okay
here we are lecture number 16. you know
this used to be where the course ended
and that's still probably
reflected on the fact that the the
prezi that i'll be using today only goes
up to 16.
but i thought it would be more
interesting to sort of continue on
to show the influence of western
thinking
in the world but also how it encountered
another
tradition so we kind of looked at that
with so-called pagan cultures and the
dream of the rude but
we're going to be taking up it again
when it encounters buddhism but
we're going to give buddhism a little
more
representation than the religion the
celtic religion that we saw on the dream
of the rood so we'll talk about it first
and then
um sort of reflect on the way that the
west hasn't encountered it as well so
i'm getting ahead of myself however
today we're going to just um
finish with rachel carson and
firmly be in first the 20th century and
also firmly with the emergence of the
modern environmental movement
and in a way you know this really could
have been the start of the course too so
i mentioned
throw could have been the start of the
course of modern environmental thinking
but
certainly the modern environmental
movement and why it's so significant and
the influence it had
and the creation of things like the epa

and
all sorts of activism that come you know
along at the same time
you know all that really can be traced
back to
carson's era and in many ways to carson
herself and
you know you can't you know forget that
compared to walden which at its at the
time i mentioned you know throw
literally couldn't give away the copies
of it that he had to print it
um carson was a very very popular book
and
we'll talk about that today and as a
consequence you know
something like this yeah it's kind of
like something going viral today
it just became enormously influential
and a lot of people were talking about
it but
let me just stop generally talking about
it then go right into carson directly
so here we are at our prezi and here we
are we've
moved up 5 000 years we moved all the
way over
into the united states and
let's talk about carson let's start with
this quote from carson
if facts are the seeds that later
produce knowledge and wisdom
then the emotions and the impressions of
the senses are the fertile ground
in which the seeds must grow
yeah carson has many such phrases by the
way she's just a wonderful speaker
and you know here in a way i i quoted
her because it nicely sums up her
project in a certain way
you know yes she's giving you a lot of
facts you know and they will produce
you know hopefully give you knowledge

and and maybe even
you know wisdom to act on that knowledge
but you know but the emotions and the
impressions are the fertile ground
on which the seeds must grow so
knowledge is important you know facts
are important
in the sense of knowing about it but you
have to engage with this in an emotional
personal way and you know i think
that's something that we sometimes
forget so for example with the climate
crisis we could just
you know you could tell try to
communicate by telling someone the facts
and all but
you really need to get them to engage
with it emotionally and she
she knows how to do that when people do
that i think it can be
incredibly effective and an incredibly
effective way of communicating
so what i mean by that so the film the
true cost
yeah you could go through the facts i
could have made a prezi
with a bunch of black text on a white
background just like this you know
telling you
the facts well that would have been
probably effective in a certain kind of
way
but gee when you watch that film when
you see the reza
uh um uh pleasant the ronald plaza
disaster right afterwards and the people
there and all
yeah it's just really hard not to
to be pulled into it on an emotional
level
and i think that's something we we
sometimes forget but carson clearly
has not forgotten that carson clearly is

um
as you know realizing that that's
important and basing her rhetorical
approach on that
so let me get out of there
um here's an interesting thing there
there are lots of different
differences between carson and thoreau
but you know carson is suggesting
radical lifestyle
changes his kind of environmentalism
involves that
and you know in english 23 the course
that you know the book ends this
comes after we we do talk a lot about
that and i think it's important and i
think it's well essential human beings
have to behave differently toward the
planet
but carson has a kind of
environmentalism that doesn't
necessarily require that
and that's that's an interesting
distinction to note
because you know um as a what she's
really saying here
is that we have to act on the things
that we're doing
in a different way you know um so for
example
um we have to use pesticides
and continue to use them she's not she's
not denying that we do
but on the other hand we have to be very
careful about the ones that we are
using such as like ddt and
the way that we are using them so the
sort of indiscriminate thing where we
you know
load up airplanes and we do crop dusting
you know
over whole regions with it so it's not
but in the in in either sensor we're

really talking about something that you
have to do
differently on a personal level and
again
i would argue one of the reasons that
this work did kick off the modern
environmental movement
because people didn't recoil from it on
a personal level so
someone would have said i might have
said at the time for example
knowing how bad automobiles were at the
time
and and how quickly they were
proliferating and and
the fact that there was still time to
save mass transportation in the united
states
jim already outlining a book that i
might have written but i would have said
you have to stop using your car cars
have to go we have to go to mass
transportation
well people might have looked at that
and said wait what huh no i'm not going
to get rid of my car i love my car my
shiny new car are you crazy
well carson's approach and and thoreau
might have said that too
thoreau would have really said it except
you know throw would have set it from a
sort of high moral horse
and people would have just you know
scoffed at it
carson's not um suggesting those kinds
of changes which is arguably why
her type of environmentalism will be so
effective
and move forward and you know move to
like the creation of the epa and all
just an important distinction to note
the action then is not so much personal
as as you know widespread action these

