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Encounters at the End of the World

By Werner Herzog

WERNER HERZOG These images taken
under the ice of the Ross Sea in Antarctica
were the reason
I wanted to go to this continent
The pictures were taken by a friend of mine,
one of these expert divers
The best connection is on
military planes out of New Zealand,
loaded with chained-down parts
of polar stations
Most of the passengers had tucked
into their laptops and their books,
and many of them were sleeping
Who were the people I was going to meet
in Antarctica at the end of the world?
What were their dreams?
We flew into the unknown,
a seemingly endless void
I was surprised that
I was even on this plane
The National Science Foundation
had invited me to Antarctica,
even though I left no doubt
that I would not come up
with another film about penguins
My questions about nature,
I let them know, were different
I told them I kept wondering
why is it that human beings put on
masks or feathers to conceal their identity?
And why do they saddle horses
and feel the urge to chase the bad guy?
Hi-yo, Silver!
HERZOG And why is it that certain species
of ants keep flocks of plant lice as slaves
to milk them for droplets of sugar?
I asked them why is it
that a sophisticated animal like a chimp
does not utilize inferior creatures?
He could straddle a goat
and ride off into the sunset
Despite my odd questions, I found myself
landing on the ice runway at McMurdo
For most of the austral spring and summer,

which lasts from October through February,
planes can land on
the 8-foot thick ice of the Ross Sea
In the distance,
the mountains of the Transantarctic range
McMurdo itself is situated on an island
The Ross Sea is the largest bay
in the continent
This bay alone covers the size
of the state of Texas
On this very same frozen ocean,
the early explorer's ship
got wedged into moving ice flows
Here, Shackleton's expedition
evacuates their vessel,
which would later come to ruin,
leaving them stranded there
Everything in this expedition was doomed,
including the first ancestor
of the snowmobile
The idea was too big for
the technical possibilities 100 years ago
At that time,
every step meant incredible hardship
The first thing that caught my eye
upon landing
was the humongous bus and its driver
- We're clearing the apron now, thank you
- MAN Hey, you're welcome
This is Ivan the Terra Bus
It's one of seven in the world,
weighs 67,000 pounds
and is the largest vehicle on the continent

HERZOG:

back home? Are you a taxi driver?
I am not a taxi driver at home
Before I came to Antarctica,
I was actually a banker in Colorado
And after two years there,
I changed my pace a little bit
and decided to help
the people of Guatemala,
so I joined the Peace Corps, and there

I worked in small business development
Just realized that the world's
not all about money
ROWLAND Where I lived in Guatemala
was in the northern part
It's a Kekchi Mayan village, 99% Mayan,
and therefore nobody spoke Spanish
I had to learn the Mayan dialect, Kekchi
When I first moved to Chisec, I was just out
on a normal walk, and before I knew it
I had six people with machetes
chasing me down, wanting to talk to me
Turns out the little brother
told them I was there to steal children
I was, however, not there to steal children
They took me back to my My judge
and jury was the 14-year-old boy in the town
who could speak both Spanish and Kekchi
Luckily, they let me go,
and we ended up being
great friends over the two years

- HERZOG:

- I was acquitted I made it out of there
But it could have been dangerous
It is, it is
And, you know, a story not too long ago is,
a lady was just taking a picture of a child,
you know, the same type of group of people
with machetes, and she wasn't so fortunate
- She didn't make it out
- What happened to her?
She was killed, by a machete
HERZOG Approaching McMurdo Station,
the largest American base,
in fact the largest settlement in Antarctica
Right there is Captain Scott's hut,
built in 1902
HERZOG During the austral summer,
about 1,000 people live here
experiencing a strange state,
five months of no nighttime
McMurdo serves as a logistical hub
and provides fixed laboratory facilities

for research
All the decisions about scientific projects
are the domain of my host,
the National Science Foundation
Day to day logistics
are run by a defense contractor
I had been told by some
disgruntled former inhabitants
that they ran things
in the spirit of a correctional facility
Actually, they were decent people,
just too concerned for my personal safety
Of course, I did not expect
pristine landscapes
and men living in blissful harmony
with fluffy penguins,
but I was still surprised to find McMurdo
looking like an ugly mining town
filled with Caterpillars
and noisy construction sites
Who are the people
who drive the heavy machinery,
and what brought them to Antarctica?
(LAUGHING) It's a long story
I've explored many different
lands of the mind and many worlds of ideas,
and I started before I even knew
how to read and write
My grandmother was reading
The Odyssey and The Iliad to me,
so I started my journey in my fantasy,
before I even knew the means
of accomplishing it, but my mind
and my psyche was ready for it
I was already traveling with Odysseus
and with the Argonauts
and to those strange and amazing lands,
and that always stayed with me,
that fascination of the world,
and that I fell in love with the world
And it's been very powerful
and has been with me this whole time

