the prepuce from the glans penis from PN20 until sufficient separation was apparent. ...

Female mice were examined for the age of vaginal opening (VO) by visual examination of the vulva from PN20 until a clear opening is present. ...

Vaginal cytology

Once VO in female peripubertal mice (around PN₃₀) had occurred, females were examined daily for vaginal cytology to determine their estrous cycle stages.

[...]

Motile sperm concentration measurement by epididymal squash

At PN60, male mice were anaesthetized using isoflurane and rapidly decapitated. A V-shaped abdominal incision was made, and epididymal fat pads were gently pulled to expose the testes and epididymis. The epididymis was isolated from each testis and placed in a petri dish with 2 mL of prewarmed (37 °C) phosphate-buffered saline (PBS). Both epididymides were used for this procedure. The epididymal cauda was isolated from the rest of the epididymis and vas deferens, minced with two scalpel blades and incubated in 2 ml of PBS at 35 °C for 15 minutes with gentle agitation. Following, 500 µl of sperm-containing PBS was mixed with 500 µl of 3% NaCl to immobilize sperm for consistent counting. The solution containing immobilized sperm was then vortexed and a 10-µl aliquot was used for counting by a hemacytometer. Of the 25 grids, four corner grids and one center grid were counted for number of sperm. Sperm that were not fully enclosed in the grid were only counted if they passed over the top or left line of the grid. Average number of sperm contained in the 5 grids was calculated. The average number of sperm was multiplied by the dilution factor, the number of total grids, and the volume of the hemocytometer to result in a final concentration of sperm per mL.

Statistical analysis

Homoscedasticity was observed for all data, thus differences between genotypes were determined by Students *t*-test. Differences were considered

significant when $p < 0.05$.

Results:

Phenotypic pubertal assessment

First estrus

[...]

[...]

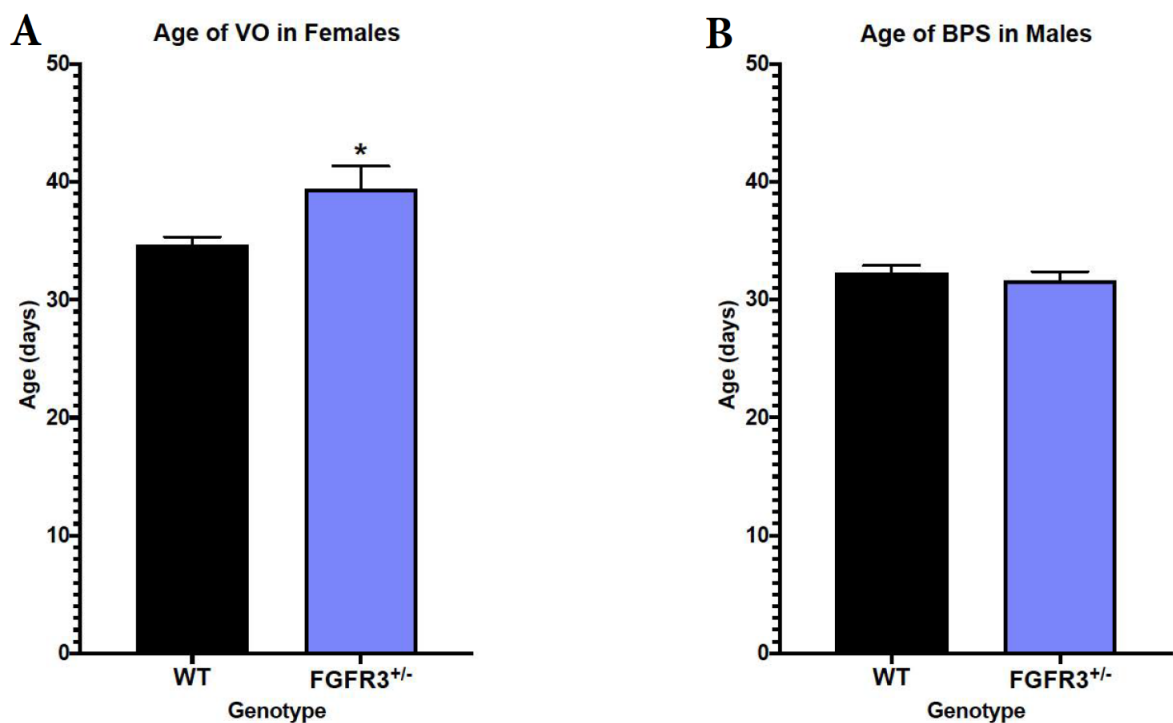


Figure 1. (A) Age of VO in $FGFR3^{+/-}$ females is significantly delayed compared to WT females (N=8-9). (B) Age of BPS is not significantly different between $FGFR3^{+/-}$ and WT males (N=4-5). All data represent mean \pm SE.

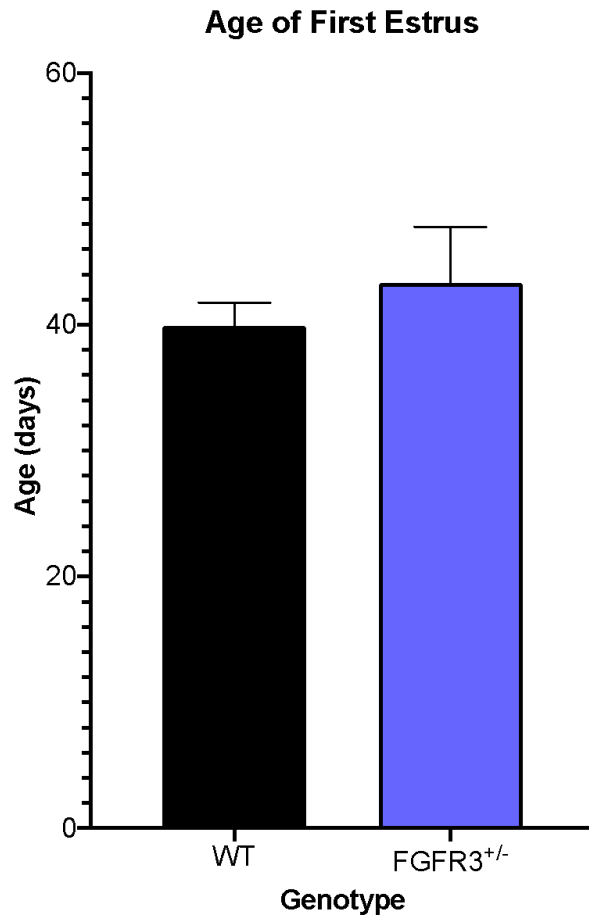


Figure 2. Age of first estrus is not significantly different between WT and *FGFR3*^{+/-} females (N=6-9). All data represent mean ± SE.

Days in estrus

[...]

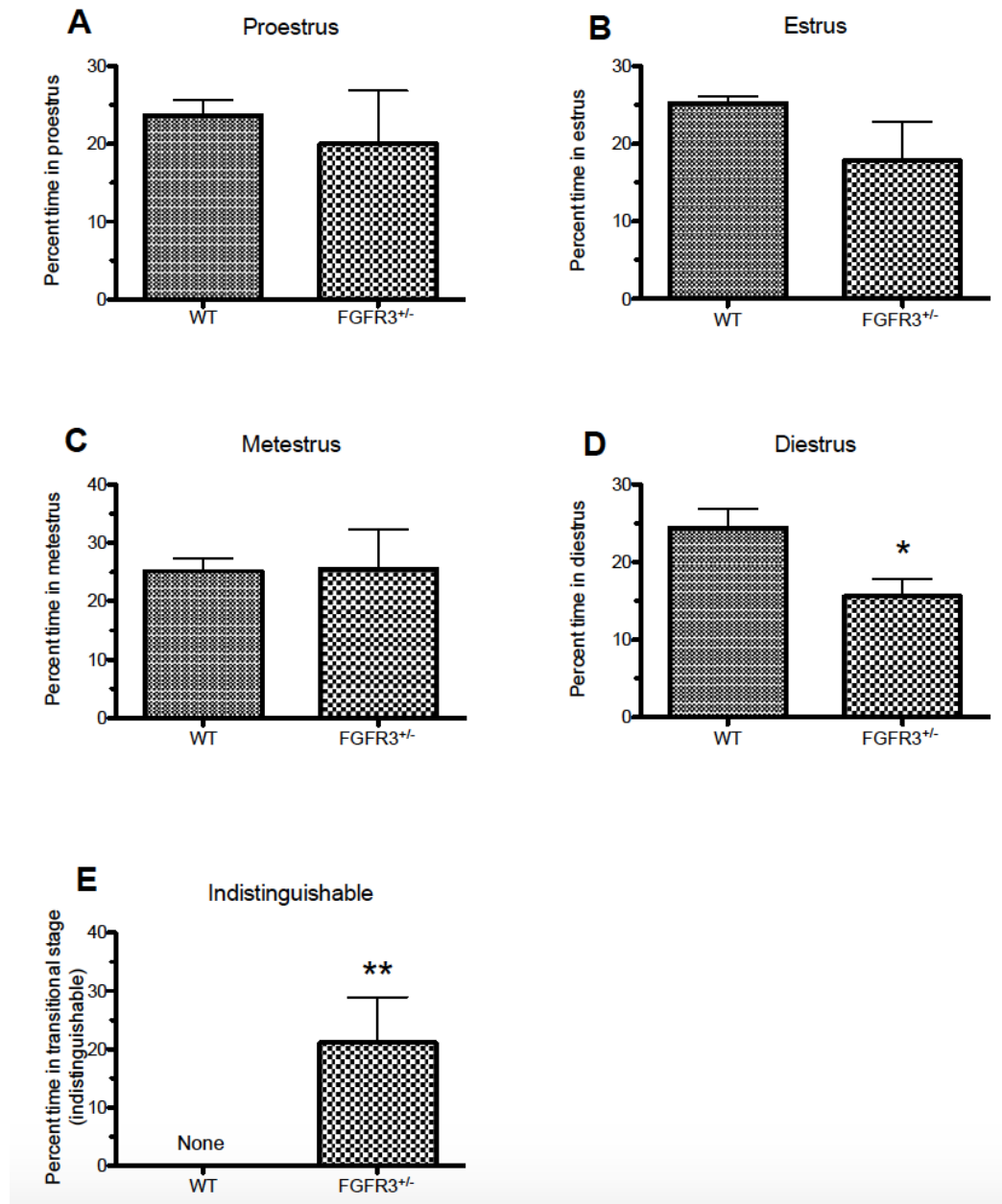


Figure 3. (A) Percent of time in proestrus over 15 days is not significantly different between WT and *FGFR3*^{+/-} mice (N=9, N=5). (B) Percent of time in estrus over 15 days is not significantly different between WT and *FGFR3*^{+/-} mice (N=9, N=5). (C) Percent of time in metestrus over 15 days is not significantly different between WT and *FGFR3*^{+/-} mice (N=9, N=5). (D) Percent of time in diestrus over 15 days is significantly different between WT and *FGFR3*^{+/-} mice (N=9, N=5) ($p < 0.05$). (E) Percent of time in an indistinguishable stage over 15 days is significantly different between WT and *FGFR3*^{+/-} mice (N=9, N=5) ($p < 0.05$). All data represent the mean \pm SE.

Motile Sperm Concentration

[...]

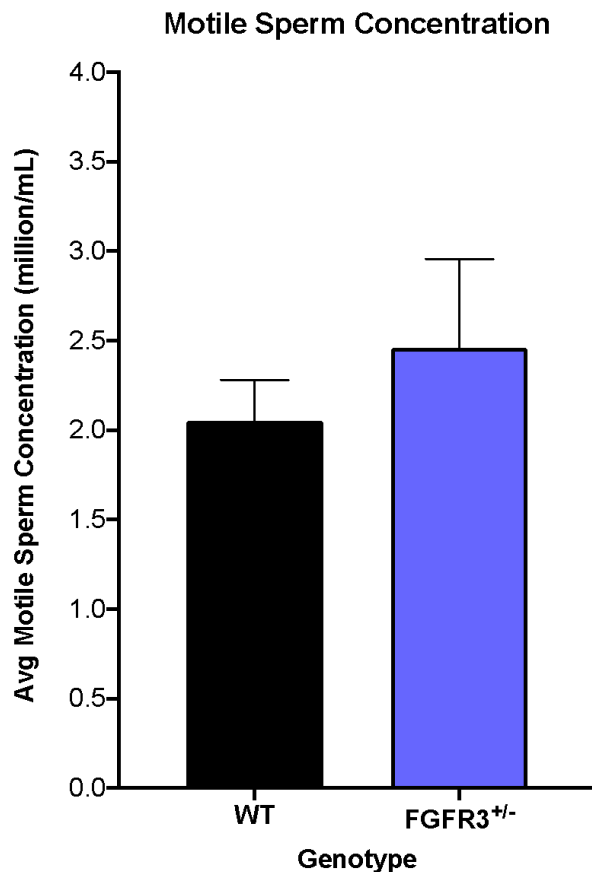


Figure 4. Motile sperm concentration obtained by epididymal squash of the cauda epididymis was not significantly different between PN60 WT and *FGFR3*^{+/-} males (N=3-5 respectively). All data represent mean \pm SE.

Discussion:

Characterization of the reproductive function is fundamental to understanding the effects of *FGFR3* deficiency on the HPG axis. Previously studies showed that *FGFR3*^{+/-} mice were born with a normal set of GnRH neurons but later exhibited a postnatal loss (PN60) of these neurons (Chung et al. 2010). However, the reproductive consequence of this neuronal loss was not examined. In addition, *FGFR3* is also expressed in

the pituitary and gonad (Sharma et al. 2019, Kaminskas et al. 2019), suggesting it may directly mediate the functions of these two downstream organs. This study aimed to examine the onset of puberty in young *FGFR3*-deficient mice as well as the maintenance of reproduction in older adults.

External pubertal markers for both female and male mice were assessed. BPS is an androgen-dependent event that coincides with the maturation of the testes and is an external indicator of puberty (Korenbroet et al. 1977). Our results showed that WT and *FGFR3*^{+/-} males attained BPS at the same time (Figure 1B), suggesting their circulating androgen levels were likely to be similar. These results suggest that the postnatal loss of GnRH neurons in *FGFR3*^{+/-} males may not have yet occurred at the time of BPS (around PN30).

Another indication of puberty, VO, was determined after weaning (PN20) of female mice. Vaginal opening is initiated by a surge of estrogen occurring around the time of puberty in female mice (Ojeda et al. 1994). Although their male counterparts achieved puberty at a normal age, *FGFR3*^{+/-} females exhibited delayed VO compared to WT (Figure 1A). These results suggest a potential lack of adequate estrogen production to induce apoptosis of lower vaginal mucosa (Rodriguez et al. 1997), leading to delayed VO. Decreased estrogen levels could result from decreased GnRH neurons found in *FGFR3*^{+/-} mice at PN60. Interestingly, *FGFR3*^{-/-} mice (N=3) never achieved VO even 72 days after birth (data not shown). These mice died at various ages with the oldest being PN72, yet never underwent VO at the time of death. Absence of VO in these mice could be due to a complete absence of functional *FGFR3* allele, resulting in absent or insufficient GnRH neurons and therefore no pubertal onset. That being said, *FGFR3*^{-/-} mice suffer significant musculoskeletal deformities and may experience issues unrelated to primary GnRH deficiency, such as reduced feeding or enhanced stress, that could suppress the HPG axis (Rivier et al. 1991).

Evaluating the age of first estrus is particularly

relevant to fertility in females because it indicates not just an estrogen surge sufficient to induce VO, but the beginning of ovarian cyclicity. Despite a delayed VO, *FGFR3*^{+/-} and WT females attained the first estrus at the same time. These results suggest that like humans, puberty in mice consists of many stages, and *FGFR3* deficiency may influence the earlier (VO) but not the later (first estrus) stages.

Over a 15-day period, females were examined for estrous cyclicity, including the number of days spent in each stage. WT and *FGFR3*^{+/-} mice spent the same percentage of time in proestrus, estrus, and metestrus (Figure 3A, 3B, 3C). Interestingly, WT spent 8.88% more time in diestrus compared to *FGFR3*^{+/-} mice (Figure 3D). Additionally, *FGFR3*^{+/-} mice spent 21.11% of their cycle in an indistinguishable phase consisting of little to no cells and severely crenated cells (Figure 3E). Abnormal GnRH numbers could disrupt HPG axis signaling and interfere with normal estrous cyclicity. Lack of gonadotropins and sex steroids due to a GnRH deficiency could produce the indistinguishable estrous phase seen in these mice. Ovarian analyses should be performed to examine the morphology of a follicle at this indistinguishable phase. Additionally, levels of gonadotropins and sex steroids should be examined for a potential discrepancy. Abnormal estrous cyclicity can be seen in *FGFR3*^{+/-} mice and may cause a decrease in fertility as compared to WT mice.

Male mice were evaluated for fertility by examining motile sperm concentration in adulthood (PN60). Despite the previously shown reduction in GnRH neurons in PN60 *FGFR3*^{+/-} males (Chung et al. 2010), motile sperm concentration at PN60 was not significantly different between WT and *FGFR3*^{+/-} males (Figure 4). Overall, male mice appear to be less affected by *FGFR3* deficiency than female mice. The cause of this sex difference is unknown. Multiple studies have reported that females are, in general, more vulnerable to HPG axis disruption due to a need for robust hormonal changes to drive the female cycle. The precise locus along the HPG axis leading to this sex difference remains to be investigated.

Our results showed that *FGFR3* deficiency did not impact male puberty and reproductive function, but significantly disrupted female pubertal onset and cyclicity. These results are novel and suggest *FGFR3* inactivating mutations in humans may similarly impact certain aspects of women's reproduction. Future studies should examine tissue-specific *FGFR3*^{+/-} knockout mice to ensure reproductive defects are due to a suboptimal HPG axis and not secondarily to defects in musculoskeletal functions (Kubota et al. 2020). Additionally, the precise extra-hypothalamic loci of the HPG axis impacted by *FGFR3* deficiency, such as the pituitary and the gonad, should be investigated.

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Effects of Cross-Sex Hormone Replacement Therapy on Fertility in Transgender Patients: A Systematic Review

Arin Barth

The following is an excerpt from a longer piece. For full text, please visit https://scholar.colorado.edu/concern/undergraduate_honors_theses/2n49t2555

Lay Summary

Although 62% of transgender patients want to have biological kids, 83% of their healthcare providers have never discussed the possible effects of hormone replacement therapy (HRT) on their fertility.

Transgender people are often prescribed hormones as a part of gender affirming treatment to change traits that are typically perceived as gendered. Testosterone and estrogen regulate our reproductive systems and impact secondary sex characteristics, such as facial hair and breast development. These hormones can affect one's ability to have kids; however, the extent of that effect is not well researched.