are societal
changes that have to be enacted by way
of you know organizations like the epa
so um it none you could say well
you know it might seem too conservative
so to someone like thoreau or even the
way i was saying i would have you know
said you have to do all these major
radical changes to our life's
lives like getting rid of cars and
having smaller houses and you know
cutting down on the amount of meat we
eat and all that
well you know to people like you take
that position carson may seem kind of
conservative because she's not asking
for these radical
changes just minor little things but
the advantage of this approach is that
if
it caused immediate and widespread
change
and epa you know it begins to come
as an idea come into creation 1970 and
formally gets introduced a little later
so you can see the advantage of the
approach and again
you know you have to stop and and and
wonder and marvel a little bit about
how clever rachel carson is the clever
is even the wrong word
strategic and and smart she is to have
come up with this approach because it is
just
so incredibly effective
and and would define a certain kind of
environmentalism a certain very
important kind of environmentalism
and i think it's fair to say then that
that
so you know i'm not saying that these
two are are completely different carson
and thoreau or that they don't you know

dovetail or overlap and all that they do
you could probably draw them like as a
venn diagram overlapping
but they do represent sort of two
different approaches
and for the modern environmental
movement not not
throws from you know 150 years ago but
from this one
carson's 50 years ago there is an
enormous amount
of influence that comes from it and and
i think
it's um clearly the case that it has
been more influential
and and i see that's great you know what
i mean
yeah um you know also remember
i'm just kind of reflecting back on
pastoral for a moment which sort of
looked away from problems to you know
nicer environmental things you know
carson is unflinchingly looking at
environmental devastation
and not only looking at it so we could
say that
in 1854 the year the walden was
published that charles dickens
looked at it a lot in hard times his
novel he did
but carson is going one step further
it's not just looking about looking at
it talking about it
you know writing about it but actually
proposing action on it and then action
is a key idea here
and that would define the modern
environmental movement too it's not just
examining these problems but proposing
an action um
i'm curious who you find more
interesting who appeals to you
more again i don't think in this sense

it has to be an either or discussion
either
you may find them both admirable you may
find them both useful
you may find problems with both and you
want to you know take a little bit from
each
i think that's all fine i just kind of
meant like in a in a gut way
you know your first response to either
um
you know who did you who did you find
more uh
you know influential to your personal
thinking
so here's um let me pull this down a
little bit for you
and then i'll put it back up so you can
get the pictures carson's primary
objection to ddt was widespread use
and the notion which was proposed at the
time that it was harmless to people
so here is the problem
here you see two men working presumably
on a farm
with a spraying machine and
this presumably is a solution of ddt
so what's the problem here well what's
not in this picture
any kind of protective gear whatsoever
no masks no goggles no protective
clothing no gloves
nothing at all why well the manufacturer
of ddt said this stuff is perfectly
harmless
it's just like spraying water or
something yeah
this is what happens if you just listen
to you know a company who's trying to
admit that's trying to make money
rather than something have a group like
the epa
study this material first and then make

that determination
and then tell you it's safe or
alternately saying well
it's not fully safe but we're going to
continue to use it but
to do that you need to be very careful
and use protective gear and things of
that sort
and you know that's why you you get
warning labels on you know go
any product you buy go to you know your
kitchen cabinet for things that you
clean the
your kitchen with and on you'll find
those warning labels put there to make
sure that you know
so how is it used so second use here
this is an airplane this is a flight
attendant spraying it directly
into the cabin of the airplane
and again you know this is ddt
how dangerous is that and why that's
done being uh being done by the way is
you know at the time folks were worried
that there were insects that were
that were spreading diseases and also
you'd introduce them to new ecosystems
by way of airplanes you know they'd fly
into an airplane they'd go
you know 3000 miles come out later come
out the other end
spread diseases or you know breed there
and introduce
new species to the area so what's the
solution well you use an insecticide
directly in an airplane and you kill any
you know bug that flew into the airplane
well
okay a good idea in theory but in
practice
and because this is not a harmless
material that's a problem
how harmless did people think it was

these two women
are in bathing suits and and sort of
making a display
of how harmless they think it is
um and they believed it and and how how
horrible how horrific
is this right i mean these women
presumably are not scientists they don't
know
the facts of of the matter they're just
told that it's safe
they believe it and they're they're
willing to do something like that and
the related picture is this one down
here and this actually
was apparently very common so one of the
ways that ddt
was spread that trucks would literally
go up and down streets and spray it
and apparently children when they heard
about
you know heard the truck coming they
would go grow running out and
play in the fog behind the truck and
apparently
um you know anecdotally that that's what
happened that whenever you saw these
trucks going down the road there would
be a band of little children because
they had to go pretty slow to
spray it effectively you know running to
keep up with it playing in the fog
i can't even begin to to describe how
disturbing that is
um but as far as its use this um
next photograph this man here um
he's actually being sprayed for it
topically in this case because
the concern over lice so he may have
lice on his body
well since this thing kills insects
really well
spray it right on someone's body and