HERZOG:

we are encountering each other here
at the end of the world?
I think that it's a logical place to find
each other because this place works
almost as a natural selection for people that
have this intention to jump
off the margin of the map,
and we all meet here where
all the lines of the map converge
PASHO V There is no point that is
south of the South Pole
And I think there is a fair amount
of the population here
which are full-time travelers
and part-time workers
So yes, those are the professional dreamers
They dream all the time,
and, I think, through them
the great cosmic dreams come into fruition,
because the universe dreams
through our dreams,
and I think that there is
many different ways for the reality
to bring itself forward, and dreaming
is definitely one of those ways
HERZOG As banal as McMurdo appears,
it turns out it is filled
with these professional dreamers
At night, I was laying
in my bed here in McMurdo
I am again walking across the top of B-15
Might as well be
on a piece of the South Pole,
but yet I'm actually adrift in the ocean,
a vagabond floating in the ocean,
and below my feet
I can feel the rumble of the iceberg
I can feel the change, the cry of the iceberg
as it's screeching
and as it's bouncing off the seabed,
as it's steering the ocean currents,
as it's beginning to move north
I can feel that sound coming up
through the bottoms of my feet

and telling me that this iceberg
is coming north That's my dream
So here I'm sitting in this lovely warm lab
and just outside is the environment
that Scott and Shackleton first faced
when they came here about 100 years ago
Unlike Scott and Shackleton, who viewed
the ice as this sort of static monster
that had to be crossed
to get to the South Pole,
we scientists now are able to
see the ice as a dynamic living entity
that is sort of producing change,
like the icebergs that I study
For me, it's been a wild ride
First of all, I found out that the iceberg
that I came down to study
not only was larger than the iceberg
that sank the Titanic,
it was not only larger than the Titanic itself,
but it was larger than the country
that built the Titanic
That's pretty big
This is B-15 So what we see here
is the white cliff It's about 150 feet tall,
so that means that there's over
This iceberg is so big
that the water that it contains
would run the flow of
the river Jordan for 1,000 years
It's so big that the water that is inside of it
would run the river Nile for 75 years
MacAYEAL This is a little bit
of video that we shot
when we were flying up to the iceberg
It looks big and it looms above us,
even if we're on an aircraft
flying above the iceberg,
the iceberg is always above us
It's above us because it's a mystery
that we don't understand
Here's a picture of what it looked like once
we had arrived in the center of the iceberg
We put out our instruments

Now we're gonna have an opportunity
to monitor how the iceberg drifts north
They're so big, there's an element of fear
We don't know, really,
what's going to come ahead
when they eventually begin to melt
in the ocean beyond Antarctica
What we're seeing now here
is a time-lapse sort of animation
of satellite imagery of the sea ice
and of the continent of Antarctica
And what you see are three shades of gray
This sort of lighter shade of gray
is the sea ice,
and these little bits and pieces here,
these are titanic icebergs
This little fellow right here, he's not a very
big iceberg compared to these other ones,
but that guy there might be the size of
the island of Sicily in the Mediterranean
It's like a little tiny bumblebee
zipping around in a circle,
happy to be in the warm waters
as it's drifting north
I'd be happy to see Antarctica as a static,
monolithic environment,
a cold monolith of ice, sort of the way
the people back in the past used to see it,
but now our comfortable thought
about Antarctica is over
Now we're seeing it as
a living being that's dynamic,
that's producing change, change that
it's broadcasting to the rest of the world,
possibly in response to what the world
is broadcasting down to Antarctica
Certainly on a gut level
it's going to be frightening
to watch what happens
to these babies once they get north
HERZOG What environment would the men
of Shackleton's expedition encounter
if they returned in a next life?
Shackleton, seen here,

would finally make it to the Pole,
a quest he had to abandon
a mere 100 miles short of it
Would there be any ice left?
Would he have to construct
an artificial Antarctica in a studio
and try to find his route through
papier-mache icebergs?
Would our only modern recourse
be to create ice with machines?
This is Frosty Boy, here in McMurdo
It's the equivalent of ice cream in the States,
and it's a really big hit
Everybody loves it It's what they go for
three or four times a day
And it has the texture of ice cream,
but it's not quite ice cream
There's a lot of crises that happen
in McMurdo when the Frosty Boy runs out
It's bad news
Words circulate everywhere throughout
McMurdo when Frosty Boy goes down
It's really good stuff
HERZOG From the very first day,
we just wanted to get out of this place
McMurdo has climate-controlled housing
facilities, its own radio station,
a bowling alley and abominations
such as an aerobic studio and yoga classes
It even has an ATM machine
For all these reasons, I wanted to get out
into the field as soon as possible
But before we could do that, it is mandatory
that every inhabitant of McMurdo
attend survival school
before being allowed to leave
This two-day exercise
is called Happy Camper
Students learn to build
survival trenches and igloos
The bad news is, that night
you have to sleep in your own construction
As long as I end up with 10 fingers
and 10 toes at the end, it's all good

Oh, God, sorry!
We just need to break ourselves
into two different groups now
We're gonna brief this group over here
for the burning vehicle scenario first,
then we're gonna come back over
and we're gonna brief
the bucket head white-out scenario
for everybody else
Essentially, we're trying to create conditions
where we wouldn't be able to see
The wind is so severe, the snow is blowing
so severely Very, very cold
Exposed skin might actually
create frostbite instantaneously
The winds are so severe
you could be blown off of your stance
of just simply standing out,
and visibility is pretty much none
You can't see flag to flag
You might not be able to see your hand
in front of your own face
Therefore,
what we're gonna do as a simulator
is incorporate a bucket to simulate
a white-out condition
to a point where I can barely hear myself
You can't necessarily even hear me, and
I certainly can't see any of you right now
So that's the whole idea
behind the bucket head
is to actually be a white-out simulator,
and it works really quite well
So, some of the parameters
for this are gonna be,
we're gonna start inside the sea-ice hut
I said I was gonna go to the bathroom,
and in fact I did
I needed to go to the bathroom, right
So, I've gone out
I've been gone for
quite some time now though,
you know, like 10, 15
All of a sudden 20 minutes, you're like,

"First off, where's the chocolate,
second off, where's Kevin?"