In this paper, I compiled data from 39 studies on the effects of HRT on transgender patients' reproductive systems. I compared and contrasted findings to identify trends and performed statistical analysis to determine the extent of the impact of HRT on the reproductive system. I found that in patients with ovaries, testosterone did not significantly affect the release of egg cells, and only moderately affected the inner layer of the uterus. Meanwhile, estrogen negatively impacted semen quality and therefore fertility. The effect on the reproductive system varied widely from person to person. If HRT was stopped, fertility would generally return to what it was before HRT, but research on long-term effects is especially limited.

Currently, trans people's reproductive choices are limited by lack of research and uninformed healthcare providers, as well as other systemic barriers. This paper

provides a comprehensive resource describing our current understanding of this topic. Prioritizing further research in this area will ensure that transgender individuals are empowered to make informed decisions about their reproductive futures.

Abstract

A growing area of research among the scientific community is the methods and effects of medical transition for transgender patients. One common component of medical transition is the administration of exogenous cross-sex hormones to patients to obtain a masculinized or feminized phenotype, referred to as hormone replacement therapy (HRT). There is limited research on much of these effects, including the effects of HRT on patients' fertility. In this study, I conducted a systematic review of research on the impacts of HRT on fertility, including calculating risk ratios and etiologic fractions. Thirty-nine papers were examined both qualitatively and quantitatively to assess the impacts of HRT on semen quality, ovulation, polycystic ovary morphology, and endometrial function. This study found that HRT reduces fertility in transgender patients, but not universally or completely; there is still evidence of fertility during HRT administration in many patients. Following discontinuation of HRT, reduced fertility will return to its pre-HRT status in most patients. This research will help clinicians counsel their transgender patients on fertility before and after their medical transition.

Terminology and Abbreviations List

Assigned female at birth (AFAB): Describes an individual who was assigned a female sex based on their external genitalia at birth.

Assigned male at birth (AMAB): Describes an individual who was assigned a male sex based on their external genitalia at birth.

Cisgender: Describes an individual whose gender identity aligns with their assigned sex.

Estrogen (E): The primary hormone involved in hormone replacement therapy (HRT) for AMAB individuals. Administration results in a more feminine appearing phenotype for these individuals.

Gender dysphoria: An experience of distress or discomfort brought on by a conflict between one's gender identity and sex assigned at birth. Gender dysphoria is experienced by many but not all transgender individuals.

Gender-nonconforming: Describes an individual whose behavior or appearance does not conform to prevailing cultural and social expectations about what is appropriate for their gender. These individuals may or may not identify as transgender.

Hormone replacement therapy (HRT): The process of administering one or more exogenous hormones to transgender patients to achieve a physical appearance more congruent with their gender identity. One component of medical transition.

Intersex: Describes numerous conditions in which sex development does not progress in a manner consistent with typical pathways of "male" or "female." Intersex infants are often coercively assigned a sex at birth, sometimes along with surgical intervention to mimic typical genitalia.

Medical transition: The process of undergoing medical treatments to change one's body to better align with one's gender identity. This could include hormone replacement therapy (HRT), voice therapy, laser hair removal, or surgeries such as mastectomy, genital reconstruction surgery, or facial feminization surgery.

Many but not all transgender individuals undergo some form of medical transition.

Nonbinary/genderqueer: Umbrella terms for individuals whose gender identity falls outside of or is not confined to the established gender binary. These terms fall under the "transgender" umbrella, but there are nuanced social, political, and cultural differences between them, and they are not interchangeable.

Testosterone (T): The primary hormone involved in hormone replacement therapy (HRT) for AFAB individuals. Administration results in a more masculine appearing phenotype for these individuals.

Transgender: Describes an individual whose gender identity differs from their assigned sex.

Transgender men: Individuals whose gender identity is male and who were assigned female at birth (AFAB).

Transgender women: Individuals whose gender identity is female and who were assigned male at birth (AMAB).

Introduction

Medical care for transgender individuals is a growing field in health care as broad cultural awareness and acceptance of diverse gender identity increases.... One common component of medical transition is hormone replacement therapy (HRT), where one or more exogenous sex hormones are administered to change a patient's hormone profile and therefore, the phenotype of some secondary sex characteristics.

[...]

Many of the full-body effects of HRT are moderately well-researched and understood; however, research on the effects of HRT on fertility is lacking.

[...]

In AMAB individuals taking HRT, high serum estrogen could result in reduced nutrients, growth factors, and

proteins needed for proper sperm development and impaired release of mature spermatids (Figure 1c).

[...]

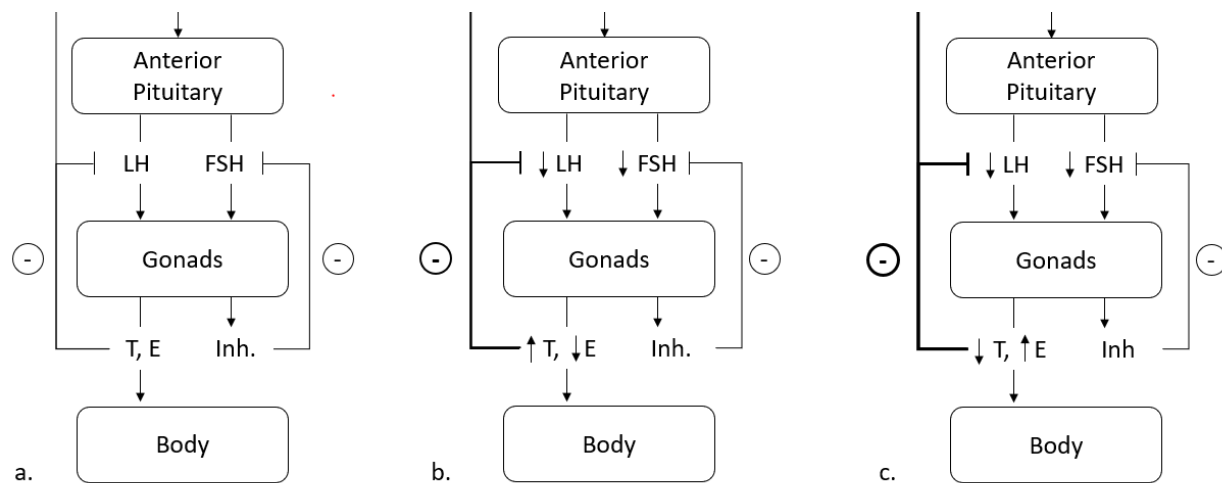


Figure 1: Diagram of the typical HPG axis (a), an HPG axis with interference by supraphysiological exogenous testosterone (b), and an HPG axis with interference by supraphysiological exogenous estrogen (c). Arrows between boxes indicate stimulation and (-) indicates feedback regulation. Small arrows indicate increased or decreased hormone levels relative to baseline. Bold lines indicate increased strength of negative feedback. Conversely, high serum testosterone in AFAB patients is less likely to disrupt the hormone cycles necessary for ovulation because of the intricacies of the feedback mechanisms (Figure 1b).

[...]

Overall, I hypothesize measures of fertility in transgender patients on HRT to be significantly reduced relative to cisgender controls, but not indicating a complete absence of fertility among the population.

Methods

Literature Search

A literature review of the biomedical database PubMed was performed from August 28, 2019 to October 17, 2019.

[...]

Data Analysis

Risk Ratios (RR) and confidence intervals (CI) were calculated for eight studies: six in AFAB subjects, and two in AMAB subjects.

[...]

Standard errors (SE) were calculated from CIs

The etiologic fraction (EF) indicates the proportion of the changes to a specific outcome that can be attributed to the treatment applied, which is HRT for the purposes of this study.

[...]

For outcomes which had a RR less than one, the EF calculated by this method is not meaningful, so an alternative etiologic fraction was (AEF) was calculated.

[...]

Prevalence rates were calculated for various outcomes in all patients taking HRT in all studies: presence of a

corpus lutea or corpus albicantia, endometrial activity, presence of endometrial polyps, polycystic ovary morphology, and spermatogenesis.

[...]

Results

Literature Search Results

During the literature search, 567 articles were screened for relevancy. Two hundred and twenty studies in non-humans were excluded and 347 human studies were screened for relevancy. Of these, 39 articles were determined to meet the criteria and were relevant to the research.

[...]

Results in AMAB Patients

Twenty relevant articles in AMAB patients were examined for this analysis (Table 1). Risk ratios, 95% confidence intervals, and standard errors were calculated for two papers in transgender women (Figure 3, Table 2). Data in this section is listed as “RR (Lower CI-Upper CI, SE).”

All of the RRs I calculated were greater than 1, which indicated increased risk of sperm abnormalities in transgender patients relative to cisgender controls.

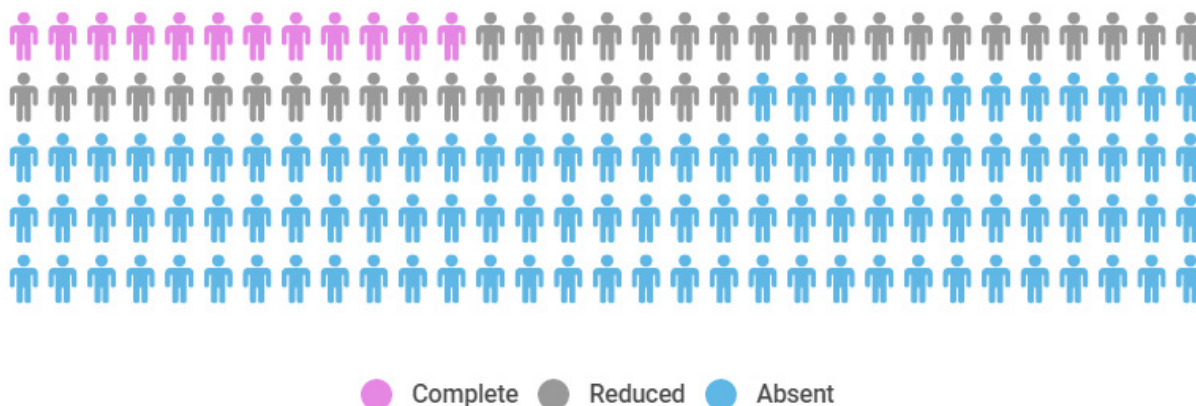


Figure 4: Calculated prevalence rates of observed complete, reduced, or absent spermatogenesis in the testes of AMAB transgender people taking HRT.

[...]

Results in AFAB Patients

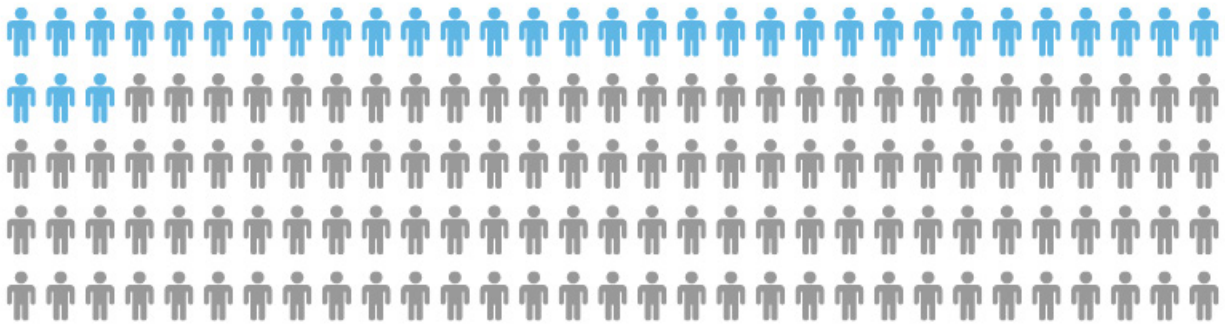
Nineteen articles in AFAB patients were examined for this analysis. Risk ratios, 95% confidence intervals, and standard errors were calculated for six papers in AFAB patients (Figure 5, Tables 4 and 5).

Several outcomes resulted in RRs greater than 1, indicating increased risk of the relevant outcome in transgender patients relative to cisgender controls.

[...]

Several other outcomes had RRs less than or equal to 1, including several studies noting the presence of a corpus lutea and/or albicantia.

[...]



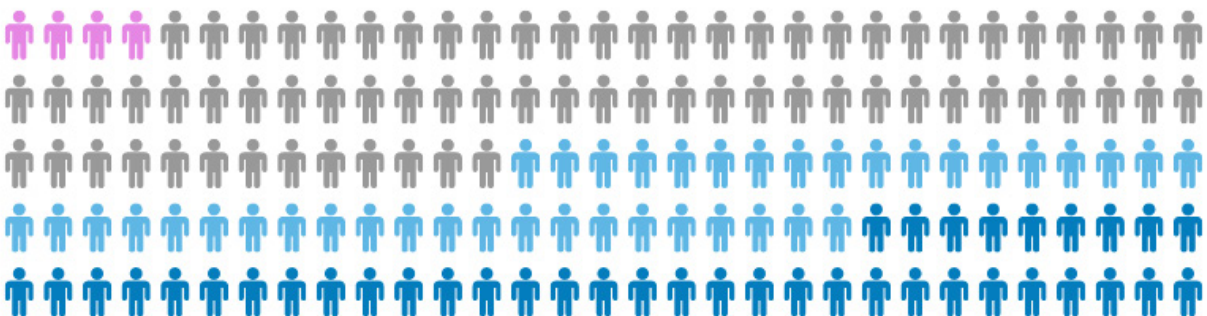
● Corpus luteum and/or albicantia present ● Neither present

a.



● PCOM ● No PCOM

b.



● Secretory ● Proliferative ● Inactive ● Atrophied

c.

Figure 6: Calculated prevalence rates of evidence of ovulation (a), PCOM (b), and endometrial states (c) observed AFAB transgender people taking HRT.

Discussion

Effects in AMAB Patients

Although there is some disagreement between studies, semen quality in AMAB transgender patients currently using HRT appears to be significantly lower than in cisgender controls. Transgender patients were shown to have a statistically significant increased risk of oligospermia (decreased sperm concentration) and of teratospermia (abnormal sperm morphology) compared to cisgender controls.

[...]

Effects in AFAB Patients

One of the most important factors in whether an AFAB individual can conceive is the presence or absence of ovulation. Evidence of ovulation in AFAB transgender individuals taking hormone replacement therapy were not necessarily significantly reduced.... Taken together, these data indicate that HRT does not necessarily negatively impact ovulation in AFAB patients.

[...]

Hormone replacement therapy did not appear to result in endometrial atrophy in most AFAB patients.

[...]

Effects Following HRT Discontinuation

Following discontinuation of HRT in AMAB patients, sperm quality seems to largely return to pre-HRT levels. ... These data indicate that semen quality return to baseline levels according to most measures in as little as 6 weeks post discontinuation of HRT in AMAB patients.

There is limited data on the fertility of AFAB patients following discontinuation of HRT. ...

Hormone replacement therapy in AFAB patients does not result in long-term infertility.

[...]

Non-hormonal Factors

It is important to consider factors besides HRT that could result in reduced fertility in transgender patients. It was not possible for this analysis to control for possible confounding variables, but differences in fertility before initiation of HRT are important to consider. Many studies recorded baseline measures for their subjects, otherwise assessed pre-treatment parameters, or studied patients prior to initiating HRT.

[...]

Strengths and Limitations

This is the first broad systematic review of the effects of HRT on fertility in both AFAB and AMAB subjects. However, this study was limited in several ways. First, I was unable to perform meta-analysis. Relatively few studies met all the criteria for this type of analysis, because of failure to use controls, fully discuss the results of subjects in control groups, or because the sample sizes were too small to provide adequate data for a defined risk ratio. If a meta-analysis had been possible, it would have lent another dimension of statistical analysis to the data, improving the overall understanding of the overall findings of the research available.

[...]

This review of existing research makes the scientific understanding of fertility on HRT more accessible to health care providers, so that they can accurately counsel their patients on how HRT may affect their

fertility, so that patients can more easily make informed decisions about their bodies.

Additionally, this is the only study that I know of that focuses on the effects of HRT, or any other aspect of medical transition, on transgender patients, that was authored by a transgender researcher.

[...]

Research into transgender bodies is not complete without an understanding of transgender communities....

Conclusions

There is a shortage of data on the effects of HRT on the fertility of transgender individuals, and what data does exist is often conflicting or inconclusive. The data we have indicates that fertility may be somewhat, but not

completely reduced in transgender patients. Effects of HRT do not appear to increase past initial changes to cause more significant changes with increased duration, and HRT does not result in long term loss of fertility; following discontinuation of the medication normal fertility should return in most patients. However, there is some possibility that reduction in semen quality in AMAB transgender patients could be present prior to HRT, and therefore related to other factors such as stress and anxiety. Transgender patients hoping to avoid pregnancy should use birth control methods and not consider their HRT regimen to be a substitute for birth control. Transgender patients hoping to conceive should be able to do so but may wish to consider discontinuing HRT to raise their chances. Transgender patients who were assigned female at birth will have to discontinue HRT use to sustain a healthy pregnancy.

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[...]

Little Ambergris Cay, a Case Study for Ooid Rich Island Development on the Turks and Caicos Carbonate Platform

Drew G. Brown

The following is an excerpt from a longer piece. For full text, please visit https://scholar.colorado.edu/concern/undergraduate_honors_theses/8910jv661

Lay Summary:

This study proposes a hypothesis for the formation of an island located within the Turks and Caicos carbonate platform, named Little Ambergris Cay. Little Ambergris Cay is unusual in that it formed during a period of sea level rise within the Holocene. This anomaly coincided with unique sediment characteristics, as the island is dominantly composed of ooids. Ooids are concentrically coated calcium carbonate sand grains. In this circumstance, the rapid accumulation of ooids resulted in island formation. This coupling of high ooid concentrations alongside sea level rise provided an opportunity to build a new model for modern carbonate island growth. This study used data from the loose sediments of Little Ambergris Cay, such as grain type, grain size, biological composition, and roundness of grains, compared with different carbonate islands data, allowing us to track changes in environment over time. By performing this comparison, we can see how Little Ambergris Cay formed within the previous five thousand years. Through interpreting the changes in environment over this time, we draw conclusions about formation direction and the possible reasons for accumulation during sea level rise. This study provides a unique model for carbonate island formation that has relevance in the carbonate sedimentology field.