it'll kill insects so
again very disturbing is not only that
he's
not being encouraged to wear a mask or
other protective gear
but it's actually being sprayed directly
on him intentionally
and finally and and perhaps most
importantly
this is a crop dusting airplane and this
is how
ddt as far as like pound for pound how
was most of it disseminated
spread this was it and
the idea was that if you're effectively
going to put down an insect population
like say mosquitoes yeah if you just
went up and down streets and sprayed
that might be kind of good but what
about you know
you know the backyards of people that
couldn't be reached that way
you know how would you get the insects
back there if you really wanted to do
this effectively you would crisscross
entire counties
with crop dusters spraying it everywhere
so in this case you know it's not your
choice you may say
i don't feel comfortable with that you
know i don't want to spray it
at my house you do not have a choice in
this way
airplanes are flying over flying pretty
low like this spraying it so that the
particles all come and fall into your
yard
that was in a way the biggest problem
because
in carson's you know issue with it is
it's
it's being sprayed completely completely
completely indiscriminately there's

there's no thought of like you know
how we could do this in a careful way or
maybe that you know
if you're worried about insects and you
know farmer's fields or something then
spray on the fields
but that's not what's being done here
it's being spread
everywhere yeah very disturbing images i
think
okay so these are the biocides of course
carson's great um uh re-christening of
our word for the word that we use for um
our word insecticides the chemical
industries were insecticides
do i fit on here not quite let me pull
this down a little
carson's approach to environmental
devastation focuses on
ecology and this is
a great quote from silent spring of
course
and it describes you know this
this um
normal spread of how how
ddt worked in the ecosystem so
you spread it on to kill flies the
caddisfly here
in this stream so we poison this fly
and the fly now dies and you know
the it gets into water as well and
the salmon runs and dry but the best
example is here
you spread it on elm trees and why do we
do it because you know you have a crop
thruster spreading it on top of there
and it kills all the insects
good problem solved the problem is not
over
a new problem emerges you know the
following spring
you know the robins now are
dying and why is there a silent spring

you know her title
with robin's dead it's not because she
sprayed it on the robins directly but
because the poison traveled
step by step through the now familiar
elm leaf earthworm robin cycle
what does that mean it got spread on the
tree
insects died sure but it also was spread
on the leaves of the tree
the leaves of the tree absorbed it
plants not only get their water through
roots and all of course but they get
water from like dew and mist and all
they absorb directly into their leaves
so in absorbing that water
it directly took in ddt those leaves at
the end of the season
in the fall and most you know climates
they fell down to the ground
and they began to decay what you know
facilitated their decay earthworms
earthworms you know as they were
decaying earthworms you know ate
the leaves and created you know uh
earthworms soil was it by way of it by
way of composting
by the way that that could take years so
the leaf mold that fell
down on the ground as you may know it
can sit there for a year or more
and it doesn't become directly part of
the soil so earthworms are not working
on it other
you know microbes and all are working on
its decay
so this process is not like it happens
immediately which makes it
all the more insidious it's going to
take a while but anyhow here's the next
problem earthworms ultimately take in
the ddt
by way of leaves and then robins of

course
love to eat worms and robin and other
birds
eat the worms and now they've ingested
ddt
and now it creates the problem we've
been looking at that their shells are
weak and
and they can't reproduce properly so
if you if you think about it then it's
it's a little cycle it's a
connectiveness
and you know as carson notes here at the
end
all this reflects the web all this
reflects the
web of life or death that scientists
know as
ecology well for most americans
this was probably if not the first time
they heard the word ecology
the first time that they were given a
good um explanation of what ecology was
so even though and i'll mention in the
next slide even though ernst hegel came
up with the definition of ecology 100
years before rachel carson
here's how it got to the american public
and and
and great that rachel carson used the
person to deliver it because she does
such a
very effective description and
explanation
of what it is and you know let me switch
to the next slide
um i won't go back
sorry i'm being indecisive here but let
me just
talk about this for a moment longer that
this is is so important because the
notion of ecology is that within an
ecosystem that's an ecological system

