

At the turn of the 20th century, it was speculated there would soon be a world-wide food shortage.

The Earth's natural sodium nitrate resources
needed to fertilize our soil
superseded its growing population.

Human progress caused us to live beyond the means of what our planet could provide.

The Atacama desert in Chile
which possessed two thirds of the world's natural nitrate supply and over 200 mines, could not
keep up with the increasing demand.

As scientists scrambled to find a solution to the inevitable crisis,
it was Fritz Haber who first succeeded in creating a synthetic version of sodium nitrate through
what is known as the Haber-Bosch method.

Enough to feed Germany
and eventually the world.

I came to Atacama to document the mines.

The remnants of mines past,
the colors of mines present.

Mines

which have fed our ancestors appetite for food
and for war.

Mines

which feed our appetites for technology
and a promise of a green energy future.

A future which allows us to continue our gluttony
our appetites insatiable,
our bellies never full.

Appetites

that feed the wallets of a few.

Appetites

that come at a cost to the land
At a cost to Indigenous stewards
who we dispossess.

Always a cost

Human progress

A justification for expansion and extraction.

This is the myth of the west.

In 2014 the Tesla Gigafactory broke ground in Sparks, Nevada, just outside Reno.

It is expected to become the largest building in the world when complete and is boasted to be
entirely powered by renewable energy resources.

It produces electric cars and other energy products which are alleged to be environmentally sustainable.
These products require lithium.

The desert has long been considered lifeless.
The name itself implies lack or a void.
I spend the hours before sunset walking the desert.
I collect semi-precious stones while looking down.
I move slow.
I see life.
Stones in a riverbed dried as dry can be.
The cracks on the ground mimic my skin's cracking at the desert dryness.
A cool breeze on my skin mistaking coolness for the heat of the sun.
Walking towards the salt mountains
- Salt flats -
the desert made of salt.

I don't know what possesses me to want to take the stones.
Perhaps a part of me wants to take a part of Atacama with me.
To possess it.
I wonder if this desire to collect and to keep is part of the whiteness that flows in my veins.
Is it whiteness or human nature that allows desire to reign over rationale?

It is speculated that 2/5^{ths} of the world's population would not be living if it wasn't for the Haber-Bosch method.
Haber's discovery, however, was not wholly altruistic.
At the outbreak of World War I, the Allied forces forced the Germany to look for alternative nitrate sources as they blocked the Chilean supply.
The Allies believed this would force a swift surrender, as the German people could not be fed, nor could they use this resource to stock their ammunition.

Had Haber's invention not come to fruition the war would have ended within a few months.
Instead it waged on for four years.
Haber, born a Prussian Jew, was regaled by his countrymen and reveled in his new role of a converted Christian patriot whose chemistry saved Germany.

No longer in need of a natural nitrate reserve,
by the 1940s Atacama's once thriving mining towns became ghost towns.

Come work in the new frontier, the wild west, where the wild horses roam free!

I sleep in a seedy motel on the outskirts of Reno.
Casino lights
a circus
tourists lured to seek fortunes
hocking their possessions.

At the bend in the river where the cottonwoods grow.
Joan Didion's desire for her John Wayne.
The myth of the Western promise lives on
as do the wilds as evidenced by untamed horses.
Brought to Nevada by the ranchers and miners
Who sought this land for their fortune.
The promise of the west.
The promise of progress.
The promise of freedom and to be the hero of one's own story.

Clara Immerwahr was the first woman to receive a Doctorate in Chemistry in Germany. She went on to marry Fritz Haber.
Perhaps had the relationship had a more collaborative turn her story would not have ended so sadly.

As Fritz received fame and recognition for his science,
Clara was resigned to life as a housewife.
She writes to her dear friend and former professor about her discontent...

subtitles: What Fritz has gained in these eight years I have lost – plus [I've lost] even more – and what is left of me fills me with the deepest dissatisfaction.

I was picked up at the side of the road in San Pedro by a PR rep for SQM.
I was treated well and was fed stories about sustainable efforts with regards to their lithium mining practices.
How it doesn't fill the air with yellow haze unlike the copper mines such as Chuquicamata near Calama where my plane landed 3 weeks prior.
A mine that is visible from outer space.
I think about the legends of space visitors that inhabit the Atacameños consciousness and wonder their reaction to seeing this mine from the sky.
And how the flamingos above have mistaken the lithium pools for the desert's rare natural bodies of water.

On approach to SQM,
the desert is blanketed in white,
reminding me of snow-covered landscapes of my childhood.
My favorite sound,

the crunch of the snow and ice as it breaks with each footstep.
But not snow.
It is salt.
The desert is blanketed in a sea of salt,
and as we approach the mine mounds form,
a useful bi-product from the lithium's evaporation.
And amidst this,
pools of aqua and fluorescent yellows and greens emerge.
A man-made oasis in the middle of this vastness.