Abstract:

Little Ambergris Cay (LAC) within the Turks and

Caicos is a useful field site to examine the accumulation of a carbonate island, within a typical carbonate platform environment, because it does not follow the typically accepted modes of island accretion. There are several methods used to describe carbonate island formation after Schlager (2003), who described carbonate “factories” in reference to the modern analogues of Florida and the Bahamas. The Turks and Caicos, and specifically Little Ambergris Cay, offers a field site that differs from the comparison analogues in sediment composition, energy flux, and Holocene development. Little Ambergris Cay is unusual in that it formed during a period of sea level rise (Figure 2, Toscano & Macintyre, 2003), and thus presents an opportunity for research on how modern carbonate platform environments accumulate through time. This paper presents an argument for eastward direction of island accumulation of Little Ambergris Cay. Based on the research of Trower et al. (2018), Dravis & Wanless (2008), and Schlager (2003), I interpret that Little Ambergris Cay formed via eastward accumulation based on the influence of wind-wave current energy as means of supplying ample sediment to a zone of accumulation; in other words, in this system, sediment supply outpaces accommodation space. To support this interpretation, I will present several sets of data that were derived from unlithified sediment cores collected from the interior of LAC as means to characterize and compare against representative environments. First, I performed thin section point-count analysis on loose

sediments from a variety of depths in a representative collected core to identify how grain composition varied with depth. I then compared this point count data with a range of grain characteristics such as grain size, sorting, sphericity, etc., determined via Camsizer analysis, in order to determine the parameters that best described the changes in grain concentration as seen in the point count. Finally, by integrating plots of the grain size parameters determined in this paper vs. depth, stereoscope microscopy, and radiocarbon ages of core sediments, I compared representative facies of modern carbonate environments to determine a facies development through time of Little Ambergris Cay. I concluded that Little Ambergris Cay underwent a series of high to low energy facies changes, where early lithification on the south-western edge of the modern LAC allowed successive accumulation of incoming easterly ooids due to sediment entrapment, possibly due to microbial mat and bedrock influence. The incoming sediment grains from the east onto an early lithified fragment to the west allowed eastward accumulation, where facies changed from an ancient shoal to a modern island. This paper furthers the research of modern carbonate analogues and their interpreted growth patterns. LAC offers a unique environment that does not follow typical carbonate island development, and by providing a case study of wind-wave influenced island accretion, sectors of geologic interest have the opportunity to interpret unique climatic and chemical factors. The petroleum unconventional subsurface carbonate play search is greatly related to LAC, as grainstones offer potential reservoirs (Dravis & Wanless, 2008). The geochemical field may have interest in the accumulation of LAC, as specific seawater concentrations play a role in the uniquely high concentrations of ooids found on the Caicos Platform. The geobiological field may be interested in LAC, as the relatively low abundance of microbes and biotic influence differs greatly from the other modern analogues for carbonate platform

development.

Introduction:

Little Ambergris Cay (LAC, Figure 1) within the Turks and Caicos is known to be composed of dominantly Holocene aged carbonate sediments (Orzechowski et al., 2016). Toscano & Macintyre (2003) recognized that a period of sea level rise occurred in the Atlantic Holocene. Generally speaking, using the Bahamas and Florida as a modern analogue for carbonate platform development, the most common way for carbonate accumulation to outpace or remain at increasing sea level is through a process of “backstepping,” or retrogradation of the platform that is primarily influenced by reef growth (Schlager, 2003). Reefs are rare on the Caicos platform, so considering that we instead primarily observe Holocene ooids (Dravis and Wanless, 1989), and recognizing that LAC accreted past sea level during a period of increasing accommodation space, it then becomes clear that LAC does not follow the most obvious modern models of island formation in the Holocene. This anomaly offers an opportunity to better understand how and why formation of this carbonate platform island occurred in such conditions.

[...]

Before research was conducted, I developed hypotheses regarding the question of how an island forms during a period of sea level rise. I hypothesized that, in order for an island to form, sediment supply must have outpaced sea level rise (accommodation space). Trower et al. (2018), proposed a westward growth hypothesis of LAC, which I decided to test through facies development and stratigraphy. It is known that current and wind influence westward migration of sediment (Trower et al., 2018; Dravis and Wanless, 2008), and Big Ambergris Cay lies to the east of LAC and is



Figure 1:
A: A map of Little Ambergis Cay with associated core locations.

older in age. Given this observation, I hypothesize that sediments from BAC are migrating to LAC where early lithification of ooid grainstones could have trapped incoming sediments. I therefore also developed an alternative hypothesis that Little Ambergis Cay accreted eastward, towards BAC, as a function of incoming sediment supply onto a pre-existing bedrock.

Three steps will be taken in testing these hypotheses (westward vs eastward accretion), by analyzing sediment sample characteristics from cores collected on the interior of LAC. Using point counting data (Figure 3), I am able to determine sediment composition within the VCo3 core. Secondly, I used Matlab to analyze Camsizer data, and was able to determine characteristic grain size (D_{10} , D_{50} , D_{90}), mean roundness, and sorting for the other cores (VCo1-VCo8). By comparing the point counting data to the Camsizer data for VCo3, I determined that the roundness, grain size and sorting parameters correlated to the interpreted grain composition.... The third and final step was to use both the point counting and Camsizer data, compared against a set of thin sections and Camsizer data, for samples that represented

modern depositional environments to determine facies and environmental change over time on LAC.

Based on the conclusions that I draw in these three steps, using the parameters described above, I will test that the westward growth hypothesis of Little Ambergis Cay (Trower et al., 2018) is not supported by the data analyzed in this paper. Rather, based on the facies development of the VC cores and the comparison facies deposits of Table 1 & 2, I will attempt to support an eastward growth hypothesis of Little Ambergis Cay.

Materials and Methods:

[...]

Sediment Core and Sample Collection

I began work on a set of sediment samples collected from a variety of depths in eight sediment cores previously collected in 2017 and 2018 via vibracoring.

[...]

Point Count Analysis Data

The first step was to conduct a point count for sediment composition using JMicrovision, an image analysis toolbox. Analyzing 11 thin sections of the loose sediment in VCo3, at each successive depth (up to 220cm), I performed a 400-sample point count for each increment depth.

[...]

Grain Size and Shape Data

The next step was to analyze grain size and shape data, which had previously been measured via a Retsch Camsizer P4, from all the cores through a Matlab code that was able to process the D_{10} , D_{50} , D_{90} , mean roundness, mean sphericity, mean aspect ratio, roundness, and sorting.

[...]

Stereoscope Microscopy

Stereoscope microscopy was performed on the four samples.... This imaging allowed me to qualitatively assess the abundance of ooids and skeletal grains, and confirm the Camsizer sorting, roundness, and diameter data.

Radiocarbon Data

Radiocarbon dating was performed on 11 samples (Figure 2 & FA-2-A and FA-4-A) via Accelerator Mass Spectrometer (AMS) at the Keck-Carbon Cycle AMS facility at UC Irvine and the NOSAMS facility at WHOI.

[...]

Facies Correlations to Modern Depositional Environments

...By collecting the sorting and roundness data for the representative environments, I was able to compare the previously processed sorting and roundness data of the VC cores and correlate each depth's values to the associated representative environments. This allowed me, along with the radiocarbon age of the given cores, to formulate an idea of how facies changed over time.

Results:

The ages of the three cores (ranging from youngest to oldest) display similar trends vs. depth between each core. CC-J18 and VCo3 are in similar positions on the northern side of LAC, while FML-J18A is located on the eastern side of LAC (Figure 1.A) Corrected radiocarbon age for exposed bedrock samples FA-2-A & FA-4-A (Figure 1.C) show ages of 5946BP & 5220BP. The bedrock has been interpreted as a cross-stratified eolianite ooid grainstone (Orzechowski et al. 2016).

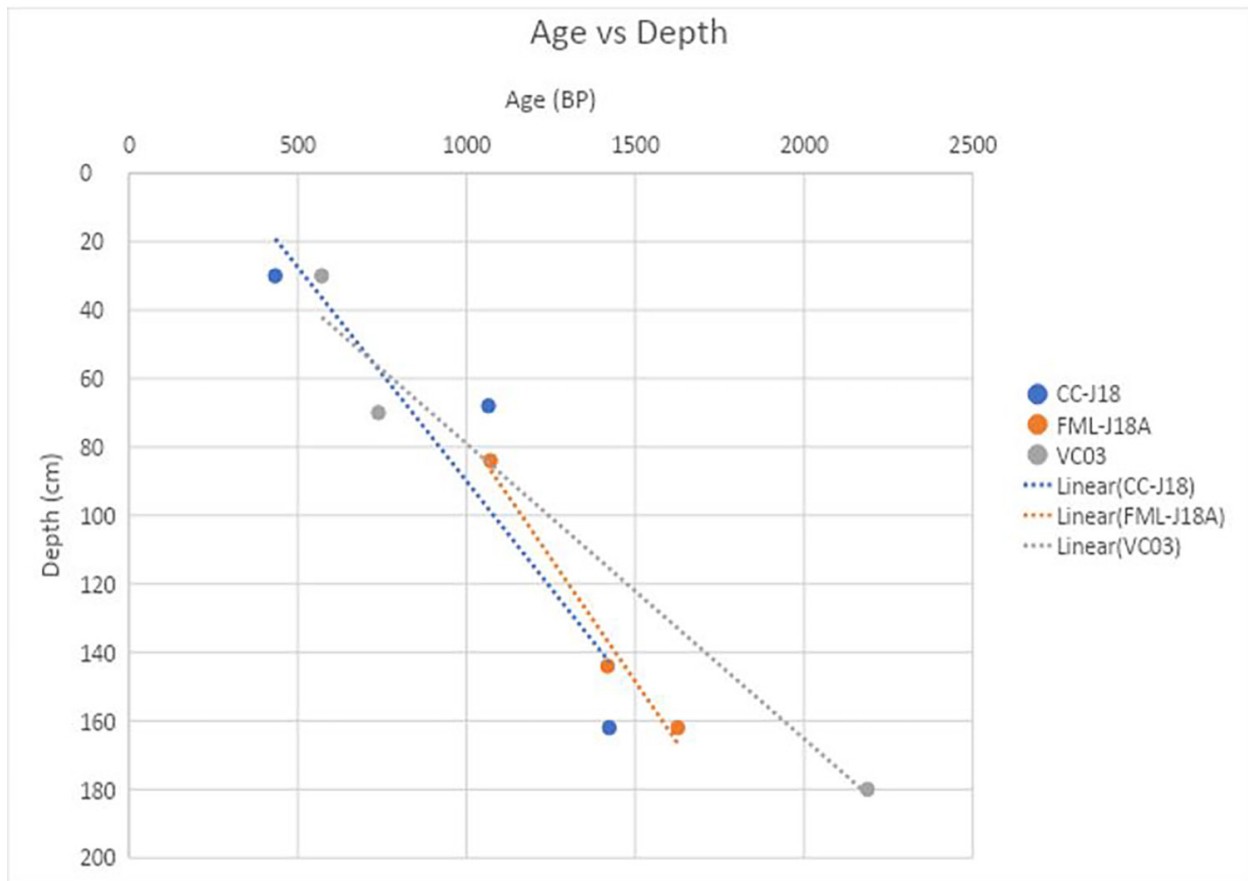


Figure 2: Corrected radiocarbon data for three cores collected on northern LAC.

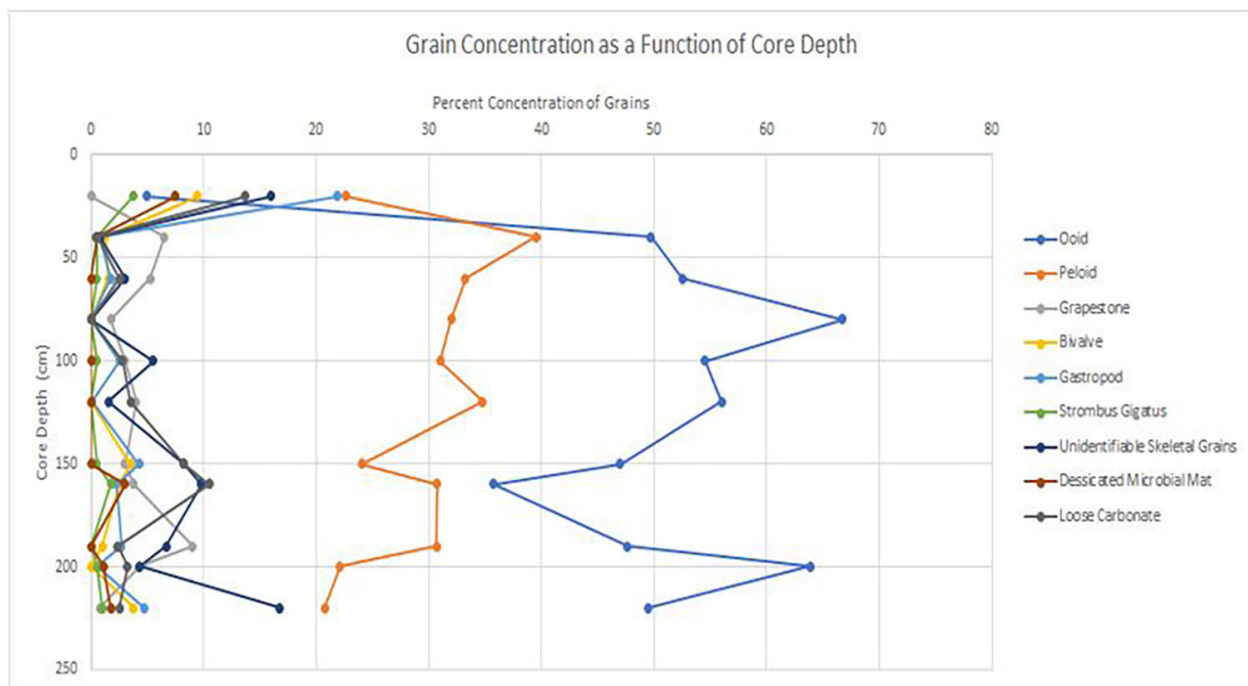


Figure 3: The scatter plot above shows sediment compositions a function of core depth.

The data was determined through a 400-sample point count for each depth in VC03. Trends imply that skeletal grains were abundant in the shallower and deeper sections of the core, and ooid abundance increased in the mid-core (60cm+) and decreased in the late-core (~150cm), followed by another period of increase (~180cm). Sediment composition provides key information into depositional environment and will be discussed in more specific analysis further in the discussion.

Each depth displayed offers three general trends: percent changes in ooid, peloid, and skeletal grain abundance. I determined that roundness, median diameter (D_{50}), and sorting, as provided through Camsizer analysis, best correlated with the changes in concentration of ooid and skeletal presence described in Figure 3, and should thus be interpreted for other cores of interest as described in Figures 4, 5 and 6.

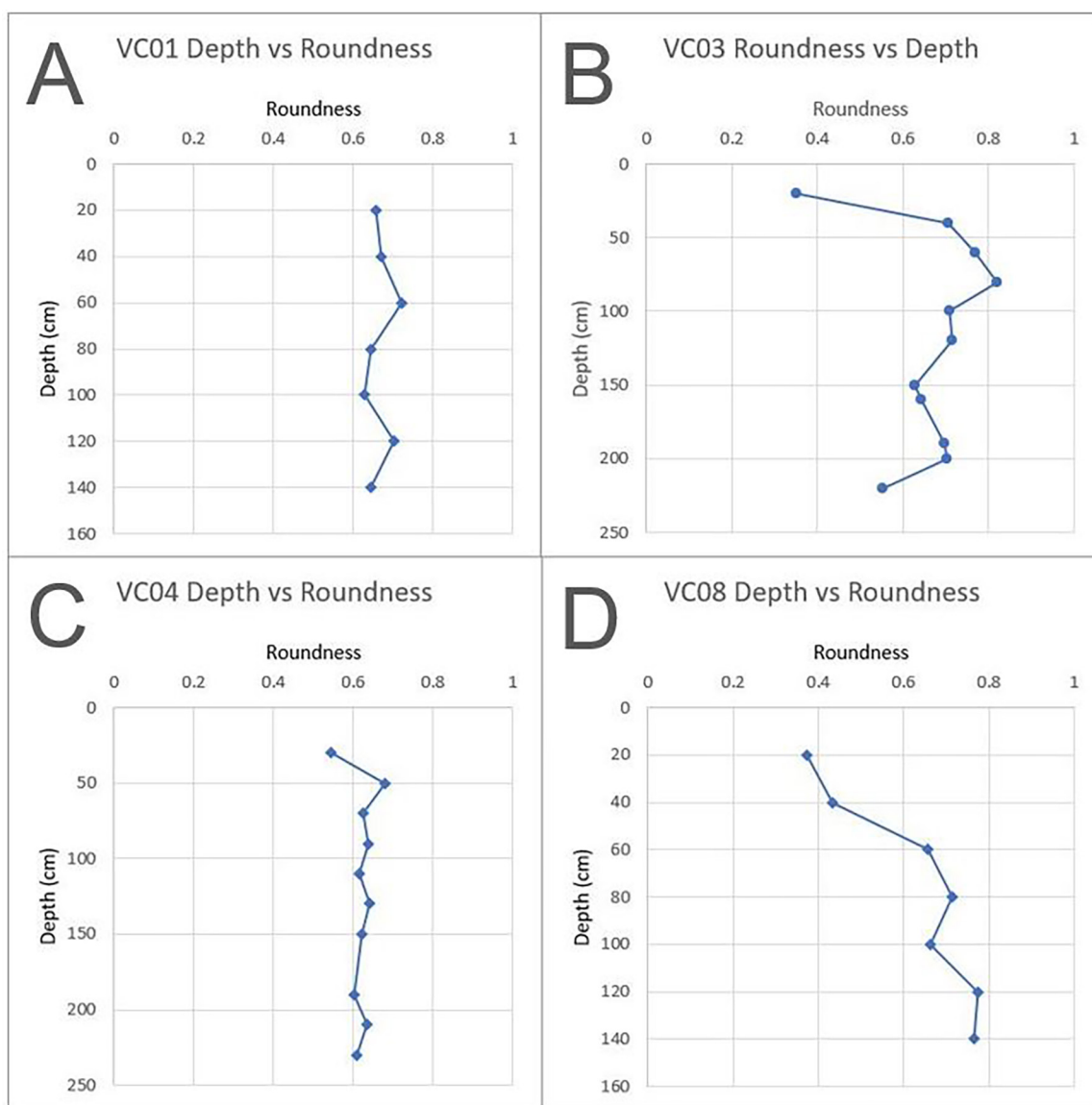


Figure 4: The photos above represent each core's depth compared against roundness. The higher the values, the higher the roundness.

Four cores were chosen to compare roundness, D₅₀, and sorting versus depth to serve as a proxy for ooid concentration. Each core is located within different cardinal direction points around LAC (Figure 1.A) to give an interpretation of ooid concentrations based on differing locations.

The maximum roundness described in Figure 4.B is 0.81 in VCo₃, while the minimum value is 0.38 in VCo₈. Each core shows different patterns vs. depth, where VCo₈ increases with depth, and VCo₃ initially

increases, but gradually decreases following 100cm. VCo₄ and VCo₁ remain relatively constant throughout their entire section.