- **EMERY:**

- Number One is out

HERZOG The goal is clear,
to find the instructor next to the outhouse

Number Two is out

Number Three out Number Three out

EMERY:

gonna have to walk in one simple direction,
and I'm gonna keep the

Pull on one rope for me

Four out

HERZOG It looks pretty good They seem
to be heading in the right direction

Five out

Six out

But very soon the front man veers
off-course, pulling everyone else with him

- Pull the rope, somebody

- **THREE:**

Out here Number Three is here

- Where you at, Number Two?

- Find him?

- Did we find the guy?

- No

ONE:

Follow me this way, guys This way, guys

Hold on, hold on

So part of what we want to do here
as an educational opportunity
is see if they realize what they've done,
come back to a hut

and come up with a new game plan,
or if they just keep going down
that cascading error phenomenon,
where one mistake

leads into another mistake

which leads into a third,

and it just gets really bad

Who's pulling on this line?

- Me

- Number One

Number One, don't pull on that

That's the line going back to the hut

- I got the end

- Okay, back to the hut?

- Back to the hut

- Back to the hut

Back to the hut

HERZOG But rather than

pulling everyone in,

last man first along the rope,

they drift completely off-course

- Number Two is here Is Number Three here?

- Number Three is here

Number Four?

- Towards the sun

- No, not towards the sun

- Left

- We need to go left

Left, stay left

We don't know where he's standing though,

so left might be different for him

- Correct

- Number Two

- Okay, Number One

- I'm here

HERZOG For most of our time here,

we had postcard-pretty weather conditions

This was frustrating because I loathe

the sun both on my celluloid and my skin

So it almost came as a relief when a few

days later, the weather suddenly changed

The storm soon broke and we were allowed

to venture out of McMurdo for the first time

We set out on snowmobiles, in front of us

miles and miles of frozen ocean

We were heading toward a field camp

of scientists who study seals

It was amazing to consider

that a mere six feet under us

was the expanse of the Ross Sea

These scientists here

are particularly interested
in the feeding cycle of the Weddell seal
In just a few short weeks,
pups grow rapidly, while mothers lose
some 40% of their body weight
Bagging the seal's head keeps the animal
calm as the scientists extract a milk sample
(SEAL WAILING)

OFTEDAL Well, this really is quite
a wonderful group of animals to work on
Weddell seals in particular,
you can see they're very big
They're very strong,
and yet they allow us to work with them
They're not very aggressive,
nor are they very timid
Even though they struggle somewhat
when you have them in a bag or in a net,
when you release them, they lie down
There's the mother behind us
who we just worked on,
and she's just lying quietly with her pup
We've had pups start to nurse within
a couple of minutes of releasing them
So even though they are a bit perturbed
at being handled,
they recover very quickly from it
and seem to behave normally after that,
and really that's the ideal for us is to have
an animal species that we can work on
that will not be so disturbed by the work
that's being done on them
that they behave abnormally,
'cause we want to know how these
animals survive, under these conditions
HERZOG In a field laboratory
adjacent to the colony,
they prepare the milk samples
that may ultimately provide insight
into human weight loss
This was just collected It's still warm
from the animal So if you see that
See, it's like, you know,
it's almost like pouring wax

It's really something else And if I let this
cool down, it would get pretty pasty
I wouldn't be able to pour it like that at all
It's at body temperature right now
The milk of the Weddell seal
is about 45 fat
It's about 60 dry matter, 65 dry matter
It's very, very high in protein
It's about 10 to 12 protein
and contains no lactose at all,
which is very unusual
And there's many things
about this place that are very unusual,
and one of the things that I find
very fascinating is how quiet it gets
It's the quietest place
When the wind is down,
when there's no wind,
it wakes you up in the middle of the night
because there's no wind,
and there's no sound at all,
and if you walk out on the ice,
you can hear your own heartbeat,
that's how still it is
And you can hear the
You can hear the ice crack,
and it sounds like there's somebody walking
behind you, but it's just the ice
It's sort of, you know,
these little stress cracks moving all the time,
because we're actually,
right here we're on ocean
We're not on solid ground, so
And you can hear the seals
You can hear the seals call,
and it's the most amazing sound
They make these really inorganic sounds
(SEAL CALLING)
They sound like,
I don't know, Pink Floyd or something
They don't sound like mammals,
and they definitely don't sound like animals
It's really out of this world, I can say that
OFTEDAL You get used to

a surface being solid,
and you sort of think in your mind
that you're on land, and then all of a sudden
you'll hear the sound
coming up through the floor