I go to Nevada to witness a new wild west.
One purporting infinite promise.
The lands,
occupied by the harbingers of a green future
emblazoned with a logo that is red.

I drive to the Gigafactory on an early Sunday evening.
falsely believing no one would be there.
Instead, the stream of cars coming and going are endless.
Workers leaving the factory.
A modern-day Lumière film.
The cars replacing the foot and the horse.
Horses roaming the hills,
risking crossing in endless traffic.
An endless sea of workers
- Factory workers -
a Sisyphean state.

I came to Atacama to document the mines.
The ruins of our past.
The colors of our future present.
I came to Atacama to see the light.
I conceived of a project to allow me to visit.
The experience I attempted to capture, and much of which failed me.
I returned home to LA with a feeling of fullness soon followed by defeat.
My shoot at SQM did not turn out.
My camera failed and my film had voids of black where I had shot this imagery.
I panicked as I scrubbed through the footage and realized that everything mining related that I
filmed on my bolex was lost...
almost as if Atacama herself didn't want me to record her pain.
Forcing me to recognize my own complicity by robbing me of my footage
just as we rob her of her resources for our material wealth.

She is unfulfilled promise

A product of patriarchy
the consequence of this machine that persists on conquest disguised progress.

There is much confusion as to Clara's true intent.
Her convictions.
Revisionist history seeks her out as a feminist, a pacifist heroine.
These identities may be true.
Society had no place for her scientific mind.
So why would her reason to die be merely because of her dissatisfaction and anger towards her husband?

I've been craving a disappearance of sorts.
Of feeling my smallness. My insignificance.
in the shade you can feel the chill of the air but once in sun you will burn in the heat.

This land is sacred, but isn't most land?
In the desert you register things at a different scale.
The desert feels like the ocean.
Atacama once was ocean.
The origins of life and possibly the end.

On April 22nd, 1915, the world's first poisonous gas attack took place in France.
This newfound warfare,
the brainchild of and overseen by one Fritz Haber.

10 days later,
upon returning home to Dahlem,
a celebration was made in his honor.

That night,
Clara took a pistol and shot herself in the garden.

She died on this very site.
The same age as I am when I take this shot.
The gun fueled by her husband's invention.

The horses which lure workers to fulfill their own John Wayne fantasies
Provide the perfect cover story.
When I am stopped by Tesla security for filming near the factory,
I claim to be there not to film it,
rather I am there to film the wild horses.

Nestled within the valley, the factory is hidden from sight.
All lands which provide a view are private
and my only recourse is to trespass and follow the horses.
Using google satellite I see what might be a view point,
and the next morning I drive to a backside dirt road littered with fired bullets.

I am greeted by the horses on the onset of the road.
I climb the hill and wait for the sun to rise over the Gigafactory.

In the foreground,
the body of a dead horse.
Moving the bones to better fill the frame.
A Harvest of Death,
my own.
The desire of the photographer to show the public a pictorial record,
even if a slight manipulation is needed to better capture the reality of what is seen with the eye.
Is anything we bear witness to true?
Has the medium I use to document ever able to capture anything.
The need to capture,
to possess,
to hold,
to share,
to see.

In an age of climate crisis,
the solution, sold as green
Carbon offset
Electric vehicles
Technology from the same desert lands,
a site of seemingly nothingness.

I wonder how Clara would feel that her body was unearthed to lie with Fritz according to his wishes.
As his fame and fortunes fell,
In 1934 Haber was mid-journey to his new position in Rehovot when his heart failed.
He died in a hotel near the train station in Basel.
His body was buried in the city's cemetery.
His wish to have Clara's remains removed from Dahlem and interred with him was posthumously performed in 1937.
What Clara's wishes were I do not know.
Clara's discontent and autonomy erased by this act.
Their combined gravestone simply lists their two names and the dates they inhabited this Earth.
Both are named Haber.

Looking up at the desert sky's stars...
the clearest on planet Earth.
A moving star that moves in a perfect line at a continued pace.
Looking for other forms of life up above.

My camera refuses to capture the night sky,
only the moon is visible as it rises.

I like this moment that is just for me.
Thinking of what my eyes bear witness to
that my lens does not see.

Our skies will never be the same
now that Elon Musk has launched satellites to mimic the stars.
These satellites claim to open up a world of technological possibility.
Gentrifying the sky without permission from any of us.

These same skies which were seen by our ancestors and all of life before us.
Unifying time between the past and the present and the future.

Our future skies forever changed.
One man's vision of progress, but at what cost?
Our night skies forever polluted.

A shadow of death has forever been cast,
here, in the Valley of the Moon.