The maximum median diameter within the described cores is just <1200μm in VCo₃. The minimum median diameter is ~300μm in VCo₈. Once again, VCo₄ and VCo₁ display relatively consistent values throughout their section. Median diameter gives an interpretation of overall grain size, where consistent values of D₅₀ represent consistent grain composition

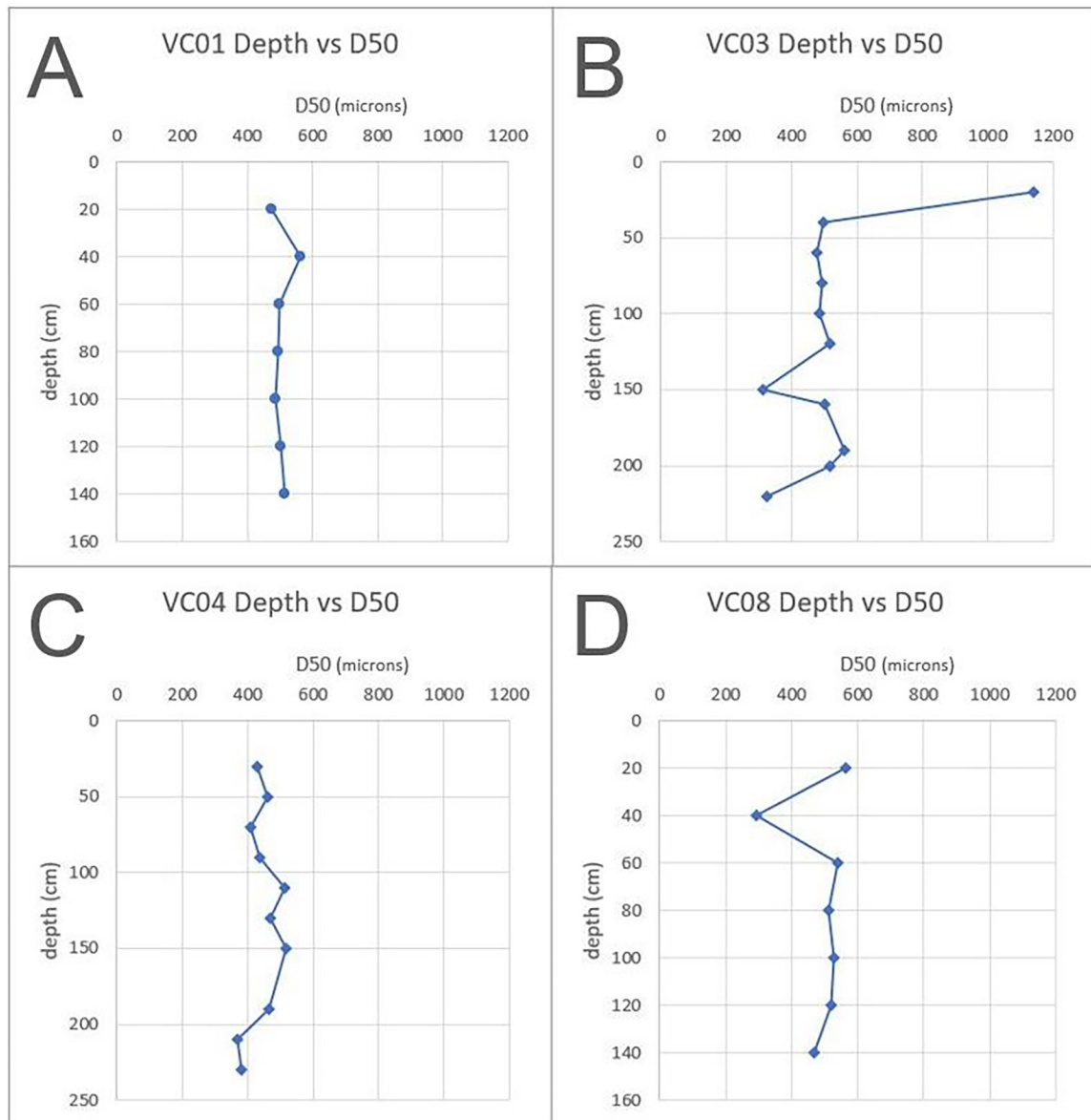


Figure 5: The photos above represent each core's depth compared against D₅₀, or the median diameter. Units of D₅₀ are in microns.

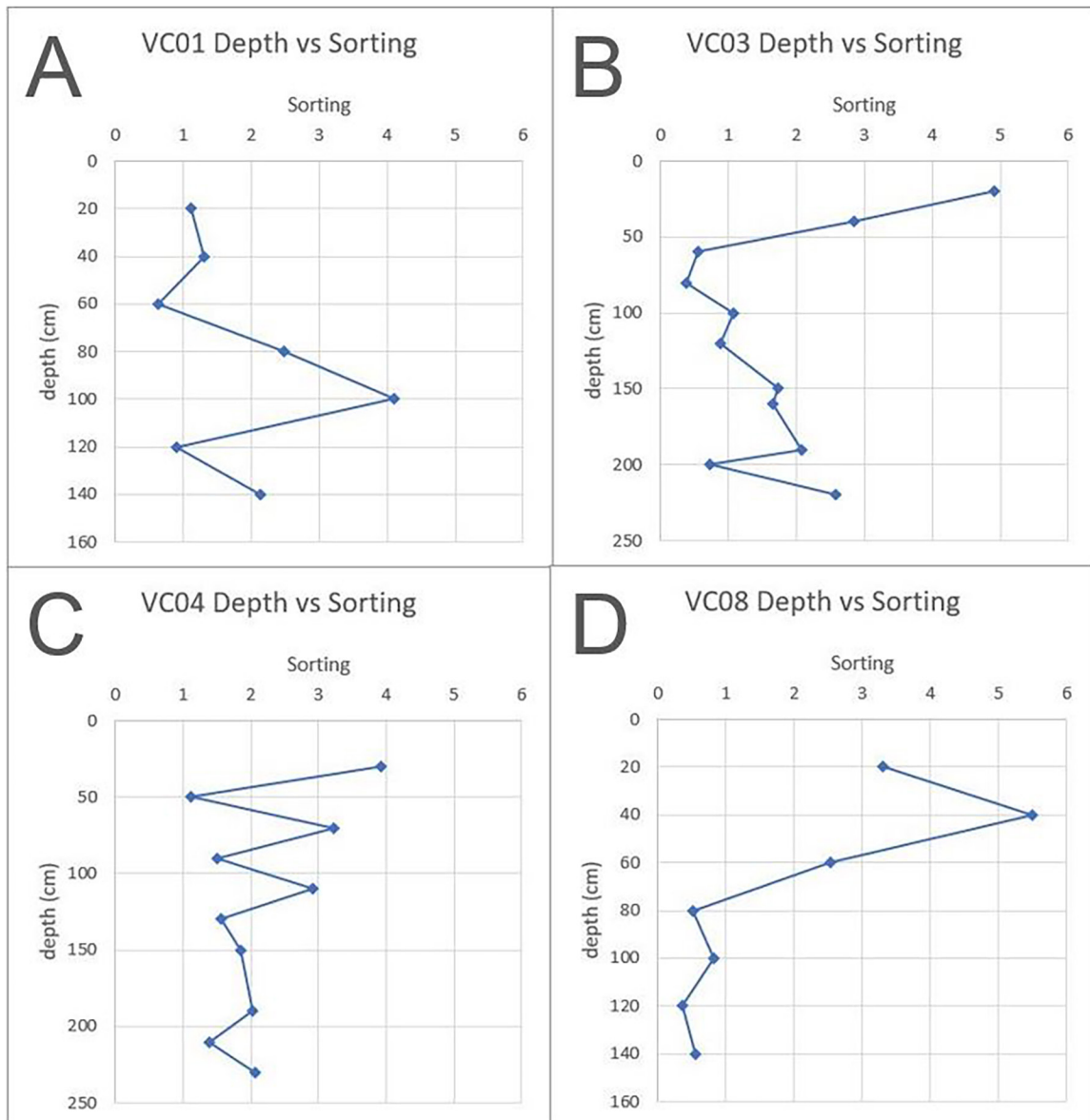


Figure 6: The figures above represent each core's depth compared against sorting. Higher numbers reflect poorer sorting.

The lowest degree of sorting is described in VCo8 at ~ 5.5 . The best degree of sorting is also within VCo8 at 0.35 at 80cm depth. VCo3 also exhibits a high degree of sorting at 0.38 at 60cm depth. Sorting provides an interpretation of grain presence, where the best degrees of sorting for LAC are consisting of dominantly ooids, and the lower degrees are a large mix of skeletal grains with ooids..

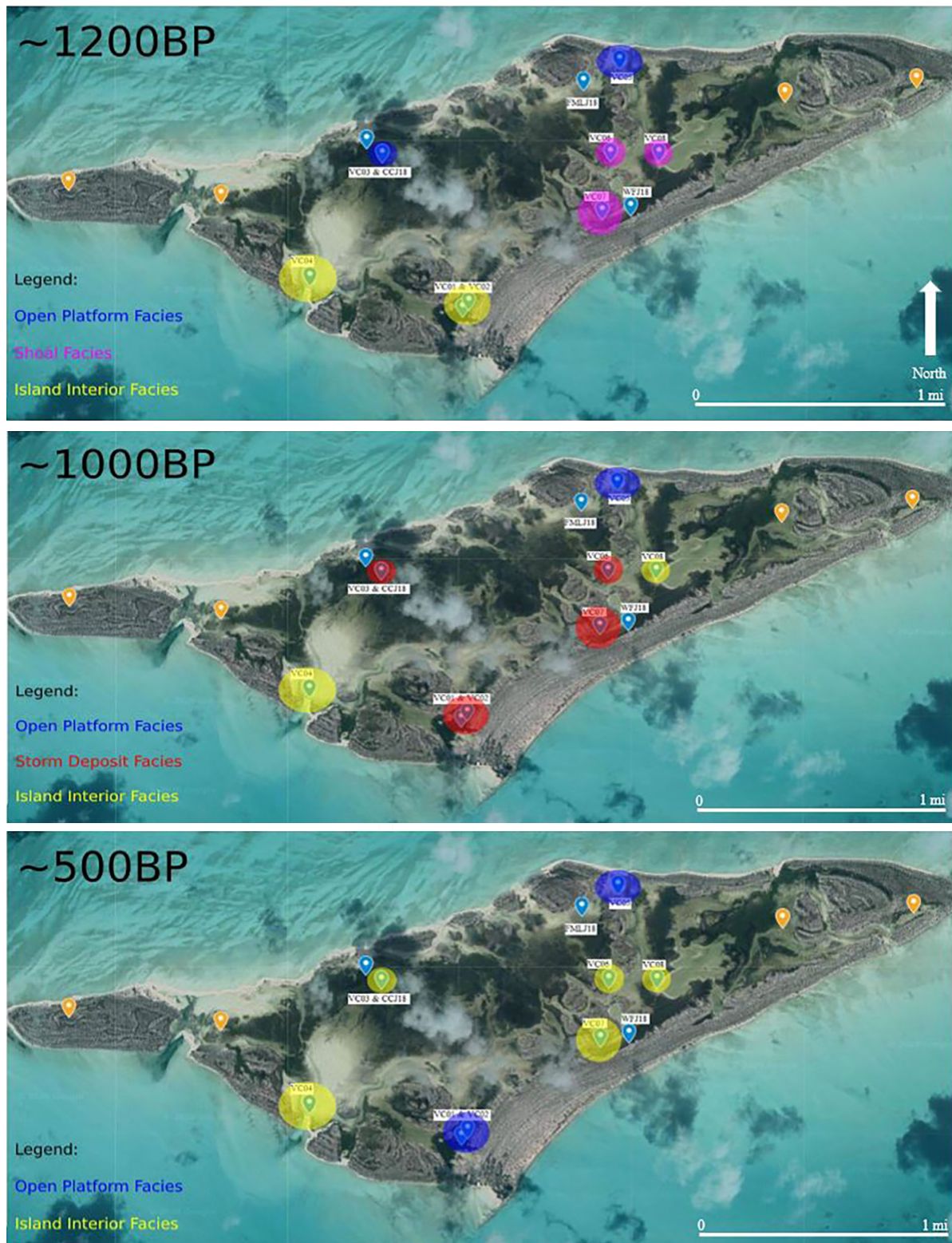


Figure 7:

The three photographs above show the interpretation of the succession of depositional facies through time based on the radiocarbon ooid data collected (Figure 2).

[...]

Discussion:

[...]

Regarding the question of why LAC accumulates in the position it does (~ 3 miles off of BAC), instead of accreting off the western edge of BAC, I have formulated three hypotheses that could explain such formation.

1. BAC poses as a large geographic “block” for current and wind-wave influence coming in from the east. This “block” forces wave refraction off the northern and southern edges of BAC. It is possible that the two refractions combine at the ~ 3 miles mark where the initial bedrock could have lithified, thus allowing sediment supply to be particularly higher at this specific location, and in turn allowing eolianite processes or cement compaction processes to allow an early lithification.

2. Patch reefs are visible and have been observed around the entirety of the Caicos Platform (Dravis and Wanless, 2008). It is possible that a singular patch reef was/is in-situ at the ~ 3-mile point west of BAC. It is possible that the westward migrating ooids were able to be trapped in this patch reef, and in turn allow sediment accumulation to form an early lithification to surpass sea level rise.

3. Knowing that ooids are increasing in size as they transport west (Trower et al., 2018), it could be possible that the Intra-Cay shoal grew westward enough to sufficiently surpass water depth. In other words, it could be possible that the westward growth of ooids along the BAC shoal grew to high enough size in high enough concentrations that they were able to succeed sea level, and thus allow an early lithification along with eolianite processes.

- i. Microbial mat influence has the potential to affect each of the above listed scenarios.

While in-situ biology has not proved to be a leading cause of LAC island accumulation based on the research provided in this paper, it should be noted that microbial mats greatly increase the ability for sediment entrapment, and even minor presence of microbial mats could help support accumulation of incoming ooid sediments.

Future Directions

...However, I propose that research be conducted on a series of processes within the Intra-Cay shoal and LAC. Based on the above hypotheses, the direction and energy relationship of refraction off BAC should be considered in how exactly the wave energy may influence the combination or direction of ooid sediment transport.

[...]

Conclusion:

Building the Overall Picture of Little Ambergris Cay Formation

1. The Ambergris Shoal (Intra-Cay Shoal), extending a total of ~ 2.2km west (reaching the modern LAC shoreline) of BAC, of age greater than 6000BP, develops due to easterly wind-wave action and the prior abundance of ooid grains.

2. An abundant supply of ooids are continuously transported from BAC to the west, accumulating and extending along the Intra-Cay shoal.

3. Sediment supply outpaces accommodation space following the eolianite influence of LAC ooid bedrock lithification ~ 5946BP. Possible reasons for sediment supply to accumulate past the subsurface and lithify could be due to wave refraction induced

sediment accumulation, patch reef presence and subsequent sediment accumulation, or transport induced ooid growth resulting in carbonate sediment growth surpassing sea level rise.

4. Westward migration of ooids became trapped onto a newly existing surface area of bedrock <6000BP, where possible microbial mat development could have aided in incoming sediment entrapment and further cementing lithification, allowing sediment accumulation to succeed sea level rise in the early Holocene.

5. Island growth occurs as per Figure 7.

[...]

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Creative Nonfiction

Without Mom and Dad

Alex Adler

Bye mom! I'll miss you! Alright, one more hug. Okay that's enough, I think it's time for you to leave. Yes, I'll call you this weekend. Fine, one more hug. What's that? My neighbors are outside? Alright let's all go talk to them for a while. I'm glad you are here to supervise my first impressions. It's a good thing their parents are also here, helping them move in, otherwise this conversation might have lasted less than twenty minutes. Yeah, the weather here is so nice. And of course we have to talk about the view. Okay, can this be over now? Yes, but no. The conversation 'ending' means it is time for the all important exchange of phone numbers. As the four cell phones are passed around I realize that I'm about to be free from this wonderful company forever. Not forever, I suppose. But at least until thanksgiving. I can't wait.

~ ~ ~

It was quite a surreal feeling the first time I took a shower in my own apartment. To walk in and see none of the familiar soaps or shampoos my parents used to buy me felt a bit like I was off in some foreign country. Unsure of the water pressure, the angle of the spray, and especially the temperature range, I tentatively turned the knob and began my mental preparations. I tried to hype myself up, telling myself *it's just a shower, you have nothing to fear and you've taken thousands of*

showers in your life, this won't be any different.

As I slid open the glass door and stepped under the soft, soothing downpour, I felt a sort of universal loneliness wash over me. After spending ten minutes in that shower, I realized that I had been alone for (almost) every other shower of my life, but not like this. I felt like Bear Grylls in the wilderness, with no one to turn to but myself. I stepped out and began drying my hair, unaware of the fact that I wasn't nearly as alone as I thought.

I was feeling chipper, freshly cleaned, just about to leave the bathroom when I spotted a fly, landed on the faucet of the sink, staring up at me with compound eyes. Marvin¹ seemed to taunt me, gently wiggling its antennae as if to say *go ahead, try and swat me*. Naive as I was, and without the clairvoyance to realize what a significant part of my life Marvin would become, I made a feeble attempt on his life. Of course he swiftly avoided my swing, taking flight and making a few laps around my head for good measure. Though I failed in my first effort to rid myself of Marvin's presence, I was optimistic that he would soon be gone, so I casually left the bathroom to go about my day.

I think Marvin liked me; at least I can say he put up with me. I showed him the same tolerance for about twelve hours, after which I was pretty much done with his shit. Which is a bit silly, because 'his shit' was

¹ At the time I did not know the fly's name, but some time after our first encounter I decided I should call it Marvin.

usually just him sitting still on a wall while I happened to be in the same room (and happened to be naked?). I decided that I did not like Marvin and wanted him to leave, even though he'd really done nothing wrong. I expected that Marvin, polite as he was, would notice that I didn't like him and leave me out of sympathy, but after a few more days and a few more showers, it was apparent that Marvin wasn't going to leave of his own accord. One day I noticed a pair of flies whizzing by and realized that Marvin was no longer working alone; that was the last straw. Living with one fly was a burden I could bear, at least briefly, but two or more? Don't be ridiculous. I could no longer sit idly by while these insolent insects acted like they owned the place. I decided to launch a household campaign to eradicate the entire bathroom fly population by any means necessary. I would not rest until I had definitive evidence that Marvin and his friend(s?) were gone for good.

The trouble is, killing a fly is a Herculean task. Don't let anyone convince you otherwise. Have you ever watched someone try to kill a fly? Usually a human's first instinct is to swat. Without proper equipment, or a Mr. Miyagi-esque level of focus, a direct strike will often miss as flies can literally see things moving in slow motion.² After failing a swat, being embarrassed by the tiny tactician, a person either a) surrenders unconditionally to the fly's demands, or b) becomes deranged and manic, losing all inhibition and destroying much of the environment around them as they try with increasing effort to take out the clever avian menace.

I found myself more often in the latter camp when dealing with Marvin, unable to contain my rage on the

battlefield. The specific terrain on which we dueled certainly did not help my case: my bathroom takes up forty square feet and is cluttered with all of the usual water closet accoutrements; standing in the center of the room, I couldn't fully extend either of my arms without encountering some sort of collision. I was always swatting at half mast to avoid knocking over a shelf or putting my arm through a mirror, and Marvin and his friend knew it. Eventually the flies seemed to become excited when I entered, as if our great conflict was the highlight of their day. I was far less sportsmanlike, becoming consumed morning noon and night by thoughts of Marvin and his friend and what possible strategy I could conjure that would rid me of these pests permanently.