- You'll hear the chucks and the whistles
- And the booms

And the booms that come which are the
You realize there's
a whole world underneath you,
that seals are moving and competing
and fighting beneath you under the ice
while you're here sleeping in a tent
or working in a lab hut
(SEALS CALLING)

HERZOG We soon returned to
the prosaic world of today's McMurdo
David Pacheco works in maintenance
and construction as a journeyman plumber
He prides himself on his heritage
He is part Apache
but has claims to yet another lineage
It's funny, but I'm revealing my hands
and they are very distinct,
and I was told by my doctor
who operated me that
it is from the Aztec
and the Inca's royal family
An anthropologist told me that,
and one of our daughters is very similar,
but everywhere I go,
I try to find somebody See?
And I can turn it around too,
if you wanna see it this way
It's very distinct, the line here,
and I was at awe when they told me
it was from the royal family of the Indians

HERZOG:

do you work best or point best?
I don't know if I should say this It's funny,
but in school I used to not reach
the chalkboard with this,
so I used to point with this,

and they called my father in
and said that I was being a bad boy,
but I still have the habit
of pointing like that
I have a long ribcage
He could not find the gallbladder
I have a long ribcage like the Aztecs
used to have, I guess, and
If you can come to Antarctica, please do
Plus, be aware of global warming It's real
I'm a green person I'm as green as I can be
I build adobe homes, solar homes
I'm a contractor back home, too, but it's
so hard for a small minority to make it, but
(SPEAKING SPANISH)

Spirit, the fire of my ancestors

(WHOOOPS)

(WHISTLES)

HERZOG Our next journey took us
We were heading from Ross Island
in the direction of mainland Antarctica
The empty interior beyond these mountains
is larger in size than
continental North America
The vast majority of it is
covered in a layer of ice 9,000 feet thick
We were heading for New Harbor,
a diving camp
which lies on the coastline of the ocean
To the right is the frozen sea
where they dive
The camp itself is built on firm ground
We were welcomed by my friend
Henry Kaiser, a musician and expert diver,
whose underwater footage
it was that brought me to this place
We had arrived at an opportune time
and went straight to this shelter
which protects a primary diving hole
next to New Harbor camp
Sam Bowser is the head
of the scientific field team
We found him in a pensive mood

HERZOG:

this is a special day for you?
Well, I think
I think everyone should stop
when they've reached a point
where they've done
what they've wanted to do,
and today is probably gonna be
my last Antarctic dive, I think
I think we've accomplished what
At least, I've accomplished
what I've set out to do here,
and it's time to pass the ball off to
the next generation of biologists, I think
So, it is a bit of a special day
HERZOG I had heard that he was also
a great science fiction fan
The creatures that are down there
that are like science-fiction creatures,
they range in the way that they would
gobble you up from slime-type blobs,
but creepier than classic
science-fiction blobs
These would have long tendrils
that would ensnare you,
and as you tried to get away from them
you'd just become more and more ensnared
by your own actions
And then after you would be frustrated
and exhausted,
then this creature would start to move in
and take you apart
So that's one example
of one of the creatures
Then there are other types of worm-type
things with horrible mandibles
and jaws and just bits to rend your flesh
It really is a violent,
horribly violent world that
is obscure to us
because we're encased in neoprene,
you know,
and we're much larger than that world
So it doesn't really affect us,

but if you were to shrink down,
miniaturize into that world,
it'd be a horrible place to be Just horrible

HERZOG:

earlier than human beings
Do you think that the human race
and other mammals
fled in panic from the oceans
and crawled on solid land to get out of this?
Yeah, I think undoubtedly
that's exactly the driving force
that caused us to leave the horrors behind
To grow and evolve into larger creatures
to escape
what's horribly violent
at the miniature scale, miniaturized scale
Yeah

HERZOG The water under the ice is
minus 2 degrees Celsius
That keeps us insulated from the cold
Want me to open it up?

- Yeah Ready?

- Yeah

Dive operation Time right now is
I'll give you a call back at about 2:30
To me, the divers look like astronauts
floating in space
But their work is extremely dangerous
They are diving without tethers
to give them more free range
But here you can't trust a compass
So close to the magnetic pole, the needle
would point straight up or straight down
Somehow you have to find
your way back to the exit hole
or you are trapped under the ceiling of ice
So I selected some areas
that have the tree foraminifera,
and they're the ones we're interested in
right now, to find out if they're carnivores,
whether or not they eat shrimp-like
creatures, multi-cellular creatures
And also I found a few of the urchins

that have, I think,
they're the ones that have
a parasitic worm that lives in their anus
It's a pretty beautiful scarlet worm,
but it must be a horrible way to make a life,
I would think
ANNOUNCER ON TV I tell you, gentlemen,
science has agreed
that unless something is done,
and done quickly,
man as the dominant species of life on Earth
will be extinct within a year
HERZOG Sam Bowser likes to show
doomsday science fiction films
to the researchers
Many of them express grave doubts about
our long-ranging presence on this planet
Nature, they predict, will regulate us
ANNOUNCER Stay in your homes
I repeat, stay in your homes
Your personal safety,
the safety of the entire city
depends upon your full cooperation
with the military authorities
Yes! Cities, nations, even civilization itself
threatened with annihilation
Because in one moment of
history-making violence,
nature, mad, rampant,
wrought its most awesome creation
For born in that swirling inferno of
radioactive dust
were things so horrible,
so terrifying, so hideous
there is no word to describe them
We may be witnesses to
a biblical prophecy come true
And there shall be destruction
and darkness come upon creation,
and the beasts shall reign over the Earth
ANNOUNCER Yes, the Earth,
infested by swarms