that really just means like a region or area
that's connected you know all the life there is connected
carson gives a little example here this elm leaf earthworm
robin cycle but it could be you know anything else and it could go up you know the so-called food chain to other you know to to key predators at the very top it could involve
more plants it could involve microbes it could involve everything
but the notion here is in an ecosystem everything
is related there's nothing that is that is outside of it
and you know it's all towered through you know evolution to that particular ecosystem so you know
polar bears have evolved for you know arctic life or as you know grizzly and you know brown bears have revolved for different regions
everything has evolved to fit their particular ecosystem everything in the ecosystem is created
is connected there and carson you know initially and carson actually references here
you know they reflect the web of life that scientists know as ecology originally
that's how ecology was thought of by hegel and others that's that's how life works that's how life in the bigger picture of
multiple species of life you know are connected and sustained themselves
carson throws a twist in here um you know by adding that's the way that death works too
not only does this allow animals you

know to feed upon other animals
and but this also means that when they
feed upon other things
like the robin is doing here it can it
can bring death as well
so very important because it uh it
introduced it but
the next one next line carson
is is very clever to speak about and
speak here so so carson is not of an
error where we knew about the
um biome the the fact that you know
your the cells in your body only
constitute about one tenth of the cells
in your body
that there are all sorts of other
microbes that that live in you and on
you and on your skin and all
um shouldn't know about that because in
that sense there is a vast ecosystem
walking around with each of us and it's
very important that it works if you
didn't have
the microbes that you do you know in
your um
your stomach and digestive system you
wouldn't be able to digest a lot of food
the way that you do if you didn't have
you know the right microbes all across
your skin your skin would be drying out
and scaling but you you need all this
it's very important
but carson in a general way knows that
as she notes here
that there is an ecology of the world
within our very bodies you know
to discover the agents of disease and
death depends on a patient piecing
together many seemingly distinct and
unrelated facts
well yeah and how tragic is this that at
the time
carson was writing this i don't think

that she had been
diagnosed with cancer at this point but
you know the very way that
some of her cells were beginning to to
work and cancer was spreading throughout
her body
is a great example not not different
cells in the sense of like different
microbes in the biome but
uh instead you know her her cells were
beginning to
um become cancerous and and that was
being spread from cell to cell
so she really does get it right in the
sense that we now know in a in a greater
way than she ever did
that that we are an ecosystem walking
around
um and also so tragic because you know
her
um example was exactly what was
happening to her at the time
so yeah hegel um introduced it
the idea of ecology in 1866 becomes
you know known to
scientists it takes a century later
before it gets known to the general
public
and you know it's incredibly important
that this happened
um because you know scientists have a
certain
esoteric knowledge that really doesn't
you know isn't really essential that it
gets to the general public and then the
average person on the street knows about
them but in this case it really is
important
and then carson um in a very perceptive
way
focuses on not what happens when eco
systems are working correctly
but when they become disrupted and how

small little disruptions can make a big difference
yep and
once she you know introduces the idea of ecology and talks about how disruption can happen
she notes that and this is the thing that might be surprising maybe was surprising to people at the time
that minor changes can disrupt an entire ecosystem
so you know even if you could pinpoint a chemical to kill
just one particular insect right so if you didn't have a biocide if you had a true insecticide and moreover it was species you know
um specific well okay
great maybe that wouldn't be a true biocide and maybe it wouldn't hurt people and maybe you could even use it without protective gear
i probably wouldn't advise it but maybe maybe you could i don't know
i'm just coming up with a hypothetical here but even if you did that and even if you had a perfect insecticide that killed you know just the insects that spread malaria
okay but you know what would happen then is you know over time that could accumulate in the body of other animals too
and maybe with the greater accumulation even though it might be benign and smaller concentrations maybe that would be a problem
we have something like that with that mercury and i
mentioned the example of mercury here in salmon but
the real example i'll give is is tuna so these are large fish right and we've

introduced mercury
into the ecosystem specifically into our
oceans
and what happens here is you know it
gets absorbed by
plants it gets eaten by other fish and
ultimately it initiates a chain of
events that you know it accumulates over
a time
in bodies of fish but specifically large
fish that live a long time like
tuna and as a result their body can
contain
a lot of of mercury relatively speaking
i gave the example of salmon because
salmon do not do this because it doesn't
they're they're smaller fish and it
doesn't get into their body it doesn't
accumulate in their body over time in
such a large way that it does like in
tuna
but why this is an issue is in small
concentrations it may be
well why not safe not that dangerous
mercury but if it gets in higher and
higher concentrations
then there's a problem this is why
you're advised not to eat
seafood more than like three times a
week because you don't want to be like
that
tuna absorbing absorbing absorbing
more and more you know mercury into your
body
because it can become a problem if you
have just a little
you know we're told that it's safe and i
i guess relatively speaking is like i'm
not qualified to comment on that but
certainly large concentrations are not
so it's it's it's all complicated here
right it's not that the substance may
you know be absolutely dangerous in the