As the war raged on, Marvin gradually appeared weaker and more tired. I noticed after a week or two both of the flies began to slow down, spending more time sitting in one place than zipping through the air. Looking back, it's likely that at this point they were both growing old; an adult housefly's life expectancy is only somewhere between two weeks and a month³ after emerging from the pupa, so they were certainly past middle age by now.

I first thought that this was an opportunity to finally eliminate the flies once and for all, but I noticed that in their old age they had become significantly less annoying to me. I actually grew to appreciate their companionship now that they weren't flying up in my face all the time. Of course they only flew up in my face when I first attacked them, but that's beside the point. They started to spend a lot of time hanging out in the space between the two halves of the shower's sliding glass door, which was ideal because there was virtually

2 Johnston, Ian. "Q. Why Is It so Hard to Swat a Housefly? A. It Sees You Coming in Slow." *The Independent*, Independent Digital News and Media, 20 Sept. 2013, www.independent.co.uk/news/science/q-why-it-so-hard-swat-housefly-it-sees-you-coming-slow-motion-8818124.html.

3 Sanchez-Arroyo, Hussein, and John L. Capinera. *House Fly - Musca Domestica Linnaeus*, University of Florida, Aug. 1998, entnemdept.ufl.edu/creatures/urban/flies/house_fly.HTM.

no chance of us coming into contact with each other, but I could still acknowledge them and strike up a conversation on occasion. I finally accepted that Marvin was a part of my life.

The next day I found Marvin lying dead on his back on the countertop.⁴ I should have seen it coming, I should have been happy that he was gone, I shouldn't have cared so much one way or the other about a fly. But seeing Marvin belly up that morning hurt like hell. In that brief moment looking down at him, I saw Marvin for who he truly was: a friend. I had tormented Marvin throughout the prime of his life, and he had always put up with me. I finally understood the reason I resented Marvin so much was because he didn't resent me. For all I know, he loved me. He had been the bigger man, always tolerating my outbursts, and that only made me hate him more. I felt terrible for the way I treated Marvin, and I wished I could make it up to him, but of course it was too late. I picked up his body with a paper towel and threw it away.

When I lived with them, I tormented my parents almost constantly, and they always put up with me. Growing up, there were times I resented them, but they've never resented me. As far as I can tell, they love me. They always tolerated my outbursts, no matter how hard I tried to convince them that I hated them. The shower feels mighty lonely now that the flies are gone. The house feels mighty empty without mom and dad.

⁴ Technically I can't prove that the dead fly was Marvin and not his lifelong companion or some other fly, but I could feel it.

Sea of Heartbreak

Kenlie Rohrer

It was what I titled the gown, with its flowing deep-blue silks. I had discovered it thrown haphazardly over a lime-green children's trash can in a Salvation Army downtown. Must've been used previously as a curtain to cover a window. Now it would cover my body and my shame.

As I raised my hand to grab the dress, I caught a whiff of musk, of man, emanating from my now outstretched palm, lingering towards the gown. It made me think of nights and yesterdays, in which I was certain nobody loved me. They had no idea that the night-black velvets that I was folded within actually gave me comfort, the comfort that hid me. My outstretched palm closed around the fabric, pulled the silks and the memories towards me. As I pulled it up and over my head, the gown caressed me like his hands had, and I let myself revel in it, but only for a moment.

I made my way over to the jewelry rack, littered with falling paper cards stuck through with old metal, 99 cents or less, but I picked a pair worth 50. I would've felt self-conscious, if there had been anybody there but me. I walked in front of a mirror, stifling a grin with the back of my hand, and put the earrings in.

I remembered sunshine, a white light bustling against the back of rough scratchy dorm room curtains. I hadn't slept at all, wedged like a little naked clementine between him and the wall, but somehow it had seemed worth it. I smiled to myself, my eyes closed, a drunk and dreaming girl. *Is this what true love is?* I felt myself wondering. It was, surprisingly, the exact

thing I had been thinking a few short hours earlier.

Whether it was the dead of night or the wee hours of the morning, I could not say for sure, but he was there, and I was rocking back and forth

on the balls of my feet, in the dark, without my clothes and the familiar scent of dread lingering in the air. It was obvious that it was only I that could smell it. He was soft, his words made of light cotton, but there was a part of me that could not trust them.

"I want to," I found myself saying, tears sliding down my cheeks, pooling under my chin. My voice was level, calm, but riddled with pangs of uncertainty and fear. It gave nothing and everything away.

"You don't have to if you don't want to. I won't be upset." He was being understanding, gentle even, his arms tried to pry me apart. I was locked up tight, my arms cracked, a rigid board laid right up against my spine. A straight line, direct, but scared. I knew he was being tender and kind, but the words always got twisted somehow. Lost in translation, or something. The wind through the windows whispered, "He doesn't love you."

I knew it was true and I almost laughed in spite of myself. Angrily, I jabbed away at my steaming tears; incessant leakage! Someone said, "Yeah, let's do it. I'm not scared." "So you're saying yes?" He probed.

"Yes."

I felt as if I had been slapped.

I tried my best but I knew he didn't think I was good enough. And somehow, weirdly, I found myself

not completely depleted by that knowledge. My atoms merged with his atoms, or something godly. An angel, light as a feather, and strangled in phantom rope pearls, a kiss daintily, a hushed word whispered across two lips.

Bites racked up my spine. Bruises and love bloomed.

I am dramatic. He felt none of this, I am sure. I am almost always sure.

You are doing this solely for experience and nothing else played in my head like a lullaby. It lulled me to sleep, my head knocked appropriately on his bare chest. Playing with my hair, drenched in sweetness and tumbling towards sleep, I smiled again. Sometimes I am amazed at how successfully I can lie to myself.

He was tired, but not from lack of sleep. From keeping up the act.

In the morning, I could not help but feel like I was a rabbit ensnared. I wanted to lurch out from under the covers and run for the hills. I wanted to never look back. I wanted to never fall in love. But we still had so long until the night would end. I guess I just wanted him to wake up too. I was tired of being alone.

Twenty minutes later, the alarm went off. We sat up at the same time, awkward and shifty, me shying away from his touch. He got up, searching for his clothes. I was ashamed at how cold I felt without him next to me.

We still couldn't find my missing earring.

"When you find it, you can put it in an envelope and mail it to me," I said, trying to grin. "Okay," he replied.

I wonder if he knew I was joking. *Or you could give it to me. And then you would see me again.*

He said he prides himself on being honest, but I had the strangest feeling he was lying to me the whole time.

He stopped his wobbly truck at the curb. He kissed me on the cheek. A nice gesture, I thought. I got out, swaying slightly.

"Thank you for playing pretend with me," I said.

"Goodbye," he said.

He never found my earring, and I never saw him again.

Out the Kitchen Window

Charlotte Whitney

“So I asked my mother: ‘What would have happened if I had been two or three years older?’” My grandfather pauses, then continues: “She responded ‘well, then your father would have sent you into the total war.’” It’s a cold day in January and I’m sitting at my desk, interviewing my grandfather for a paper on Nazi Germany. I have so many questions, but luckily, he has answers.

~ ~ ~

Unbridled fascination with political ideology is a defining characteristic of the Middelmann family. Wolf and Hanna Middelmann, two Germans who grew up under Hitler’s National Socialism and emerged as Social Democrats, have been major influences on those around them in more ways than one: not only has their activism brought aid and attention to underserved Holocaust survivors in the Baltic, their unapologetic dedication to political education has been paramount to my own political growth. As a dual-citizen coming of age in Donald Trump’s America, I’ve observed the wide spectrum of political ideology that is all around me, and my search to find my place within it has been characterized by an exploration into the past and its influence on the present, from the prevalence of extreme ideologies and their opposition to the enduring employment of ideology to define the undefinable.

Francois Facchini, Professor of Economics at

the University of the Sorbonne, defines ideology as “a system for justifying the way the world is and/or should be” (Facchini 590). For humans who are constantly left without answers and seek to create their own, adherence to ideology offers simple solutions to complex problems. When faced with unrest, fear, and confusion, the weighted blanket of ideology comforts the individual. While extreme examples exist, ideology doesn’t necessarily imply extremism: religious belief, political alignment, and vegetarianism are all examples of systems chosen by individuals that drive the way they interact with the world.

~ ~ ~

I sit up in my chair. “I know people aren’t stupid. They don’t just choose an ideology because it’s there. But I seriously can’t imagine being swayed by propaganda to that degree.”

“You have to understand, it’s not about the propaganda. It’s about the people it’s aimed at, it’s about fear. Fear, confusion, anger. Those are the weapons of indoctrination, and Hitler had them in his arsenal.”

~ ~ ~

In a dying Weimar Republic that was overrun with economic and political strife, tension and uncontrolled fear was rampant and manifested itself in political riots

and lawlessness. Extreme ideologies such as fascism and National Socialism feed on fear, telling those in distress exactly why they're upset and blaming a specific population of people for their problems. Europe's history of antisemitism provided Hitler with an obvious scapegoat that the general public wouldn't question: the European Jewish population. What ensued were efficient propaganda campaigns that disseminated absolute morals: Riefenstahl's *Olympia* bombarded audiences with images of the ideal Aryan physique and emphasized German supremacy, Harlan's *Jew Süss* disseminated shamelessly disgusting antisemitism, Steinhoff's *Hitler Youth Quex* communicated to German youth that communism was evil and that martyrdom in the name of Hitler was the highest possible honor to achieve.

These tactics worked. Alongside propaganda minister Joseph Goebbels and education minister Bernhard Rust, Adolf Hitler created with his Hitler Youth an army of boys who were ardently in favor of National Socialism and were willing to die to protect it—even if they had no idea what that meant. In *JoJo Rabbit*, the titular character (whose dedication to National Socialist ideology is personified by his imaginary friend, Adolf) embodies every quality expected of him by the Führer, and he asserts it unapologetically in a speech to Elsa, the Jewish girl hidden in his house: “I am born of Aryan ancestry. My blood is the color of a pure, red rose...” (Waititi 00:38:35).

~ ~ ~

“So what caused people to change? Like...you don't just wake up one day and say: ‘I've decided not to be a Nazi anymore.’”

“What caused a whole nation to change their minds? I don't know if anything did. Hitler died, the Allies won. But that didn't necessarily cause people to change their ideology. They didn't automatically stop

believing in National Socialism just because their leader was dead. My own father continued to spread Nazi messages in his internment camp—it didn't matter that the war was over.”

~ ~ ~

Ideology is part of a causal system, where looping effects create delusions which form a dependence on ideology, which in turn fosters more delusion (Facchini 590). Facchini interprets the processes that drive the abandonment of ideology as a feedback model with quasi-economic processes that drive change. A person believes one thing, they receive information that contradicts it, causing cognitive dissonance and, thus, a crisis of thought, the response to which being a shift in ideology (Facchini 591). This crisis of thought is governed by a cost-benefit analysis: in weighing options A and B (whether to continue adhering to an ideology or to abandon it) an individual indexes the benefits of each option and chooses one over the other based on how costly it would be to defend either choice (Facchini 595).

In *JoJo Rabbit*, our protagonist performs such a cost-benefit analysis, as represented by his growing distrust of Adolf, who becomes meaner and more terrifying as JoJo weighs his choices. JoJo's blossoming friendship with Elsa and the obvious fact that the Nazis are going to lose the war are his crisis of thought. He chooses option B—abandoning his current ideology—and acts accordingly: JoJo kicks a frenzied Adolf out of his kitchen window with an emphatic “Fuck off, Hitler.” (Waititi 01:39:50).

~ ~ ~

In a more contemporary display of an abandonment of extreme ideology, Megan Phelps Roper, an ex-member of the notoriously extremist Westboro Baptist Church, opens up to reporter Adrian Chen about the events

that drove her break from the church. Having been instituted as the WBC's social media contact, Roper spent years tweeting inflammatory comments she knew would publicize the Church's message, which resulted in her heavy involvement in internet discourse with those who challenged her.

One such challenger, a Jewish Web-developer named David Abitbol, became a fixture in Megan's life: they spoke every day, maintaining a relationship that was rooted in religious animosity but was slowly turning into a real friendship. Megan's friendship with Abitbol is what set the scene for her moment of cognitive dissonance: he posed a question about a contradiction within WBC's doctrine regarding the "sin of homosexuality," a question which would be the first domino in dismantling Megan's trust in the ideological system she had grown up in. All of a sudden, she began the process of questioning everything she thought she believed, resulting in her and her sister Grace's departure from the church roughly three years later, punctuated with a final message:

"Until now, our names have been synonymous with 'God Hates Fags.'

What we can do is try to find a better way to live from here on" (Chen 14).

~ ~ ~

"I guess the reason I'm so concerned about all of this is rooted in fear. I genuinely believe that all it will take is one political incident to set America on fire. And I'm scared, because how can I possibly navigate that?"

"Don't let fear govern your actions—that's how regimes win. Instead of being afraid of what the other side has the potential to do, focus on cementing your own side. What do you believe? What ideology will you follow? Figure that out, and you'll have the support you'll need to navigate the world, if America is really going to burn, as you say it will."

~ ~ ~

On May 25, 2020, when a Black man named George Floyd was killed by two Minneapolis police officers, a shock wave ran through the nation. That is to say, a shock wave ran through white Americans—BIPOC had known about the pervasiveness of police brutality in the United States long before then. The ensuing protests that broke out in all 50 states, manifestations of a populace's exhaustion, fear, and anger, garnered international attention (Kornfield 1). In a complex melee of clashing political ideologies, everyone had something to say about the protests: from centrist liberals who repudiated violent protest, to passionate activists (with varying affiliations) who were split in their use or condemnation of violent action, to many conservatives and the alt-right who condemned every protester, peaceful or not, as radical hooligans, hell-bent on destroying America.

Amidst a barrage of Instagram infographics about social justice and photos of crowds of teargassed protesters, I did not know what my place was in an issue I was trying my best to understand, that everyone seemed to have a different opinion on. At that point, I was identifying myself as moderate liberal—a decision I had made on the fly in my senior year politics class so that I wouldn't sound too radical to my classmates. This chosen ideology made me reluctant to endorse any direct action, opting instead to take a more moderate path of educating myself and donating to disparate causes. Five months later, this would play out differently.

~ ~ ~

"This may sound insensitive. But, like, how come you're such a liberal? I feel like you're part of *the* key demographic for indoctrination in the 1930s—how do you possibly escape that?"

"I don't really have an answer for you. I think

I just got lucky—there were some teachers I had who genuinely cared about my learning. I felt I could trust them even amidst all the brainwashing. Going to college, learning from adults who weren't my parents, that was important. Even if there had been a sliver of Nazi ideology lying dormant in my brain, that was all wiped out by becoming educated."

~ ~ ~

In describing antifascism, historian Mark Bray uses a number of specified terms, referring to it as "a method of politics," "a locus of individual and group self-identification," and "a transnational movement" (Bray xiv). Antifascism, and its organized form Antifa, has been twisted by those most threatened by it as an attempt to destroy America and invoked to delegitimize less radical movements such as Black Lives Matter (Mogelson 5). Valid criticisms of antifascist groups exist: especially recently, many white activists have needlessly incited violence and twisted the goals of BIPOC-led organizations to meet their own anarchist urges, causing any social movement to be overshadowed by white, militant antifascism (Mogelson 5). Indictments of antifascists as terrorists, however, are decidedly more inaccurate: to date, there has only been one death caused by a self-proclaimed antifascist, in contrast to the more than 320 deaths caused by right-wing extremists in the past century (Mogelson 1).

The above description is not my endorsement of antifascism as my chosen political ideology, the definitive answer I have chosen to give the questions that drive most of my thought processes. Rather, it represents the event that shaped my own moment of cognitive dissonance, that influenced my own cost-benefit analysis of my chosen ideology. Having started my political science degree and studying Nazi propaganda films, all the while living through one of the most polarized American elections to date, the scene was set for my inevitable questioning of ideology.

It was the discussion of fascism and antifascism I had with my German film professor that served as an inciting incident in my ideological journey. Closely following the political paralysis of the summer, I felt all of a sudden like I had been provided with concepts that verbalized the way I felt about my society better than the label I had arbitrarily given myself as a teenager. Although I knew that I wouldn't find the answers immediately, or even all in one place, I felt mobilized to begin a shift in a different direction, from a moderate ideology to one that I hadn't (and still haven't) found the words for, but one that would be rooted in the empathy and passion I feel should govern political behavior.

~ ~ ~

"What if I choose wrong, what if that puts me in danger?"

~ ~ ~

My grandfather doesn't have an answer to this one. It's been almost a year since his passing, and I still can't help but look to him to help me navigate the terrifying world I live in. It frustrates me to no end that I can't just turn on Skype when I have a question, can't send him a letter when I'm confused. So I make up his answers in my head, a little pseudo-ideology of my own, my system for justifying the way the world is or should be.

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Dysphoria

Rita DiSibio

Language is a funny thing, you know? Different “conglomerations,” I like to say, of spaces and letters mashed together to indicate what’s this and what’s that.

I wonder if all the people squished together on the bus this morning are a language. What would it sound like? Would it be nice? Or would it sound, I don’t know, German?

I laugh as I step to the ground, imagining myself as a letter breaking free and floating away in the wind.

Or maybe I am a space.

What would I be a space for? Or for whom? And what kind of space? An apologetic one, probably. I feel like I always hear people say “take up space!” but really, they mean “you may only take up space if you fit into my picture perfect ideal of humanity.”

Sometimes these combinations of spaces and letters, these “words,” have what I call hard meanings. They mean exactly what they say they mean, what they are told they mean: chest, t-shirt, hair, etc. I also have what I call soft meanings. These are the words pulsing with subtext, the words meaning more than what’s been given to them: alive, happy, pain, etc.

And sometimes, actually sometimes more often than not, I find myself realizing it’s rare to find a truly hard word that isn’t secretly soft in some context or other. And I think sometimes words are taught disguised to us, as if learning the true softness of the word will somehow break the fabric of society.

While I walk to class after stepping off the bus this

morning, I am pleasantly surprised by an image. No, not an image. Reflection. I am pleasantly surprised by a reflection I see in the window of some science building I never cared to learn the name of.

I am distracted by the way his faded orange t-shirt accentuated the flatness of his chest, the way the bottom of his boxers pushed against the blue of his jeans. I like the way his backwards baseball cap hid his unwashed hair.

Three letters popped into my head:

B O Y.

See this, this is why language is a funny thing. Because in the dictionary, reflection just means an image seen in a mirror or a shiny surface. But it’s more than that. It’s a feeling, a memory that isn’t a memory. It’s reaching out into the darkness and finding a heart I forgot is mine beating *home home home*.

In the dictionary, hair just means any of the fine threadlike strands growing from the skin of humans and other animals, but this definition doesn’t capture the euphoria of my first hair cut, the euphoria of actually being able to wear a hat backwards.