BOWSER:

The body is somewhere in the dirt over there
HERZOG All that the divers had brought
back from the ocean floor
were a few spoonfuls of sand containing
the strange single-celled creatures
the scientists are studying here
They are known as tree foraminifera,
primordial single-celled organisms
They branch out in the shape of trees
The branches give off pseudopodia,
microscopic false feet
that gather and assemble grains of sand
into a protective shell around the twigs

BOWSER:

that are secreted by foraminifera
They're long, thin, tendril-like projections
What the foram does is it wakes up,
sends out the pseudopods and then just
grabs every particle in its environment
and pulls them in toward its body
There's a certain pattern to the way
that they sort the particles
They can select particular grains
out of everything in the environment
and just end up with them
They're beautiful masons

HERZOG:

a very early appearance of intelligence?
- I say it with great care
- Yeah, I have to say it with great care, too,
because there are stories about
how these particular organisms
have fit into that debate
Turn of the last century, for example,
there was a scientist,
a British scientist named Heron-Allen
who, apparently, during one of the debates
in one of the British societies was
pointing out the fact that
every definition of intelligence
that was being formulated could be
fulfilled by these single-celled creatures

Borderline intelligence,
yeah, at the single-celled level
I mean, it is a manifestation
of the best of our abilities, really,
the way that they build their shells
It's almost art

(DRILLING)

HERZOG I noticed that the divers,
in their routine, were not speaking at all
To me,

they were like priests preparing for mass
Under the ice, the divers find themselves
in a separate reality,
where space and time
acquire a strange new dimension

Those few who have experienced the world
under the frozen sky
often speak of it as
going down into the cathedral

HERZOG Back from the strange world
underwater, scientists study the samples
One of the foremost scholars in the world
in his field, Dr Pawlowski,
studies the DNA sequences of foraminifera
What looks esoteric is in fact one of the
fundamental questions about life on Earth
In the same way that cosmologists search
for the origins of the universe,
the scientists here are tracing back
the evolution of life to its earliest stages
Sometimes the building blocks
of the sequences all seem to fit
Jan, what have you found today so far
on the sample that we found?

- Three new species

- Three new species

Three new species on the dish

That's fantastic

- This is from the ROMEO site

- Yeah, from the ROMEO site

It's one small silver and two elongated ones

I don't know what it is

We have to do the DNA, too

We don't know

HERZOG:

- Yeah, yeah, this is
- Yeah, any time you increase
the known diversity of these types
of creatures, it's pretty exciting
Yeah That is very special
(BOWSER PLAYING GUITAR)
Apologies to rock musicians everywhere
(LAUGHING)
HERZOG Once the importance
of the discovery has sunk in,
Sam Bowser and his group plan to celebrate
the event in their own way
(GUITARS PLAYING)
They are rehearsing for
a late-night outdoor concert
(PLAYING ROCK MUSIC)
After the helicopter had dropped us off
back at McMurdo,
nobody was around The sundial showed
that it was close to 100 am
It did not feel like night,
so we had a look around
This unobtrusive building
had raised my curiosity for quite a while
Here amongst unripe tomatoes,
we ran into this young man
How did he end up in this place?
Oh, yeah, well, you know, I like to say,
if you take everybody who's not tied down,
they all sort of
fall down to the bottom of the planet, so,
you know, I haven't been
That's how we got here, you know
We're all at loose ends
and here we are together
I remember
when I first got down here I sort of
enjoyed the sensation of recognizing people
with my tribal markings
You know, I was like,
"Hey, these are my people"
PhDs washing dishes and, you know,

linguists on a continent with no languages
and that sort of thing, yeah It's great
Yeah, specifically I was in
a graduate program, and we had lined up
to do some work with
one of the people who was
identified as a native speaker
and a competent native speaker of
one of the languages
of the Winnebago people, the Ho-Chunk,
I think is how they pronounced it, and
HERZOG To make a complicated story short,
he ran into New Age ideologues who made
insipid claims about black and white magic
embedded in the grammar of this language
Some of the oral tradition
that had been passed along
Hence, in this stupid trend of academia,
it would be better to let the language die
than preserve it
you know, I could document a language
He had to destroy his entire PhD research
So just imagine, you know, 90
of languages will be extinct
probably in my lifetime
It's a catastrophic impact
to an ecosystem to talk
about that kind of extinction
Culturally, we're talking
about the same thing I mean,
you know, what if you lost all of
Russian literature, or something like that,
or Russian, you know? If you took all of the
Slavic languages and just they went
away, you know, and no more Tolstoy
It occurred to me that in the time
we spent with him in the greenhouse,
possibly three or four languages had died
In our efforts to preserve
endangered species,
we seem to overlook something
equally important
To me,
it is a sign of a deeply disturbed civilization