right concentration
maybe not but if it if it if you have
enough of it
it can become a problem so this is why
ecosystems matter because how do you get
those concentrations
those concentrations are happening in an
ecosystem before it gets to you if
you're consuming fish
that whole ecosystem the way it behaves
once mercury is introduced and the way
it goes from
you know plant to fish to fish to big
fish
and then to human beings all is
important and you know to
truly have a good understanding of of
what you're eating and whether it's
dangerous or not
you really need to know not only about
the chemicals that have been introduced
to the ecosystem
but how the ecosystem functions and how
individual species
in that system like like tuna or salmon
function
the difficulty with that project then is
that ecosystems
are are very complex so writing a little
bit
a couple three years before carson and
edward lorenz
he's comes up with what we generally
think of as modern chaos theory
and he argued and he was actually
studying whether he was trying to
predict whether and he thought well if
we know about all the
enough of the variables we're going to
be able to predict whether
with great great accuracy um way out and
you know for
many many days ahead um but he realized

that these systems
are so complex and so chaotic that you
can never
truly predict what's going on here
because even
a tiny little factor
can ultimately have profound
consequences so as an example
you probably heard this before you may
not have connect may not have been
connected to lorenz and chaos theory but
this is an example
that a single butterfly flapping its
wings in brazil
will alter the weather in the us not
because
it creates wind that you know goes
directly to the u.s
but it alters ever so slightly the
weather in brazil
which days or weeks later through a
whole series of other
events is going to ultimately you know
alter
the weather in in the united states
if you wanted to understand all this you
would need
you know an incredibly big computer to
try to take
all those factors into account and model
them as you may know
from the very beginning was computers in
the 1950s they
first were used by military at the
military to to model things like
making atomic bombs and all but the
second biggest use
that that they got and sort of holy
grail was to be able to predict
weather and um the some of the biggest
computers massively parallel distributed
systems today
are used to predict whether and they

they have to be huge and they have to be powerful because there's just so many factors in play
well he wasn't specifically talking about lorenz ecosystems per se
but you can see where that's exactly what what what ecosystems what's involved there
you know one little fly you know one little species can have enormous impact on everything else so
they're very very important yeah
i'm just curious if you had a good understanding of
between biology and ecology i'm not sure that then in most high schools that's taught it may well be i don't know
and bial biology of course being you know understanding the biology of a specific
um you know animal or plant um but ecology being sort of collecting all the biologies all the
individual biologies of the plants and animals in an area
and see how they interact and already you can see the
how this gets to be a big problem because first you have to understand the biology of an individual
animal for example you know how mercury is dealt with in the body of a salmon as composed to a tuna
but then beyond that you have to look at the relationship of you know
all the animals and plants in the area
and that can be
obviously a big deal
so
if i fit back on here i do but i'll move out in a minute um one of the reasons that silent spring was so influential and so important

was it was just so well promoted so in addition to being published as a book it was serialized in its entirety in the new yorker
and that meant that you know individual chapters appeared you know as the new yorker was published
and um this meant that you know you suddenly had you know all the people subscribing to the new yorker were percentage-wise
americans quite a few back then it was also
excerpted in the um autobahn magazine and by the way with the case of the new yorker
you know talking about like creating buzz for something beforehand
you know chapters were um were already being excerpted
and serialized before the book came out so
people were like yeah gee i read that and i really want to read the rest of the book and they would go out and buy the book
this is why incidentally i mentioned that the chemical companies who fighting it
they not only you know sued the publisher of the book but they also sued like the new yorker and
i think they sue both the new yorker and autobahn magazine to try to to stop its publication
um also note here something is not around today but it was
i guess maybe it still was around today was very uh
influential and sort of a cultural force to be reckoned with
back in carson's day is the book of the month club so you would sign up for this

and you pay a certain amount every month
and every month the book would be sent
to you
you didn't choose the book they chose
the book so in that sense it's kind of
like oprah's book club or something
except just 12 books a year select it
for you and
you know to have your book selected is
clearly like a big deal because you know
all the copies get sold through the book
of the month club
but it's also like oprah's book club
it's a way of validating it and saying
this is a really important book that
people should read
and as a consequence you know
a lot of people read this and and you
know why did they do it well well carson
had already come out
before with you know award-winning books
so
this clearly you know people knew that
it was carson it was going to be good
it was going to be a good read and from
something like a book of the month club
that that matters right you wanted to be
a
good read but also it was kind of a bomb
that was being dropped and
you know the early articles in the new
yorker and all
made clear that it was a um was a big
deal
yep so knowing
this and seeing early material coming
from it
um the chemical company um
that that created and was you know
promoting and selling ddt tried to stop
it from being published as well as yeah
the new yorker and audubon magazine
um and they continue today by the way