You know that feeling of running down a hill in the middle of summer, wind in your face, blue skies and green fields forever? Yeah. Imagine getting that feeling from a backwards baseball cap. The dictionary could never capture that. But that doesn’t make it less real.

Right?

I sit down in my seat after walking to class after

stepping off the bus that morning and I am late. I can feel everyone's eyes on me, burning through me like they're trying to pry me open so all of my secrets fall out. I try to ignore all of it by focusing on the blank page of not-yet written notes in front of me.

But sometimes, God, sometimes, when I try really hard to focus, my thoughts get really loud, and I can't quite hear the sounds of the real world around me. The teacher asks a question, and I am dreaming about the boy in the science building window. But the teacher is asking me a question, and the moment of euphoria turns sour, shocking me into sticky sleep paralysis. I watch someone else answer for me and I am assaulted by a different three lettered word:

S H E.

I know that "she" is pronounced like the quieting of a room, but all I can hear are alarm bells ringing in my ears SHE screaming SHE red lights SHE I couldn't think SHE I can't think SHE is it hot in here SHE is it a lie SHE am I real SHE how do I get out of my skin SHE I hate this body SHE I can't see SHE I can't move SHE no no no no no SHE I'm not SHE I don't pass SHE I can't pass SHE I can't think I can't think I can't think

Am I breathing?

A far away voice that doesn't seem like mine asks my body to smile and nod. Pretend you can hear, pretend you are there and maybe they won't notice.

But they don't notice. That's the problem.

I smile.

Social Science

Policy Prophecies: A closer look at the disparity in violence between El Salvador and Guatemala

Hailey Egelhoff

The following is an excerpt from a longer piece. For full text, please visit https://scholar.colorado.edu/concern/undergraduate_honors_theses/2r36tz48t

Introduction

Latin America has been plagued with violence of various types for the majority of its history, yet some countries have been able to develop and escape the cycle of violence while others remain incredibly dangerous and violent. This paper will attempt to answer the question: What explains the disparity in violence between El Salvador and Guatemala? Gang violence in Guatemala and El Salvador limits development and is a daily threat to individuals in gang-controlled regions. The experience of violence in El Salvador and Guatemala follow similar levels of violence and history, yet in 2017, El Salvador had 42.23% more homicides per 100,000 individuals than Guatemala (World Bank, 2017). Beyond the cost of human lives, the epidemic of gang violence has led some to flee to other neighboring countries, resulting in questions regarding how to accommodate the influx of refugees. Previous research has primarily focused on the narrative of violence, yet there remains to be little investigation of the violence disparities between Guatemala and El Salvador. Through obtaining a deeper understanding of the reasons behind the disparity in violence between the two cases, it may be possible to use the information to develop impactful policies that will curb the violence and improve safety in the region. By increasing safety in the region, Guatemala and El Salvador may be able to further develop rather than lag behind neighboring countries.

According to a 2019 study on global homicide

conducted by the United Nations Office on Drug and Crime (UNODC), of the 30 cities with the highest violence rates, 26 were in the Americas (UNODC, 2019). The Northern Triangle region of Central America, composed of El Salvador, Guatemala, and Honduras, has particularly high levels of violence in comparison to the rest of Central and South America (Eguizábol, 2015; UNODC, 2012; Ingram & Curtis, 2015). In this region, violence is pervasive and takes many forms, ranging from international drug trafficking to structural violence, which disadvantages already marginalized populations. The violence in El Salvador and Guatemala impact the citizens in each country, endangering their lives and livelihoods that have resounding effects on the individual countries and the region as a whole. Some individuals have had to flee their country and seek refuge in the United States and Mexico, resulting in an international problem of how to accommodate such individuals. Gang violence is one of the largest contributors to the overall high levels of violence in the Northern Triangle with two major gangs, or *maras*, Barrio 18, also known as the 18th Street Gang or M-18, and Mara Salvatrucha, also known as MS 13, engaging in extortion of citizens, violence against women, and forced recruitment of civilians (Insight Crime, 2018; Seelke, 2016). With origins in the United States and factions of the gangs in other Central American countries, such as Nicaragua, Costa Rica, and the United States, the gangs have been classified as “transnational.” Even so, the *maras* continue to focus

on local interests (Seelke, 2016; Olson, 2015).

In this thesis, I argue that the government policies each country has chosen to combat gang violence better explain the difference in violence between Guatemala and El Salvador than the demographic characteristics, history of violence, or level of development of each country. More specifically, the *mano dura* (iron fist) policies, which allow police to arrest individuals with suspected ties to gangs without evidence of criminal activity, that El Salvador continues to implement, results in a cycle of violence due to the environment of corruption that the policy creates, perpetuating gang violence. Although Guatemala has used some anti-gang policies that resemble *mano dura* ideology, its focus on decreasing corruption and impunity has been more effective in reducing gang violence, resulting in the disparity of violence between Guatemala and El Salvador. The International Commission against Impunity in Guatemala (CICIG), introduced in 2007, has focused on reducing corruption in the country and has led to lower levels of violence. Despite CICIG being an international commission that investigates and prosecutes crime and corruption in Guatemala, its authority is limited and must receive approval from the Public Prosecutor's Office and the Judiciary (Schneider, 2019). Any investigation, policy development or reform, and prosecution must be approved by the Guatemalan Public Prosecutor's Office; therefore, it remains a government policy decision to renew the CICIG mandate and accept CICIG's reform proposals.

To investigate the disparity in violence between Guatemala and El Salvador, a direct case study will be conducted. The similarities in terms of demographics, development, and sources of violence between the two countries will first be explained to demonstrate why the difference in homicide rate is significant and worthy of examination....

The central focus of this paper lies in the overwhelming similarities between El Salvador and

Guatemala with differing outcomes of violence. The two countries host the majority of MS 13 and Barrio 18 members. Guatemala has an estimated total of 22,000 gang members (17,000 Barrio 18 members and 5,000 MS 13 members) while 20,000 gang members were estimated in El Salvador (8,000 Barrio 18 members and 12,000 MS 13 members) in 2012 according to UNODC statistics (Seelke, 2016). However, these statistics may have changed and reports including the 2015 Unwilling Participants report by the Jesuit Conference of Canada and the United States estimates that El Salvador had as many as 60,000 total gang members in 2014 (de Waegh, 2015). Besides similar gang demographics, the two countries have a shared history of civil war violence, and similar levels of development. The United Nations Human Development Index (HDI) has ranked El Salvador 124th in the world and Guatemala 126th, demonstrating similar levels of economic, social, and political development (UN Human Development Index, El Salvador, 2019; UN Human Development Index, Guatemala, 2019). There are three key dimensions that the UN uses to calculate the HDI ranking for each country: a long, healthy life measured by life expectancy; access to education measured by expected years of schooling and the mean years of schooling among adult populations; and a "decent standard of living" measured by Gross National Income per capita and adjusted to the country (Rosner, 2019). In terms of social development, El Salvador ranks higher than Guatemala in multiple categories, with an expected 12 years of education, compared to 10.6 years in Guatemala, a skilled labor force making up 37.4% of the population, compared to 18.1% in Guatemala, and multidimensional poverty making up 7.9% of the population, compared to 8.9% of the population in Guatemala (UN Human Development Index, El Salvador, 2019; UN Human Development Index, Guatemala, 2019). Since the two countries share similar population demographics and levels of development, we cannot conclude that the disparities in violence

are caused by social factors such as unemployment or education.

Despite the data depicting El Salvador as economically and socially stronger, El Salvador has the highest level of violence, quantified through homicide rates, in the Northern Triangle region whereas Guatemala has the lowest level of violence. El Salvador has been called “a nation held hostage” due to its high homicide rate largely attributed to the gang violence between MS 13 and Barrio 18 (Whelan, 2018). Even though Guatemala faces homicide rates significantly above the world average of 6.1 homicides per 100,000 individuals, its HDI ranking would suggest that it would experience higher levels of violence than El Salvador due to worse social and economic conditions (World Bank, 2017). The reality of gang violence in El Salvador and Guatemala compared to what may be expected based on the UN HDI data and the similarities between the countries demonstrates that there is another factor that makes El Salvador more vulnerable to gang violence that has caused the disparity in violence between the two countries.

[...]

Maras versus Pandillas

The gangs MS 13 and Barrio 18 are classified as *maras*, more recent to the Northern Triangle than the historically prevalent *pandillas*. The existence of the *maras* is specifically tied to U.S. deportation policies which began in the 1990s while *pandillas* have been present long before the U.S. deportations and tend to be more localized than the *maras* (Seelke, 2016). The two *maras* themselves have evolved into sophisticated criminal organizations with transnational characteristics, however, maintain “rooted in urban marginality” (Wolf, 2012). Members of MS 13 and Barrio 18 have been reported in neighboring Central American states including Costa Rica, Nicaragua,

and Panama, along with factions in the United States (Seelke, 2016). Despite the “transnational” term associated with the *maras*, it is important to recognize that the subgroups known as “*cliques*” or “*clicas*” across countries are semi-autonomous and usually associated with a certain territory (InSight Crime & The Center for Latin American and Latino Studies - CLALS, 2018). There is no formal hierarchical structure that characterizes the *maras*; instead, each *clique* follows the local leader or “*primera palabra*,” even though the *cliques* associate themselves with the larger *mara* identity (InSight Crime, 2019, MS 13). The *mara* phenomenon along with extreme violence of the gangs has garnered international attention as well as local governmental initiatives to combat the organizations.

[...]

U.S. Deportations to Central America

The spread of MS 13 and Barrio 18 to Central America is largely attributed to the US implementation of policies to deport immigrants with a criminal record back to their home countries (Stoll, 2017; Zilberg, 2011). Mass deportations of criminals from the United States to their country of origin began without consulting the home countries, which destabilized the already fragile and broken countries (InSight Crime, 2019, MS 13). Due to the increasing rates of violence and homicide between the gangs in Los Angeles along with the riots and looting that followed the Rodney King trial in 1992, which involved many Latinx gang members, officials looked to return undocumented immigrants to their home country (Stoll, 2017). Statistics from the Department of Homeland Security (DHS) and the U.S. Immigration and Naturalization Service (INS) recorded 1,763 people deported back to Guatemala in 1995 (Jones, 2013). However, the number of deportees to Guatemala increased to 4,543 in 2000, peaking in

2011 with 30,313 Guatemalans deported, demonstrating a rapid increase after the implementation of the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) of 1996 (Jones, 2013). The IIRIRA facilitated the deportation of immigrants which included gang members, individuals with minor and extensive criminal records, and undocumented immigrants more generally (Seelke, 2016; Legal Information Institute). The deportation of gang and non-gang affiliated criminals back to Central America is said to have “exported a Los Angeles gang culture to Central America,” facilitating the expansion of MS 13 and Barrio 18 territory to the Northern Triangle region (Seelke, 2016; Stoll, 2017).

The deportations of gang members and undocumented immigrants with a criminal record has not stopped, with a documented 129,726 ex-cons and criminals returned to Central America from 2001 to 2010 (InSight & CLALS, 2018; DHS, 2011). Over 90% of the deportees were sent to the Northern Triangle specifically (InSight & CLALS, 2018; DHS, 2011).

Further deportations statistics show that between

fiscal years 2014 and 2017, an additional 45,851 people with criminal records were returned to Guatemala and 29,249 to El Salvador (DHS, 2014; DHS, 2015; DHS, 2016; DHS, 2017). The practice of deporting individuals to their country of origin with little communication between national governments put further strains on the weak governments in Guatemala and El Salvador. The influx of individuals with little cultural or emotional ties to the country, many of whom did not even have a strong grasp of the Spanish language, required state support to reintegrate into society, support that was not available (Stoll, 2017; Bruneau et. al., 2011). Combined, the lack of economic opportunity, distrust of government, and individuals looking for a social connection with the abundance of weapons post-conflict provided incentives for returnees to fall back on the familiar gang lifestyle and for non-members to join the organization (Bruneau et. al., 2011).

[...]

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Evaluating the Capacity of Green Infrastructure Projects to Facilitate Empathy with Nature in their Users

Madison Young Matthias

The following is an excerpt from a longer piece. For full text, please visit https://scholar.colorado.edu/concern/undergraduate_honors_theses/wh246to1z

CHAPTER 1: INTRODUCTION

Urban places are built by humans around human needs and desires and are driven by global and economic growth and access to advanced technologies (Clark, 2020). The result of this building and re-building has been so profound that it has been granted its own name: the anthropocene. This term specifically refers to the “massive and rapid human-induced global ecological change” (Clark, 2020) seen in contemporary times, and implies that the over extraction of resources, rapid extinction of species worldwide, and anthropogenic climate change (Clark, 2020) will disturb not only the “planet’s health” but human health as well. Amidst current global efforts to prepare for and mitigate the effects of climate change, many questions arise: What if we focused on developing cities while prioritizing climatic and ecological health? What if we harnessed the influence places and spaces have in shaping the ways we live our lives? Could we influence people to act with more compassion and understanding, or empathy, towards nature? What would this look like? And finally, does this behavior already exist, and if so, what urban designs would embody it?

The first step in exploring these questions was to select an appropriate psychological framework through which to understand the relationship between humans and their environment, specifically the connection to nature. The phenomenon of empathy, or an interpersonal understanding of another’s internal or subjective state, gave this study a

psychological direction with both substantial literature and various metrics. Empathy is, additionally, an important characteristic of building and maintaining relationships. Theoretically, when one empathizes with another, they begin to appreciate and understand this other.

Next, when refining a design type, designs were chosen that display an understanding and appreciation of nature. Green infrastructure design types were thus selected as they consistently weave together aesthetically-pleasing design and natural elements while mitigating, or solving, urban environmental problems. They are also usually public and often interactive. The consistent presence of nature in these designs offers the greatest opportunity to study how a design can influence a user’s perception of *such* nature. This is followed by the assumption that the presence and robustness of these “empathy influencers” within a design will be strong indicators as to whether users feel empathy towards nature as a result of the design and, consequently, change their behavior towards nature overall. Despite great variability in purpose, green infrastructure designs are always human constructions that incorporate natural (i.e. ‘green’) elements. These designs are often long-term, ecologically inspired solutions to ecological issues within the built environment. Once better identified, the marriage of the similar values within nature-based designs and nature-focused empathy could be strengthened and could beget exciting prospects for long-term,

ecologically-optimized and resilient design solutions.

This study's initial goal is to assess the presence and strength of nature-focused empathy elicited in users from designs. This paper defines users as those that employ and interact with a green infrastructure design—American, public, and generalized in scope. Before this can be done, however, elemental stimuli that facilitate empathy with nature must be identified within existing research and literature. With the limited scope and time of an undergraduate research project, surveying and assessing individuals' invoked empathy when interacting with a green infrastructure design was not feasible; it did, however, provide valuable insight that humans were not necessary to answer the question posed. Consequently, this study uses a combination of existing empathy metrics (e.g. aforementioned triggers, interpersonal surveys) and design literature to create a framework with which to measure the capacity of a green infrastructure design to facilitate empathy with nature for users. This framework is then applied to two green infrastructure projects that appeared most likely to embody the upper and lower bounds of possible empathy elicited from a single design. I, the researcher, was the sole contributor to the preliminary research, creation of the framework, and subsequent analyses.

[...]

GEOGRAPHIC PERSPECTIVES

The concept of *place* underlies the intersection of empathy, nature, and design. In geography, a sense of place denotes “the [contested and constructed] specific feelings, perceptions, and [unique] attitudes generated in people by the particular qualities of a locality, or the events that they experience there” (Castree et al., 2013). A study by Walker and Chapman (2003) about 258 visitors to a Canadian national park found that a sense of place influenced both empathy and perspective-taking, while perspective-taking also

influenced empathy. Places, tangible and perceptual, are the medium through which people connect to their environment. While this does not transfer well when measured objectively, metrics such as the consistency of a design's nature with the regional biome help inform the topic.

The use of empathy in this study is highly phenomenological as it focuses on the experience humans have while experiencing green infrastructure designs (via measuring the aspects of the designs themselves). The study of experience can be narrow in scope, focusing on one element or object as introduced by Edmund Husserl; broad in scope, using imagination of an object's potential (and constraints) as advocated by Jean-Paul Sartre; or in-between examining meanings and uses as did Martin Heidegger (Simpson & Ash, 2020). The frame of phenomenology used for this research is broad and more contextual, and thus closer to Sartre and Heidegger's perspectives. Individual experiences *will* be biased by their previous experiences. Human emotions are, furthermore, recognized by geographers as able to “transform the way we think about the local and the global, enable us to connect with different lifeworlds, and encourage us to appreciate the emotion present in spaces and communities” (Lucherini & Hanks, 2020). Aside from seeing emotions as ways of knowing, they are also confounds in scientific replicability and highly dynamic in meaning and context.

[...]

Wherever people exist, clues of their “philosophical arguments, critical and political agendas, and understandings [of nature]” remain inscribed on the landscape. In geography, landscape can be analyzed as a process by which our national, social, and subjective identities are formed, as a spatial form and artistic genre which encode specific historical narratives and political practices, as a site of visual appropriation, of historical

memory, or as the medium in which body and world affectively encounter each other” (Dubow, 2009). This “body and world” encounter is often explored using structuralism, an approach that examines the human beliefs, ideas, and behaviors behind phenomena and how they perpetuate those phenomena (Smith, 2020). “The structuralist approach was invented and developed by several key thinkers—e.g., Saussure, Lévi-Strauss, Lacan, Barthes, Foucault—and many others across several disciplines” (Smith, 2020). Criticisms of this have given rise to poststructuralist epistemological and ontological analyses. In other words, not only should we look into ideas that beget reality but how those ideas came to be (Woodward, et al., 2020).

Recent studies regarding geographical possibilism have opened up new theories that counter environmental determinism — exploring the “possibilities that exist in nature and especially on those that are effectively used through human activities in various times and places” (Berdoulay, 2020). When applied to issues of the anthropocene, possibilism implies that humans have agency in the way the environment manifests. This agency, when framed within contemporary anthropogenic behaviors, forms the foundation for this study’s assumption that humans do not currently actively empathize with nature.

Another important consideration when investigating the interactions of humans with their environments is subjectivity. For “most of geography’s history, subjectivity has meant understanding the role of various social locations (such as class, gender, ethnicity, and sexuality) on the construction of the individual’s relationship with the world, which shapes their knowledge and understanding of the world” (Sharp, 2020). Recognition of subjective variances in the perceptions of both research participants and researchers themselves has led to more profound and conscientious studies; this occurs though considering the “effects of less visible or conscious markers of identity such as psychological and emotional

characteristics, the influence of bodily knowledge, and the subjectivity of things external to the individual: networks, collectivities, technologies, and nonhuman animals” (Sharp, 2020).

When these theories are reified, they create and uncover structures of power throughout landscapes and interactions among them. This brings up questions such as: Who has the authority to be making choices about nature? Who decides who gets to experience nature? Who gets to decide what is natural? Who can access this nature or design? Are ecologists the best, or only choice? It is important that these systems of inclusion *or exclusion* are weighed when concluding the ability of designs to facilitate empathy with the public. People, designs, and natural elements vary across places; this requires more stringent controls to extract valid results but also provides great potential in personalizing and diversifying design criteria and analyses.