where tree huggers and whale huggers
in their weirdness are acceptable,
while no one embraces
the last speakers of a language
McMurdo is full of characters
like our linguist
The bleak Motel 6-drabness of
the corridors is misleading
Behind every door there is someone
with a special story to tell
JO YCE Back in the '80s, I took a garbage
truck across Africa from London to Nairobi
That was a trip Four months in
a garbage truck It was horrible
On numerous occasions we came pretty
close to, I don't know about dying,
but pretty close
to being in some straits where
we didn't know if we were gonna get back
out of it, you know
We got taken over by the military in Uganda,
and we were kidnapped, basically
Truck was turned around
and we were going back to Entebbe
We got out of that one
We were trying to wait for
this ferry in Wadi Halfa,
the one that blew up and 800 people died
Well, we didn't get on that one
We took off across a desert,
and we got stuck We got stuck for five days
of absolute agony, of clawing
this truck with We were using plates,
just the dinner plates that we were using
for dinner, clawing at the tires
We had no water
He had used all the water tanks for gasoline,
so basically we had a cup of water a day
or two cups
HERZOG Her story goes on forever
She dealt with a bout of malaria,
with a herd of angry elephants pursuing her
through tsetse fly-invested swamps
Got caught in a civil war,

spent a night in a bombed-out airport,
with rebels fighting and shooting
in a barroom brawl,
and was finally rescued
by drunk Russian pilots,
slaloming around crater holes
in the runway
This is how you get yourself
to any place in Antarctica
HERZOG At the so-called Freak Train event
at one of McMurdo's bars,
Karen is, not surprisingly,
one of the most popular performers
This is her famous
"Travel as hand luggage" act

WOMAN:

(ALL CHEERING)

- Thought of another one

- Yeah

I traveled from Ecuador to Lima, Peru
in a sewer pipe

(LAUGHS) Forgot to mention that

I hitchhiked once from Denver to Bolivia
and back up,

and we got a ride from a truck in

It was a flatbed truck with three huge sewer
pipes on the back, so I spent It was days
in the back of this truck, in a sewer pipe,
watching the world go by just like that
That's all you could see

HERZOG Travel for those who have been
deprived of freedom means even more
These are the ones you'll find in Antarctica
Libor Zicha works as a utility mechanic
He lived like a prisoner
behind the Iron Curtain

HERZOG:

And how big a drama was that?

Oh, it was, wasn't a drama, but

The tragic events surrounding his escape
haunt him to this day

If we can

- You do not have to talk about it

- Okay Thank you

For me, the best description of
hunger is a description of bread
A poet said that once, I think,
and for me the best description of freedom
is what you have in front of you
You are traveling a lot

- That's right, yeah

- Show us

That's my freedom,
and I will be glad to show you
HERZOG He keeps a rucksack packed
and ready to go at all times
Inside is everything he needs
to set out in a moment's notice
a sleeping bag, a tent, clothes,
cooking utensils
How much weight is this all?
It's I usually don't go over 20 kilos
That's my limit,
and it's a limit also for airlines
Some of the contents of his backpack
are quite surprising
That's about the size of the raft

- How quickly can you leave?

- Oh, I am always ready

My bag is always prepared,
and I am always ready for adventure
and exploring new horizons
HERZOG Back in the days of Amundsen,
Scott and Shackleton,
scientific exploration of Antarctica began,
and this opening of the unknown continent
is their great achievement

But one thing about the early explorers
does not feel right

The obsession to be the first one
to set his foot on the South Pole
It was for personal fame
and the glory of the British Empire
This is Shackleton's original hut,
preserved unchanged for 100 years
But, in a way, from the South Pole onwards

there was no further expansion possible,
and the Empire started to fade
into the abyss of history
It all looks now like an extinct supermarket
On a cultural level,
it meant the end of adventure
Exposing the last unknown spots
of this Earth was irreversible,
but it feels sad
that the South Pole or Mount Everest
were not left in peace in their dignity
It may be a futile wish
to keep a few white spots on our maps,
but human adventure, in its original sense,
lost its meaning,
became an issue for the
Guinness Book of World Records
Scott and Amundsen
were clearly early protagonists,
and from there on
it degenerated into absurd quests
A Frenchman crossed the Sahara Desert
in his car set in reverse gear,
and I am waiting for the first barefoot runner
on the summit of Everest
or the first one hopping into the South Pole
on a pogo stick
FURMAN Well, I had this idea of breaking
a Guinness record in every continent,
and Antarctica would be the sixth,
so, now I'm trying to think of a way
to get to Antarctica
Ashrita Furman did not want
to travel this way,
because he already holds a
Guinness record in this discipline
And also in this one
So, he decided upon the more prosaic
approach and took an airplane
We flew down to Antarctica
Anyway, it was thrilling
because I'm in Antarctica,
and I'm trying to break a Guinness record
Being in Antarctica