right
so if you think that this battle ended
over ddt
it didn't it continues over ddt in other
parts of the world
and more generally it continues against
environmentalists so if you
wonder sometimes why like you'll hear
like anti-environmental sentiment
and other courses i deal with this in in
some detail
but you know if you wonder why like wait
how are environmentalists
bad guys because you'll hear them talked
about that way or you'll see them
portrayed as being this sort of
radical bunch or also the often the
portrayal of environmentalists will
will will take the most radical of
environmentalists who would do something
like eco-sabotage as being
representative for all environmentalists
and it's like
it's unclear how you can talk about
someone who's you know devoted their
life to working on the environment works
with the epa and all
how these people are you know like you
know terrorists
but they're often portrayed as being you
know way out there and sort of you know
not caring about people caring more
about the environment and all
and where do all these representations
come from um
no representation emerges by itself
right we've
we've been studying representation
throughout the course they all have a
history
in part the history of portraying ni
portraying environmentalists as crazy or
bad people or against the interest of

humanity
um you know you can go all the way back
to you know sort of
gilgamesh where we we you know see a
protector replace a genus loki
that way but in the modern day time
it goes back in part to this here is
sort of the epicenter of it
you know rachel carson becomes this sort
of and you know
fully formed at this moment and again
this goes to the genius of rachel carson
fully formed at this moment modern
environmentalists come on the scene
and at that before you know the first
major work even is published and trying
to stop the major work from
being published they begin the campaign
the chemical industry and
a whole range of industries that feel
threatened by environmental action
against environmentalists they they
create this view of the modern
environmentalists so
we don't have time to talk about that in
detail when you think about it that's
pretty amazing so
when the first sort of truly modern
environmentalist
and that's called rachel carson that yes
believe me i know there are lots of
influences and lots of
things that you know were before her but
given the way she appeared in the
popular
imagination at the moment she did let's
call her the first modern
environmentalist
when the first environmentalist comes on
the scene the attack on the first
environmentalist begins and that attack
then sets you know develops a
a modern notion of what an

environmentalist is that will continue
on today
50 odd years later so it's it's just
fascinating to think about it and also
to think you know
i didn't ask a poll question here but
you know before this class
what you thought of as an
environmentalist and if there are if
there are negative character
uh characterizations there you know why
do you have them
where did they come from and maybe ask
another question which you can ask
yourself if you have some and you can
ask it of the specific beliefs you have
was anybody served in doing that and
portraying that
that negative view of an
environmentalist in other words
could you imagine that this may have
actually come about from
you know was developed that view by one
of the detractors of the environmental
movement that there were groups whether
chemical chemical companies or whatever
that wanted you
to believe that so that they could
continue doing what they did
what they do
the argument that was made at the time
[Music]
is that these chemicals like ddt
do more good than they do harm
and ddt in particular
right um is an effective insecticide and
in places of the places in the world
where like uh
malaria is still a very big problem
this seems like a great thing right so
in other words
okay yes it causes environmental
problems yes

it may you know cause reduction in bird populations
sure but on the other hand this could save you know
hundreds of thousands of children from death and disease and spread all sorts of disease
if we could knock this thing out wouldn't that
advantage be more important than the you know harm to selective harm to the environment that happens
that's the argument and you know it far outweighs any you know human uh fallout so you could see why this would um get traction then you could see why this particular belief emerging when the environmental movement
emerges here will continue again and again and again
and and this is going to be a constant thing that you will hear
that you will be asked that question isn't it
worth it isn't it worth it for whom for human beings
isn't the good that it does whatever sort of environmental devastation or problem we're talking about
whether you know um mining mining coal or whether introducing chemicals to kill insects
isn't the good that they do human beings far more important than any environmental shortcomings they have
if you think about that argument
um let me just pop all the way on here for a moment if you think about that
this is important
because this goes back even to gilgamesh's time right
gilgamesh knew that there was a reason not to cut down that cedar forest he

knew that that was a problem he knew
that he shouldn't be doing it
but you know the religious prohibitions
against it
but on the other hand he thought yes but
the advantages
well to me personally gilgamesh wanting
fame and immortality
which incidentally he got um but on the
other hand you know to iraq to a city i
mean the resources there were so
incredible
that the benefit by rebuilding the city
and making it this amazing place to live
yeah that outweighed the the clear
cutting of that forest
it has always been with us in the sense
in the west then
and but clearly in carson's era the
the attack on her will take that form
again and again so
anything that you can say and people by
the way um do it so there's a book um
by any malik ebstine um from
i forget like the mid um teens
20 teens and he the book is called the
moral case
for fossil fuels so he talks about why
we should burn fossil fuels and he says
you know
you keep hearing that we should burn
less of them for the climate
his argument is we need to burn more of
them
why in the world would you say that
epstein's point is
fossil fuels have created the developed
world
the rest of the world needs to develop
too if we want the rest of the world to
have all the things that we have in the
west
then they need to get there too and how