Additionally, geography has set precedents of correlations between environmental and human health, and employing the landscape as therapy. While knowledge on the effect of environmental health on human health is highly sought by governments and academics, the actual impacts of the environment of human health are difficult to measure, verify and, thus, impossible to translate into policy (Elliott & Thompson, 2020). Research on physical, social, and symbolic dimensions of places and spaces that were associated with healing has helped develop theories of “relational understandings, of life courses, bodily abilities, and critical policy to show how specific places and spaces can be harnessed to enable human health and flourishing” (Foley, 2020). This implies that urban planners could harness the healing power of certain spaces to ameliorate issues for and enrich the quality of life of all urban users.

[...]

CHAPTER 3: METHODS

SUMMARY

To assess the capacity of a green infrastructure design to facilitate empathy with nature in its users, the researcher developed a new metric, the END framework, to assess observable elements within green infrastructure projects. These elements were initially based on the DEN survey and then expanded upon with input from other empathy surveys and other literature on elements shown to help stimulate empathy

in human users. END was developed as a research tool for consistency in evaluating designs and its similarity to the survey-format used to measure empathy. It is then applied to two green infrastructure designs that are most likely to embody the upper and lower bounds of possible elicited empathy; this is used to infer the overall effect these designs have on how their human users perceive nature. The END framework presents a novel tool for others to use when assessing design.

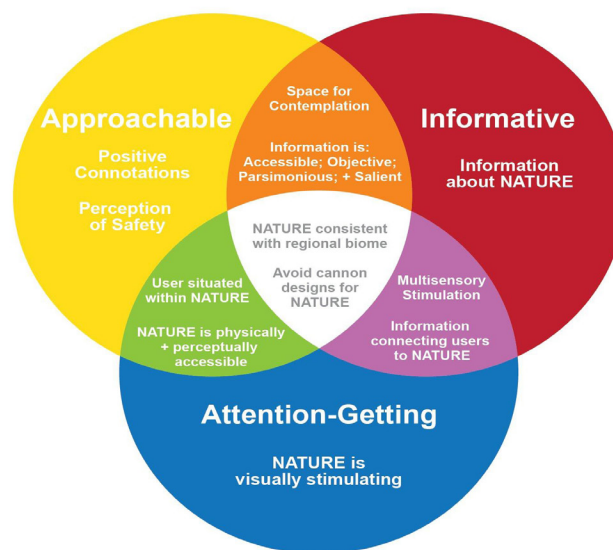


FIGURE 3.3 The Connection of END Criteria

The END criteria, as illustrated above, are broken down into three main categories: Approachable, Informative, and Attention-Getting. An approachable design ensures that the user feels safe and comfortable near and within the design. An informative design, by END standards, includes information about nature, nature as it relates to users, and space for this deliberation to take place. Finally, an attention-getting design captures the user's attention and continues to engage them with the design. When this is brought together, the process of empathy is mimicked in that users are drawn to the design, feel comfortable and willing to interact with the design, users can understand the state of nature in the design, and then users can apply this nature state to their own state. The process is not necessarily linear but is largely iterative and is likely to follow in this general sequence.

[...]

IMPLICATIONS + CONCLUSION

Finally, I want to explore issues that this research can help to solve. First, it is worth noting that both social norms and empathy beget positively reinforcing feedback loops that can be used to designers' and policy makers' advantages. Social norms influence behavior and are proven to be the number one influence on human behavior. Similarly, the process of empathy (neurological and cognitive) promotes itself – coming back to commonly-accepted neurological theories that one can “rewire” the neurons in their brain to be easier and faster each consecutive time. Consequently, incorporating empathy in design would serve two positively reinforcing purposes: 1) catalysing the process of empathy (and following processes) in each user, and 2) establishing social norms of empathy-with-nature in design that would promote a social spread of empathy.

This study supports the largely untouched heuristic of empathy in solving urban issues. Through curating information on the intersection of empathy, nature, and design, the researcher was able to design a tool with which to measure indices of empathy in green infrastructure projects. This tool, a framework of 26 questions regarding design form and characteristics, outlines triggers of cognitive empathy to be accepted or rejected and was applied to designs likely to embody the upper- and lower-limits of design-evoked-empathy. These analyses indicated the intrinsicness of safety and prioritization of ecological aesthetics in minimum design requirements and the feasibility of creating a green infrastructure project that comprehensively facilitates empathy in users. Immediate applications of these findings would include informative material in designs while longer reaching policy and studies would require human feedback on the causes and potency of experienced empathy for nature.

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Olympic Legacies: A Comparative Analysis of Olympic Vision Planning

David Broughton

The following is an excerpt from a longer piece. For full text, please visit https://scholar.colorado.edu/concern/undergraduate_honors_theses/ww72bc34h

Introduction

Brief History of the Olympic Games and Olympism Movement

Historically, the Olympic Games have centered on the principles of inclusivity, competitiveness and facilitating international cooperation through Olympic sport. In addition to fostering this ideal, the International Olympic Committee (IOC) and their respective host sub-committees mutually agree to discuss, plan, and prioritize specific financial, social legacies and goals to be upheld by hosting Olympic Games. Oftentimes, countries who seek an Olympic bid will aim to improve their economy through restructuring the city's image in a way that capitalizes on the city's marketability and often encourages higher levels of tourism and highlights marketable parts of the city's image. Additionally, many bids believe that hosting the Olympics can provide a boost to the local economy via increased revenue surpluses and improved image of the city and its respective country framed as a tourist destination (Wilson 2015). However, many Olympic bids rarely result in the vision a city wants from hosting the Games. Oftentimes, lack of funding, political turmoil, disorganization of the Olympic committee or other issues can tamper with the lasting outcome hosting an Olympics can have for the country who wishes to host. This issue is the heart of why the Olympic Movement's structure needs further examination. The backbone of the Olympism Movement is the doctrine that international sports

can be used to facilitate international cooperation through sport, in the spirit that friendly competition can promote peace and mutual understanding between nations. This doctrine has been essential in countries securing bid approvals from the International Olympic Committee, who governs the planning and structure of a city's Olympic vision and encourages spending for the construction of Olympic venues, athlete villages and other infrastructure that is necessary to receive the "Olympic seal of approval." However, these construction projects have had a direct impact on the profitability and sustainability of previous Olympic Games and have historically had the biggest impact on overall Olympic profitability and the permanence of Olympic venues after the Games' conclusion.

The International Olympic Committee (IOC) has sought to recognize and prioritize host countries that value universal rights to play sports and have democratic ideals inserted into its purpose and mission statement. The IOC has tended to favor countries with democratic ideals, high GDP levels, and who recognize universal human rights for all citizens. Additionally, the IOC requires bidding hosts to submit a "vision statement" which outlines a city's goals from hosting. This includes financial targets, such as renovations to existing infrastructure, merchandise and image marketing strategies, and projected long-term economic growth expectations following the conclusion of the games. However, many cities often overspend during the planning phase, channeling funding from

public sector streams of income such as tax revenue and sponsorships. However most budgets average merely \$1 to \$2 billion in costs on paper. In practice, costs tend to be much more, and can be attributed to IOC regulations requiring host cities to construct brand-new venues and provide public funding, resulting in higher overall costs. As a result of this, most hosts have not profited from the Games consistently throughout Olympic history. The only exception to this had been the 1984 Los Angeles Olympics, who have managed to circumnavigate planning costs and the 1992 Barcelona Olympics who had a clear post-Olympic vision via boosts to tourism. Under these costs, previous Olympics have traditionally always constructed new venues to house Olympic stadiums, such as Olympic pools, Track and Field and other venues. However very few of these monuments have tended to remain after the Olympics' conclusion. For example, the 2016 pool stadiums from Rio 2016 were constructed for swimming events throughout the Olympics, and the Rio Organizational Olympic Committee (ROOC) had plans to revitalize the venue as a new educational facility. However, the plan failed due to further escalated debt accrued from hosting the Olympics, including a lack of surplus revenue, profit and the correct structures needed to manage the upkeep of venues, such as pool construction workers to manage upkeep and the replacement of pool infrastructure needed to endure permeability of the venue.

This paper will analyze the sociopolitical structures needed to assure the permanence of "Olympic Legacies" as tangible, sustainable, lasting impacts to host cities as a result of hosting an Olympic Games (MacAloon 2002). MacAloon defines this term in the context that Olympic legacies have an impact on a city's image, but lacks a definition to a hard and tangible legacy in terms of infrastructure. Historically, legacies have been referred to in terms of the lasting impact that media coverage, a city's vision, or the public's view of a host city has impacted people's understanding

of the host city after a games conclusion. China, as an example, structured its image to frame its vision of its Olympics as a modern utopia that sought to "revolutionize" the public's view of the Olympics, which until then, had been losing popularity. China, after finishing its construction, had completed the "birds nest stadium," with estimates totaling about \$2.3 billion US dollars. Annual expenditures on Olympic infrastructure has increased every year due to inflation. How a country chooses to frame its image directly can also have an impact on sustainability. Barcelona 1992 chose to frame its image in a way that encouraged tourism, by highlighting aspects of its beaches, people, food, and other qualities directly linked to tourism.

Few studies have examined the political structures of governments who have hosted in comparison to economic and social factors that have had lasting impact on city hosts. By comparing historical Olympic data gathered from individual country's Official Olympiad reports, I would hope to synthesize the data into a framework that will provide a model for how a host country can likely retain their Olympic venues through strategic planning with the IOC.

[...]

London, England 2012

London's regeneration planning operated on three levels: local, city-wide, and national. Among these, the most crucial was the national level, which had power in directing urban policymaking to appropriate smaller city and local sub-committees. The DCLG, a national planning policy institution for the Olympics of Britain's national government was the main source of funding towards the Thames Gateway Development Corporation (LTGDC) which according to Smith's research on London's regeneration planning, was formed to regenerate large parts of East London (Smith 2014). Acting under the authority of the LTGDC,

then mayor of London Ken Livingstone emphasized East London was the only area that could meet IOC requirements and leave a positive impact on an economically crippled area of London. The nomination of a site in Stratford of the Lower Lea Valley was critical to the revitalization of East London due to its immense size and proximity to the city's center. Additionally, this area had ongoing urban initiatives to reconstruct transportation and housing constructions but had lacked the funding necessary to complete its projects. Therefore, by combining these factors, the urban regeneration plan constituted a construction proposal that would use the Olympics to construct new railways between the area and downtown London, new housing units, roads, parks, tourist attractions, and various businesses.

One of the attributable factors of why London succeeded in creating its own Olympic vision could be attributed to the lack of political and organizational dissonance experienced by planners from members of Parliament, organizers, and funders. Generally speaking, all groups directly impacted by the venue, housing, and infrastructure construction were in favor of revitalization, including most London inhabitants, business owners, and political parties, due to the increased international media attention and potential profits that tourism and infrastructure could bring to both the national and local economies. However, not all plans for London resulted in positive outcomes. One outcome noted by Giulianotti emphasized the lack of mobility in London during the Olympics as conducive to the undermining of London's goal for a positive media image. Analysis by Giulianotti, Armstrong, Hales, and Hobbs (2015) of mobility in the London 2012 Olympics highlights two specific and recurring issues faced during the games, transportation and resulting housing vacancies. Giulianotti notes transportation mobility during Olympic events caused sharp increases in inefficiencies in traffic, in a large part due to elitism.... Gentrification seemed to be a more

persistent and long-running issue facing London's ability to fulfill its terms of success outlined in the "London Plan," specifically in terms of the impact urban regeneration had on local residents.

The other issue was the vacancy of housing around Olympic Park constructions. Giulianotti et al. noted that Olympic preparations in the district of East London's Newham, required that over 400 residents and 200 businesses owners vacate their homes and businesses on the Clays Lane Housing Cooperative to make way for the construction of the Olympic stadium and surrounding roads (Giulianotti et al. 2015). Displaced persons were not compensated for this removal and the action represented the first "fundamental shift" in political control over the local lands in East London during this stage of planning. Paul Watt's (2013) interviews conducted in the Newham Borough's Clays Lane and Carpenters Estate areas of the Greater Lea Valley Project centralized around the socioeconomic impact gentrification had on its residents. Older, more long-term residents in Newham reported a greater sense of belonging and community, resulting in overall discontent at the city's gentrification process of "revitalization" for the construction of the Olympic Park. However younger residents reported less discontent due to community and more frustration at rising housing costs associated with the construction of new housing units surrounding their residences located near the Olympic Park construction areas (Watts 2013, 113).

[...]

Rio, Brazil 2016

[...]

Reasons as to why Rio failed could be attributed to a variety of factors, specifically varied economic,

social and political issues that made planning for Rio particularly difficult, and undermined the ability of the Brazilian government to create institutions that could support their sustainability goals listed in the SMP. Economic issues that influenced the Olympic policymakers' ability to implement the Games included the impact of the 2016 recession on the market and the debt accrued from hosting the FIFA World Cup in 2014. The main social issues facing Rio mainly involved public health, being the outbreak of Zika-Virus and media pressure to address pollution issues and health threats to athletes competing in water events. Finally, political pressures from Brazil's largest corruption scandal in history, the Petrobras Scandal, contributed to the distrustful image the public had towards the government and contributed to the crippling economy. Combined, these issues created a climate of economic uncertainty, driven by Brazil's pride at producing the image of an up and coming world economic actor via a "BRIC nation" (O'Neil 2001; Nobre 2016, 5). yet leaving the country in a weakened economic and political state rife with problems.

Between 2015 and 2016, Brazil slumped into a wide-spread economic recession, resulting in a contraction in the total economy, and causing rampant unemployment. At the beginning of 2016, Brazil's GDP growth rate shrank by 3.6%, slightly lower than the 2015 shrinkage of 3.8%. This contraction of the economy was persistent for 8 consecutive quarters, increasing the unemployment rate to 12.6% by January 2016 according to CNN, leaving over 13 million Brazilians out of work.

The cause was a decrease in exports to China, whose growing economy required fewer commodities from Brazil. Additionally, since Brazil is a mostly commodity-based economy reliant on oil and agriculture, prices of goods are vulnerable to instability due to competitive world prices. As a result, in 2016, Brazil's commodities of oil, sugar, coffee, and metals all dipped in value. Lastly, the media attention of the

Petrobras scandal undermined investors' trust in the Brazilian investment market, causing investment to plunge 12% and the value of the Brazilian real to fall about 12%....

All of these drops in value across the economy likely contributed to Brazil's desperation to implement its Olympic vision of a "revitalizing" Games, in an effort to gain public enthusiasm and support for boosting Brazil's international image and likely contributed to Brazil's franticness to create an image of a sound and impressive South American economy which it emphasized as a part of its mission statement for its Olympic bid.

Additionally, regarding health crises during 2016, the largest proved to be the outbreak of Zika Virus, a novel virus originating from Uganda which spread through mosquito bites and was found to cause "microcephaly" or brain shrinkage and death of babies born from pregnant females who harbored the virus. The IOC in collaboration with the WHO recognized the threat Zika posed to athletes and provided a statement to the world warning pregnant women should not travel to Brazil during this time, in an effort to curb infections. However the outbreak contributed to the general unease harbored by athletes and officials planning for the Games who were already concerned about issues with water quality and being able to train for aquatic events safely without contracting other viral or bacterial infections. Hamilton's study of the Zika Outbreak during this time suggests, even with international academics urging the IOC to move or cancel the Games for safety concerns, urged that the Games would continue as planned (Hamilton et al. 2017, 523). As a result, the WHO released a second statement in June 2016 stating the Games would continue as planned, outlining that the threat of further outbreak was limited and that containment measures were put in place, meaning containment of infected individuals and testing provided by the state. The overall outbreak of Zika threatened the welfare of Brazil

in ensuring it could host a successful Games, and Brazil as a result of this was adamant at ensuring everything would be okay to continue as planned. The Library of Congress's Report of the 2016 Games outlined the Brazil Committee's Plans to fumigate public areas, reducing mosquito population and quelling fears of outbreak, likely in an attempt to preserve its vision and avoid financial pitfalls of postponing or canceling the Games entirely. Additionally, the outbreak put further financial strain on hospitals and medical officials. Secondly, international pressures to contain pollution were wide and numerous. As noted earlier, the contamination of human faces brought an international image of underdevelopment to Brazil's current state of the Guanabara Bay and concerns were raised over the athlete's abilities to train and compete in polluted waters. The widespread media attention pressured Brazil into developing measures to improve its water quality, as stated, by implementing barriers to catch waste and investing in water treatment facilities. This international pressure likely contributed to the rushed construction of these facilities and pollution containment measures, preventing the government from delivering the image of environmental sustainability outlined in its proposal.

[...]

Analysis

Analyzing the comparative qualities of these case studies including differences in vision, planning,

implementation, and preparation reveals how the institutions that govern these factors also influence their outcomes in respective host cities and their Olympic Plans. Of note, in each case certain economic and political structures; joint state and local planning committees, sound corporations to crowdsource public and private funding, and non-corrupt bodies of authority were in place that made the handling of political issues more manageable for each planning committee in cases that were successful. These structures had profound influence on how the outcome of higher-authority decision-making was executed or ignored regarding the use of funding, sustainability planning, and the regeneration planning and construction goals of each state were conceived and implemented, with special focus on goals each country had for improving physical aspects of its host city. Overall, this research identifies the presence of a strong collaborative state and local governing authority, good sources of funding, stable economies, and a presence of secure, non-corrupt institutions allows a hosting state an ideal institutional model for hosting an Olympics and achieving the city's Olympic vision. Therefore hosts with less stable institutions, institutions that do not control corruption, that inhibit economic growth, that fund spending through debt, and that lack a combined state and local authority therefore have a more difficult time implementing their legacy plan, as demonstrated by Rio.

[...]

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Experiencing Religious Change: Latter-day Saint Women's Perceptions of Church Policy Changes and their Impact

Kathryn Halverson

The following is an excerpt from a longer piece. For full text, please visit https://scholar.colorado.edu/concern/undergraduate_honors_theses/mg74qnr3g

ABSTRACT:

This honors thesis examines how women in The Church of Jesus Christ of Latter-day Saints understand and experience policy changes occurring in the Church, specifically in how they relate to their position as members of a traditionalist religious institution. Past research on traditionalist women has relied upon the victim/empowerment paradigm, which tends to ignore the complex theological worldviews women engage in when navigating their religious and social lives. This thesis used qualitative interviews with seventeen current and former female members of the Church to analyze their ideas and experiences in a non-reductionist way. The results showed that women tended to be satisfied with the gender-segregated roles in the Church due to an acceptance of doctrine that preaches essentialized differences between men and women, as well as conceptualizing their religious duties as service, rather than status symbols. These women understood religious change through four rational frameworks: the “living church,” “global church,” “women-focused,” and “critical” explanations. Participants reported using two main strategies to cope with inconsistencies in the doctrine, called the “separation strategy” and the “eternal perspective.” Overall, these women were generally appreciative of the changes happening in the Church, which they saw as evidence of the patriarchal hierarchy acknowledging their experiences. Women’s positionality was not a factor that caused many to struggle with their faith;

however, for some the LGBTQ+ policy changes were a tipping point that led them to disassociate from the Church. This project seeks to amplify Latter-day Saint women’s voices and to better understand their experiences in the context of change within traditionalist religions.