is like being on the moon
It's so I mean, it's so peaceful
It's so pure
It's so desolate
I mean, it's just a great place
HERZOG Antarctica is not the moon,
even though sometimes it feels like it
Yet, on this planet,
McMurdo comes closest to what
a future space settlement would look like
(PENGUINS CAWING)
We left McMurdo for the penguin colony
at Cape Royds
Everyone spoke about penguins,
however, the questions I had
were not so easily answered
I was referred to a penguin expert out there
who had studied them for almost 20 years
I was told that he was a taciturn man,
who, in his solitude, was not much into
conversation with humans anymore
But Dr Ainley gave his best effort
Well, here we are at Cape Royds
This is 2006,
and it's just about the 100th anniversary
of the first penguin study
that was ever done,
which was done here at Cape Royds by
a person that was part
of the Shackleton expedition
They all had a good winter,
and they're very fat
They've
claimed their territories and eggs have
been laid and females have left,
and now there's just males
that are sitting on eggs,
using their fat reserves
and waiting for females to return
to relieve them and then go to sea
I tried to keep the conversation going
Dr Ainley, I read somewhere
that there are gay penguins
What are your observations?

I've never
Or strange sexual behavior
Can you talk about
Yeah, there has been I've seen
triangular relationships where there's
one female and two males,
and the female lays the egg,
or eggs, and the males and the female
trade off over the season
There are mis-identities, initially,
of the sex of penguins
Somebody recently described
what they call prostitution where
a female, who is out
collecting rocks for her nest,
and, of course, some penguins are
The only way they collect rocks
is to steal them from others
So, in order to do that,
they have to be very submissive
in order to get close to a male,
who's maybe advertising for a mate,
and so she'll come in, sit in his nest,
and sometimes they'll copulate
But, really, her idea is to get a rock,
and so, as soon as she can,
she escapes with a rock
Dr Ainley, is there such thing
as insanity among penguins?
I try to avoid the definition of insanity
or derangement
I don't mean that a penguin
might believe he or she is Lenin
or Napoleon Bonaparte,
but could they just go crazy
because they've had enough of
their colony?
Well, I've never seen a penguin
bashing its head against a rock
They do get disoriented
They end up in places they shouldn't be,
a long way from the ocean
HERZOG These penguins are all heading
to the open water to the right

But one of them caught our eye,
the one in the center
He would neither go towards the feeding
grounds at the edge of the ice,
nor return to the colony
Shortly afterwards, we saw him heading
straight towards the mountains,
some 70 kilometers away
Dr Ainley explained
that even if he caught him
and brought him back to the colony,
he would immediately head right back
for the mountains
But why?
One of these disoriented,
or deranged, penguins
showed up at the New Harbor diving camp,
already some 80 kilometers away
from where it should be
The rules for the humans
are do not disturb or hold up the penguin
Stand still and let him go on his way
And here, he's heading off into the interior
of the vast continent
With 5,000 kilometers ahead of him,
he's heading towards certain death
The last field camp we visited
was at Mount Erebus
This active volcano is 12,500 feet high
It is of particular importance, as inside
the crater the magma of the inner earth
is directly exposed
There are only two other such volcanoes
in the world,
one in the Congo and the other in Ethiopia
Because of political strife in those places,
it is actually easier to conduct field studies
here in Antarctica
First thing, we were instructed in
the etiquette of dealing with this volcano
One very important thing to keep in mind
when you're on the crater
is that the lava lake
could explode at any time,

and if it does, it's vital to keep
your attention faced toward the lava lake
and watch for bombs
that are tracking up into the air
and try to pick out the ones that might be
coming toward you and step out of the way
The last thing you wanna do is turn away
from the crater or run or crouch down
Keep your attention toward the lava lake,
look up and move out of the way

HERZOG We were fortunate that the lava
lake was not enshrouded in mist this day
This here is the new observation camera
William McIntosh is the leader
of the team of volcanologists here
This camera is designed for prison riots
or to be explosion proof,
and it's coated with this thick
Teflon housing

Here's the lens here This is a camera
The camera inside is made by a small
company in Canada, Extreme CCTV
The inside housing is specifically
designed for explosion

(EXPLOSION)

to be explosion-proof

There's a bang from the lava lake
right now No bombs, though

HERZOG This is the magma lake
filmed 30 years ago

At that time, there was a bold attempt
to descend into the crater

Halfway down there is a plateau

From there, it is a gaping hole straight down
into the magma

They were in for near disaster

The magma exploded, striking one of the
climbers, who got away with minor injuries