they get how we got there as fossil fuels and how they get there should be fossil fuels
and he gives examples in fact is if you go online you'll you'll find a
um a video of him giving a talk and he talks about a child in africa
dying because that child didn't have it was a premature baby
and it didn't have an incubator and it didn't have access to energy to power one and all
he says that's a crime that child should have been
allowed to live and why didn't that child live
when a child and he gives an example of a premature baby that and he does it in a very personal way alex epstein is also a good communicator
unfortunately he gives an example of friends that had a premature baby in the developed world and hey that was no big deal
we had the energy we had the technology to take care of it
he says everyone on the planet should have that we should encourage people across the planet to burn more and more fossil fuels
you can see the argument because why everything we've just been saying
the good for human beings outweighs the bad
it is a species argument and a problematic argument right because
if we continue burning fossil fuels at the rate we're doing let alone increase
the planet will become in some measure largely
unwelcoming if not downright uninhabitable and large measure for our species

so it's it's a problematic argument but
it is the very argument
you know the same argument that we see
deployed against rachel carson and
you're going to see it again and again
and again
against environmentalists and
the negative characterization of
environmentalists comes along with that
why because these are people
environmentalists who are against
humanity who are against human interests
who are against you know saving lives
who were against
saving jobs who were against all these
things these are the people that would
stop
and and someone like alec epstein makes
the argument uh in a very strong way
who would stop human progress they want
to they want to turn us back into sort
of like
the um you know the
horrible era before we had all the
things that modernity has given
us so it is interesting to think about
how environmentalists are portrayed as
um
as as horrible people in this way
anyhow let's continue silent spring
yeah if you're going to rate silent
spring how many stars would you give it
so and in the way i'm asking a related
question would you recommend this work
to a friend
silent spring um you may not have liked
it
you may have found and you may have
found it you know 50 odd years later a
little problematic
right in the sense that you know the way
carson approaches it by appealing to
emotion by by doing different things

maybe some of that graded on you maybe
maybe not and
in some ways you know carson's work
could be just the opposite one of the
most inspiring things you you've ever
read i don't know people have come to me
i've taught lots of people you know
taught this course to lots of people
over the years with both views
with either having objections to it or
some people thought it was just amazing
so
i'm not saying you should you know um
being either those particular camps but
i'm just curious how you
want you to think about it anyhow the
interesting thing is
that here we are all these decades later
and
the debate continues over silent spring
and
and it's still a lot i mean really alive
and well and and vitriolic so
let me get out of the screen here
so in a 2005 essay
the harm that pressure groups can do so
right there
that's the argument against
environmentalism so
pressure groups that means environmental
pressure groups war more generally
environmental activists
so the title of this essay is really the
harm that environmental activists
can do so just to you know make
clear the person here
who's a british politician dick tavern
essentially compares carson to adolf
hitler so carson didn't seem to take
into account the
vital role that ddt played in
controlling the transmission of malaria
by killing mosquitoes to carry the

parasite so in other words the vital
role that
ddt served it does for human beings
it is the single most effective agent
ever developed for saving life
human life now that's a remarkable
statement to say
to have right you know effective agents
so we're not talking about
oh i don't know an agent like you know
an antibiotic or some other medicine
he would argue he's arguing here tavern
that
you know ddt is more effective for
saving life that could save more lives
than any of them
rachel carson is a warning to us all the
dangers of neglecting the evidence-based
approach
okay wait what did he actually read
silence ring
i mean carson is all about evidence
i mean you know we've focused on the
fact that she's a good writer and that
she's able to take the work of
scientists
and you know make it clear and
disseminate it you know but go to the
back of that book
go to the footnotes and it's one of the
most extensively footnoted books that
you'll ever read
because she's read pretty much i would
think at the time
pretty much like all or a great many of
the
the works that deal with ddt the
scientific papers and
and is is using that evidence
yeah warning to us all the dangers of
neglecting
an evidence-based approach and the need
to weigh potential risk

against benefit let's make that clear
risk to the environment and to other
species against
benefit to human beings it can be argued
that the anti-dd campaign that she
inspired was responsible for almost as
many deaths as some of the worst
dictators of the last century
last century for return here is the 20th
century so we're talking about
you know hitler mussolini and in
particular dictator i guess you'd like
the khmer rouge or something but
that's what what he's thinking about um
focusing on
so i guess my initial response to that
is wow
um you can see though the
the argument here right it's the you
know he's very
clear about very explicit about here you
know to weigh the potential risk
against benefit and the risk he feels is
is every is absolutely worth it because
of the benefit that it would have
uh he's not the only one to vern who who
argues this
um he was intentionally you know
inflammatory you can just see with the
language he's using here
um but in 2007 speaking for an agency of
the department of health
now so this is a u.s department during
the
second bush administration which i think
is kind of important to note
this guy um vats notes that the ban
on ddt may have killed 20
million children and i note here this
you know is the age-old debate since we
have zero as the myth of gilgamesh how
human nature should be weighed against
the planets