[...]

DISCUSSION

Previous research on women in traditionalist faiths has relied on a paradigm of victimization versus empowerment, in which traditionalist women are conceptualized either as inherent victims or as individually empowered objects of their religious institution (Hoyt 2007). As a relatively young Christian sect, The Church of Jesus Christ of Latter-day Saints is of particular interest because it is currently undergoing a phase of rapid change in which many of its conservative policies—particularly those concerning women—are becoming more in line with notions of gender that exist in the broader progressive society. This study used qualitative interviews with Latter-day Saint women to examine how these changes affect the lives of typical female members of the Church. Overall, the data revealed that women in the Church of Jesus Christ are satisfied with their gender roles and power dynamics, and that policy changes, while appreciated, did not strongly influence their attitudes

toward the Church in general. There is tension within the Church of Jesus Christ as it is transitioning from one generational ideology to the next and are caught in a balance between *accommodation* and *intransigence* (Iannaccone and Miles 1990). The following sections will analyze the results of the interviews and demonstrate how they fall within the existing literature.

Gender

To Latter-day Saints, “womanhood” is generally interpreted in terms of biology (female sex and reproductive characteristics) and familial roles, specifically motherhood. The Church’s doctrine espouses essentialized beliefs about innate, binary gender characteristics. These “divine gender” characteristics are heavily ingrained within the belief system, meaning there is little contention around gender-segregated work and expectations because this belief system is so widely accepted and unquestioned. This could be a reason why there is so little dissatisfaction surrounding the different roles for men and women, as one might expect there to be in a social context where it is a much more contested issue. In other words, most women do not question why they are held to a different standard from men because they believe that, at the core, men and women are naturally different by design. This belief demonstrates the institution’s influence in shaping gender identity, as discussed by Sumerau and Cragun (2015). Another reason for the relatively high satisfaction with gender role division was the conception of religious duties as a service, rather than a status symbol. Women were not concerned with the segregated nature of their roles within the Church because they saw their roles as doing their part, not as a reflection of their power within the system. The few women I spoke to who were concerned about gender inequality in the Church stated that ultimately it was a small issue that did not influence their decision to stay or leave the faith. Former Church members acknowledged that gender

inequalities existed, but that it was not a major reason in their decision to leave the Church. Gender is such an influential force in the institutional Church that it works almost as a silent backdrop—ever-present, yet seldom recognized.

The most defining characteristic separating men from women in the Church is the ordination of men and the exclusion of women from the priesthood. One might perceive this as a structural inequality which devalues women and gives men all the governing power (Sumerau and Cragun 2015). However, the women in this study did not see it that way. The priesthood was not conceived as a status symbol or a power to be used for personal gain. Similar to the women in Beaman’s study, interviewees conceptualized it as a shared power even though it is officially only held by male members. Many agreed that it was unlikely that women would ever be ordained, even in light of recent changes being made. Most were content with that, which suggests that members tend to be more accepting of a religion’s “eternal truths,” even when changes are made that could suggest the Church is moving in that direction (Iannaccone and Miles 1990). In other words, even though the Church has changed to allow women to be baptismal witnesses—a duty formerly reserved for priesthood bearers—members do not think the doctrine will ever allow women to have the priesthood because that has been declared an “eternal truth” as opposed to an administrative policy.

The roles of women in the Church have changed drastically over the past few generations. Participants talked about the ways in which doctrine has shifted to be more accepting of nontraditional families, and how leaders now emphasize women’s personal agency to choose whether they choose to be stay-at-home mothers. The Church is still a family-focused organization, but it appears to be more accepting of nontraditional families to avoid alienating those who choose not to have children. What was once perceived as a rigid expectation of all women is now understood

as being a more personal choice. This attitudinal shift is reflected in more recent changes, as will be discussed in the next section.

Changes

Due to the sectarian nature of the Church of Jesus Christ, members often need to rationalize policy change in order to maintain consistency with their religious beliefs (Dunford and Kunz 1973). Changes to “eternal truths” can be the cause of cognitive dissonance. The Church has long set itself apart from secular society, proclaiming itself to be God’s “one true church.” However, it is easy to see similarities between the changes in the Church and the issues going on in broader Western society in terms of recent feminist and LGBTQ+ rights movements. Clearly, leaders’ revelations have a complex relationship with society, and women in the Church have various ways to understand and perceive that relationship. Ultimately, the reasons for the changes and their timeliness are up to individual interpretation—something openly encouraged by the Church, as a means of “[exercising] flexibility...while maintaining purity of doctrine” (Iannaccone and Miles 1990). Questions about the position of religious doctrine amidst broader society are not unique to members of the Church of Jesus Christ. It is interesting to see how members of this religion rationalize change in comparison to people from different eras and faiths.¹

The Church of Jesus Christ has thus far been arguably successful in navigating social pressures by changing its policies to be more in-line with progressive social norms, while staying true to its core doctrine. Does this mean that the Church is on a path leading out of sectarian retrenchment, toward denomination status? Not likely. According to Mauss and Barlow, to transition from a sect into a church requires an

“deemphasis of the exclusivist, millenarian, and eschatological themes that were once so prominent” (1991). Loosening of the commitment mechanisms that appeal to so many members would allow the Church to assimilate, but at the risk of forming yet another sectarian schism of those who reject sweeping change. The Church has indicated it is comfortable with its status as a “peculiar people” and remaining true to its traditionalist, counter-cultural policies.

What does this mean for typical Latter-day Saint women? Based on interview responses and previous literature on the subject, Latter-day Saint women are not in need of liberation. They are comfortable with their assigned roles and the gender dynamics of their institution. Gender dynamics do not seem to be a major factor that causes women to dissociate from the Church. However, these women do see a need for evolution in the doctrine to broaden the roles of women and to make them feel more involved. Changes for women are welcomed and interpreted as confirmation that the patriarchal hierarchy sees and receives revelation on their behalf.

Generally, Latter-day Saint women’s attitudes towards religious change were positive. Many said they improved their overall experience and made them feel more visible as members of the Church. Given this welcome reception, it is fair to predict that the Church will continue to evolve in similar ways. The only change that evoked controversial opinions was the policy change in 2015 that made it so children of gay parents could not be baptized or given baby blessings, and which was later reversed in 2019. Understandably with the trend of Western society becoming more and more accepting of homosexuality, the 2015 change touched a nerve with many individuals who saw it as a step backwards in the progress of the Church. There were many others who perceived it as the Church

1 For more information on change in other religious contexts, see: Seidler, John. 1986. “Contested Accommodation: The Catholic Church as a Special Case of Social Change.” Pp. 847-874 in *Social Forces*, 64(4). University of North Carolina Press.

standing by its word and not changing its doctrine at the whim of society. Ultimately, the fact that the policy was eventually undone after public outcry reveals that the Church is not immune to social pressures any more than other religions.

As for the future of The Church of Jesus Christ of Latter-day Saints, it is likely that this current phase of evolution will follow similar patterns as it has undergone before, and that many other religions have experienced it as well. It is impossible to separate one social institution from the influence of the society in which it is located, but interesting to observe their relationship to one another. It is obvious that, to some extent, the Church is responding to broader questions taking place in society regarding gender, sexuality, power, and the ways they intersect. It is also navigating the same social trends observed in other religions with the younger generations' changing views on religion and spirituality (Riess 2019a). The fact that the Church is undergoing a minor upheaval of the "old

ways" to make way for the new does not necessarily indicate the start of its downfall, as some have predicted (Riess 2019a, 2019c). Rather it is demonstrating, yet again, its ability to evolve with the changing times and culture according to the needs of its members. That being said, with the younger generations being more conscious of gender equality and LGBTQ+ rights than previous generations, the Church will likely continue to evolve in ways that demonstrate acceptance and prioritize equality. This brings up the question of whether younger generations of Latter-day Saint women currently feel differently towards the Church's progress than their parents' generation does, and what their hopes for the Church's future are. Future research might look at other conservative religions as they navigate this period of change, and how they are influenced by the youngest generations as they are coming of age.

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Where the Wild Things Roam: A Semiotic Study of Wildlife in the Rocky Mountain Arsenal National Wildlife Refuge

Sabela Vasquez-Rey

The following is an excerpt from a longer piece. For full text, please visit https://scholar.colorado.edu/concern/undergraduate_honors_theses/6wg24c9gt.

Chapter One: Introduction

Background

Nestled among burgeoning suburban developments with the Denver skyline backdrop, the 15,000-acres that constitute the Rocky Mountain Arsenal National Wildlife Refuge (or the Arsenal) currently maintains the title of being the largest urban wildlife refuge in the country. To the enjoyment of wildlife enthusiasts and curious visitors, one does not need to travel far to leave the bustling city and discover the iconic animals of the prairie ecosystem along Colorado's Front Range. The American bison (*Bison bison*), Ferruginous hawk (*Buteo regalis*), burrowing owl (*Athene cunicularia*), black-footed ferret (*Mustela nigripes*), black-tailed prairie dog (*Cynomys ludovicianus*), and white-tailed deer (*Odocoileus virginianus*) are just some of the animals found among the vast tall grasses and cottonwood trees. It may come as a surprise then that what is now a wildlife refuge that both locals and out-of-state visitors enjoy used to be a site of intensive wartime and pesticide manufacturing that produced dangerous and harmful waste.

Only 43 years ago, *The Denver Post* described the Arsenal as being one of "the most polluted pieces of ground in America" (Purdy 1995, 1). The U.S. Army seized 20,000 acres of farmland for military operations in 1942, rationalizing that the land offered various strategic benefits such as being far from foreign threats, close to railroads, and near the growing city of Denver, which provided labor and resources. The thousands of

"empty" land acres would provide an adequate buffer zone for the operations that would occur at the center, or core, of the site (Edson et al. 2011). The Army established and operated two main plants—the South and North Plants—along with other infrastructures and buildings, a majority of which would be demolished in the future remediation stage (Coady, Jones, and Giesy 2001). During World War II and until the late 1960s, the Army manufactured and stored various chemical weapons for projectiles and rockets on site, such as blister agents (e.g., mustard gas), incendiary bombs (e.g., napalm), nerve agents (e.g. Sarin), and pulmonary agents (e.g. phosgene) (Edson et al. 2011). Although the majority of weapons were stockpiled at the Arsenal (Edson et al. 2011), some of the weapons were deployed, such as the napalm bombs dropped on Japan in 1945 (Salcido 2014). Due to the excessive production of weapons on site, the Arsenal also became a site for dismantling and disposing "obsolete" weaponry.

From 1946 to 1982, the government found a new purpose for the Arsenal by leasing portions of its facilities to private industries producing pesticides, most notably the Shell Chemical Company, which is a division of the Shell Oil Company (also known as Shell) (Coady, Jones, and Giesy 2001). During this period, the Arsenal was the site for the mass production of dieldrin, chlordane, aldrin, and other organochlorine compounds, including all of their just-as-toxic byproducts (Coady, Jones, and Giesy 2001). Although the Army and Shell stopped manufacturing in 1969 and

1982 respectively, the products and byproducts that resulted from manufacturing were disposed of on site in natural depressions and trenches, resulting in the so-called ‘witches brew’ from years of pesticide and chemical munitions production (Edson et al. 2011).

.... Areas of waste disposal released harmful chemicals in the surrounding groundwater, air, soil, and natural water formations (Salcido 2014). It is estimated that 136,000 tons of contaminants were released by Shell alone, not including the 24,000 tons that the Army produced (Edson et. al 2011).

.... The site was officially designated as a refuge under the Rocky Mountain Arsenal National Wildlife Refuge Act of 1992 with the signature of President George Bush. According to the Environmental Protection Agency (EPA), which regulates Superfund sites, the remedy employed in the Arsenal included “boundary groundwater containment and treatment systems and off-post intercept and treatment system; long-term surface and groundwater monitoring; [... and the prevention of] human and wildlife contact with physical hazards such as unexploded ordnance” (United States Environmental Protection Agency n.d.). Landfills were created on site with protective caps and seals that now house contaminated soil and debris. The Arsenal’s surface cleanup ended in 2010, and in the same year the U.S. Fish and Wildlife Service (USFWS), nestled under the U.S. Department of Interior (DOI), acquired the final acres of land for the refuge. However, despite the supposed victories of remediation and the fact that the Arsenal underwent one of the most expensive remediation efforts in the country, media sources have picked up on debates about the safety aspects of the Arsenal, including concerns about detecting lewisite, a blistering agent, in 2007 and 2008 (Krupar 2013), as well as water management and groundwater concerns (Mitchell 2019). Thus, the Arsenal not only exhibits a rich diversity of wildlife and plant communities, but also a human past that is just as complex.

Purpose

Through its history, the Arsenal has undergone drastic changes, resulting in the various ways the public has experienced and interpreted this site. While it is clear that humans played a pivotal role in the fate of the Arsenal, the wildlife on the site have been, and continue to be, significant as well. From being used in ecotoxicology studies to being photographed in tours, the wildlife contributes to the cultural and social narrative of the Arsenal that we know today. This thesis aims to focus on the power that wildlife carries in the Arsenal, which has ties to both the politics and history of the site, and the far-reaching consequences of such power. What is the social significance of the wildlife in this Superfund site, and how does this significance shape the relationships between humans and animals? Additionally, how have these human generated signs of wildlife evolved over time as the Arsenal transitioned from being a military site to a wildlife sanctuary? And what relationships exist between humans and animals during these changes? And finally, what are the current consequences of the cultural role of wildlife and human interactions? This study shows how signs have been created in the Arsenal and continue to be used in the present day, what meanings people attribute to these signs, and how these signs work together to create a coherent narrative.

[...]

Chapter Two: Theory

[...]

Hyperreality

As mentioned before, animals can easily become ingrained within the social tapestry of ordinary life and the imaginative process of human sign making. In many

cases, animals can provide a means for constructing certain realities, as well as a means for making sense of a given surrounding. Hyperreality is an outcome of such creative processes. In contemporary scholarship, hyperreality is defined as the moment when an artificially produced object or event replaces the original in question due to cultural inclinations (Berger 2005). One of the founders of hyperreality, Umberto Eco, applies this concept to the fantastical landscapes that are created throughout America and that revolve around the consumption of both the present and the past (Eco 1986). Jean Baudrillard, another founder of this theory, emphasizes that hyperreality is constructed by simulations, which are “the generation of models of a real without origin or reality” (Baudrillard 1994, 1). These simulations appear to be real, and as such they threaten “the difference between the ‘true’ and the ‘false’” (Baudrillard 1994, 3).

Baudrillard argues that once these fabricated simulations of reality successfully take over, the simulacra, or artificial copies, can then become dominant (Baudrillard 1994). When an individual cannot distinguish between the real and the fake, one enters the realm of hyperreality, as it acts as “a programmatic, metastable, perfectly descriptive machine that offers all the signs of the real and short-circuits all its vicissitudes” (Baudrillard 1994, 2). In America, a “country obsessed with realism” (Eco 1986, 4), these simulacra can be favored over the original, no matter whether these copies are rational or even real (Baudrillard 1994). Hyperreality becomes successful when simulations and simulacra have been deemed as more important and real than the original reality that was copied (Berger 2005).

[...]

Chapter Four: The Hyperreal Sanctuary

[...]

Being Wild and Seeing Wild

Just as any other wildlife refuge within the general refuge system, the Arsenal deploys a wide array of conservation programs and strategies in conjunction with recreational and tourist purposes, which has drastically modified both the physical and metaphorical landscape itself. Under ordinary circumstances, these changes would not necessarily seem damaging, and indeed, in the Arsenal the conservation efforts reflect the determination and grit of workers who have a deep love for nature. However, context matters, and in the case of the Arsenal, some restorative efforts have been known to obscure aspects of the site despite attempts to retain some of its military history (Havlick 2018). In the following section, I argue that the Arsenal has become a simulacrum, depicting cultural notions of wilderness, that undermines the reality of human intervention and interaction in the site and that shapes the Arsenal’s nature. This simulacrum has been created by the endangerment narrative, as the need to protect wildlife and educate the public resulted in the establishment of tours and recreational use. This simulacrum becomes indistinguishable from the original “wilderness,” which leads to the hyperreality of the site’s environment; that is, the simulacrum is being favored over the original.

[...]

Not only has life been protected in these lands, but also new wildlife has been reintroduced. During the tours, the employees would explain that the reason for reintroducing animals, such as the black-footed ferrets and bison, was that they used to be native to the land. As Krupar points out, the reintroduction of bison “nourishes an ecological fantasy of restoring native wilderness” (Krupar 2013, 54). While reintroducing wildlife is a typical conservation strategy backed up by

a scientific explanation, these species became part of the creation process of the Arsenal as they were meant to represent the original populations that once existed. As the notion of simulacrum implies, it is difficult to tell the difference between the copy and the original. Despite the genetic purity of the bison at the Arsenal that establishes them as being wild, they have been reintroduced through human intervention. When wildlife is seen as being completely wild and meets our expectations of wilderness, it can be easy to forget the human factors that allow them to thrive in the first place. Approaching these conservation actions through educational practices and entertainment purposes augments the simulacrum of the site and reinforces the idea of complete wilderness.

The “nature” contained within the boundaries of the Arsenal is not very reflective of today’s prairie ecosystems. The landscape contains high dense amounts of wildlife species, and it is one of the few places in Colorado to exhibit xeric tall grass.... Havlick has studied naturalization in the Arsenal, as the landfills that house the remaining contamination are now mounds that can easily be interpreted as natural land formations (Havlick 2018).

[...]

Human and Wildlife Interactions

One of the main goals of USFWS is to engage people with the animals. In the end, the educational experiences bring people closer to wildlife. During

these experiences, people are interacting with wildlife in ways that are not common in nature, as people experience wilderness in areas that have been heavily modified by human intervention. These close interactions with wildlife are staged as a spectacle that becomes part of the simulation process.

[...]

Chapter Five: Conclusion

By analyzing the wildlife at the Arsenal, one can discover a network of social meanings and cultural ideologies about the environment. This thesis expands on the previous scholarly work done at the Arsenal, especially Krupar’s research, in order to look at the way animals act as conduits saturated with meaning. When animals are seen as signs, we are able to take one step closer to comprehending the web of sociopolitical interactions, which has implications in places such as the Arsenal. In this case, wildlife went from being a sign of toxicity, as seen through the duck, to a sign of protection and cleanliness, as seen through the bald eagle. Within the framework of education and the endangerment narrative on the site, the representation of wildlife has aided in the construction of a hyperreal space that exists today. In this space, visitors have close interactions with wildlife facilitated by the agencies on the site, which obscures the social history of the Arsenal.

[...]

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