Today, the lava is monitored

by Dr McIntosh's camera

Dr Clive Oppenheimer, a true Englishman
from Cambridge University,

surprised us with his tweed outfit, which

he wears as a tribute to the explorers of old

He analyzes gas emissions
from volcanoes all over the world
If this were one of those active
volcanoes in Indonesia,
I'd be far more circumspect
about standing on the crater rim
This is a very benign form of volcanism,
and even the eruptions we've seen in the
historic period are relatively minor affairs
If we go back into the geological record,
we see that there are huge
volcanic eruptions,
massive, explosive eruptions that produced
thousands of cubic miles of pumice,
showering large parts of the Earth
with fine ash,
and these have been demonstrated
to have had a strong impact on climate,
and one of the biggest of these events,
has been argued even to have affected
our human ancestors
and may have played an important role in
the origins and dispersal of early humans
So these events will recur, and I think
the more we understand about them,
the better we can prepare for
their eventuality
HERZOG For this and many other reasons,
our presence on this planet
does not seem to be sustainable
Our technological civilization makes us
particularly vulnerable
There is talk all over the scientific
community about climate change
Many of them agree the end of human life
on this Earth is assured
Human life is part of
an endless chain of catastrophes,
the demise of the dinosaurs being just
one of these events
We seem to be next
And when we are gone, what will happen
thousands of years from now in the future?
Will there be alien archeologists

from another planet
trying to find out what we were doing
at the South Pole?
They will descend into the tunnels
that we had dug deep under the pole
It is still minus 70 degrees here,
and that's why this place has outlived
all the large cities in the world
They walk on and on
And then this
As if we had wanted to leave one remnant
of our presence on this planet,
they would find a frozen sturgeon,
mysteriously hidden away
beneath the mathematically precise
true South Pole
They stash it back away
into its frozen shrine for another eternity
And then they find more,
memories of a world once green
As if the human race wanted to preserve
at least some lost beauty of this Earth,
they left this,
framed in a garland of frozen popcorn
Back at the base camp of Mount Erebus,
due to the considerable altitude,
once in a while the volcanologists
need medical care
But soon we find them back at work
My face is frozen
Quite cold up here today
Just by having that fantastic lava lake
down there with all that energy,
we still have to bring old petrol generators
up to the crater rim
Man versus Machine, Chapter 53
Professor Clive Oppenheimer on Erebus
Hands in pockets,
waiting for it to start spontaneously
He could be waiting a long time
Have you ever seen two men kiss
on the top of Erebus before?
(BOTH LAUGHING)

OPPENHEIMER:

It's R-18, okay?

I like working with Harry

HERZOG Along the slopes of the volcano
there are vents where steam creates
so-called fumaroles, bizarre chimneys of ice,

sometimes reaching two stories in height
It is possible to descend into some of them
You only have to be careful

to avoid the ones containing toxic gasses
At the foot of Erebus, out on the sea ice,
the two tallest buildings on this continent
are located

In these hangars,
scientific payloads are being readied
for their balloon launch

into the stratosphere
We were interested in
the neutrino detection project
Scientists are planning
to lift an observation instrument
in search of almost
undetectable subatomic particles

(ALL CHEERING)

As it rises, this small-looking bubble
of helium will expand
to fill the entire skin,
which here still looks like a white rope
It will eventually form a gigantic globe
more than 300 feet in diameter

When it reaches the stratosphere,
the detector will scan
thousands of square miles of ice
without encountering electrical
disturbances from the inhabited world

Prior to the launch,
we were inside the hangar

The neutrino project is led by
Dr Gorham of the University of Hawaii

So, what we're trying to do
with this instrument is to be the first
scientific group to detect the highest
energy neutrinos in the universe, we hope

HERZOG:

what exactly is a neutrino?
The neutrino is It's the most ridiculous
particle you could imagine
A billion neutrinos went through my nose
as we were talking
A trillion, a trillion of them
went through my nose just now,
and they did nothing to me
They pass through all of the matter
around us continuously,
in a huge, huge blast of particles
that does nothing at all
They're like
They almost exist in a separate universe,
but we know, as physicists,
we can measure them,
we can make precision predictions
and measurements They exist,
but we can't get our hands on them,
because they seem to just exist
in another place,
and yet without neutrinos, the beginning
of the universe would not have worked
We would not have the matter
that we have today,
because you couldn't create
the elements without the neutrinos
In the very, very earliest few seconds
of the big bang,
the neutrinos were the dominant particle,
and they actually determined
much of the kinetics of the production
of the elements we know
So, the universe can't exist the way it is
without the neutrinos,
but they seem
to be in their own separate universe,
and we're trying to actually
make contact with that
otherworldly universe of neutrinos
And as a physicist, even though
I understand it mathematically
and I understand it intellectually,

it still hits me in the gut
that there is something here around
surrounding me almost like
some kind of spirit or god
that I can't touch,
but I can measure it
I can make a measurement
It's like measuring the spirit world
or something like that
You can go out and touch these things
HERZOG Not surprisingly, we found
this incantation in Hawaiian language
on the side of his detector
It was as if spirits had to be invoked
What would we see if we could film
the impact of a neutrino?
What you would see is, you would see
a lightning bolt about 10 meters long,
about that thick,
and it would blast at the speed of light
over this 10 meter distance,
and you would see the most beautiful
blue light your eyes have ever seen
It happens in about
The entire impulse of radio waves
is up and down in probably
one one-hundred billionth of a second
It just goes bang and it's gone,
and that's what we're looking for
There is a beautiful saying by an American,
a philosopher, Alan Watts,
and he used to say that through our eyes,
the universe is perceiving itself,
and through our ears, the universe
is listening to its cosmic harmonies,
and we are the witness
through which the universe
becomes conscious of its glory,
of its magnificence