so um taking the argument that tavern has
further and being explicit the you know
so so why is this the most important
agent ever used by human beings
why is rachel carson as bad as
adaf hitler well she killed she is
responsible for the death of 20 million
people
so if that were true yeah yeah i mean
second world war like 50 million people
ultimately died so i mean hitler
hitler may be the worst i guess if
you're looking at like the most infamous
people in modern
in modernity but suddenly rachel carson
is on the
you know the top list um
that's that's a fascinating argument and
then of course ddt
if it you know number wise it could
literally have saved 20 million
children it's absolutely as
you know important as something like a
particular antibiotic
like um you know like penicillin or
something
well okay but first i mean we need to be
clear this is a specious argument and
then this is the same argument again
that people like i mentioned alec
epstein who wrote the book the moral
case for fossil fuels
because what's not taken into account
that there are other things that you
could use that are more benign
and so we're talking about here are
children in the developing world
and particular infants so if infants
contract something like malaria
if infant can infants contract yeah many
many diseases it's far worse for them of
course than it is for adults

because their immune systems are still
forming and they're they just don't have
the you know resilience to be able to
counter it the way an adult would
so they're particularly vulnerable to it
and a disease that
might make an adult you know plenty sick
would kill a child or kill an infant
um but so then there's there's a way
around that
a more benign way which are something um
called mosquito nets
and basically all these are are little
tents that you put over
cribs so when insects come and would you
know bite a
child at night they can't get through
the netting and they can't get to
the the child you know are they
completely effective
no do people use them when they you know
when they should the way they should
no but it does make clear that there are
other approaches to solving a problem
like this
than to use substance that causes you
know widespread environmental
problems so in going to alec epstein's
case
yes fossil fuels have given us the
modern world i mean
are burning them in the last 250 years
or so
has has brought a lot of prosperity to
the world and
does power things like you know medical
equipment that saves children
that's true but hey they're alternative
to that too
we call them alternative energy
otherwise known as renewable energy
then that you can power this equipment
on solar energy on wind power some

combination of those
whether directly or through that energy
being stored and that that's what we
really need to work on
or to go to this example that's what we
really need to work on um
yeah mosquito nets for you know put over
a children's crib
great idea but we really need to work on
other ways of solving these problems
that are environmentally
you know benign as benign as possible
and we've done that
right so ddt is banned other chemicals
were used now
some of them savin and all which one of
the the ones was introduced
uh most quickly they have their problems
too but you know we can we can work on
mitigating the problems
that become less and less chapter 17 of
silent spring
carson takes another route all together
you know acknowledging
that it would be good to do something
but instead she
says and you have to remember she has an
m.a in zoology
so she's going to come at it not from
from like a chemical perspective but
more biological
and she says you know we we need to use
um
things that will act on the very biology
of animals so if we could render
infertile
the insects that spread malaria then
you know suddenly they won't be able to
reproduce if they don't reproduce they
will die out and we might be able to do
that by
like a biological in a biological way
and in fact and also the carson's dream

and that's where she ends silence spring that
biology would be able to decide to solve this what she calls biobiotic intervention
um really now we are getting to the point where we can pretty much do that in fact
there's a ucsb research project on doing that very same
thing but of course now we have the advantage of being able to alter
you know dna and make a genetically modified genetic modification
that can be a problem too i'm sure as soon as i said that people
you rolled your eyes so it's that much better than ddt well hopefully
but i don't know but i i do know that we need to
come up with solutions that can meet these um
challenges but can do so in a more environmentally benign way
look even the production of solar cells is in a silver bullet that could that can be
problems you know wind turbines have their own problems
but you know and if you're doing a risk benefit
you know um you know analysis and making your decision based on it you have to try to
as much as we possibly can reduce the risk to the planet and what we're doing here
one last note here in terms of carson
um silent spring really is the work of a genus loki
um this of course comes you know back to his logical conclusion
we saw the suggestion made by emilia

lanier and ben johnson
400 years ago that you know human beings
take care of a place and that there
should be their obligation to take care
of its place in fact
arguably that's the prescription that
johnson has given the guy that he's
writing the poem for
so robert sydney commissions them to
write a poem johnson writes a poem
saying this is how great your estate is
but also in there is a little
prescription but you need to be the one
who takes care of it
it is your job to take care of you're
doing a great job but you can do an even
better job
basically that's it um and but
now the suggestion is kind of a
prescription to everyone
that we should all be genus loki
carson suggests environmentalists are
the new genus loki that we're protecting
the um the entire planet and
that's that's fascinating right in terms
of the course because you know
the first genus look who we encounter
humbaba is outright called a monster
and you can see the attack made on
environmentalists calling rachel carson
you know almost the equivalent of adolf
hitler is well
that's calling her a monster too so it's
it's it's not over but um it's
interesting that
the protectors of place are that
yep yep
the individuals like gilgamesh who would
endanger and exploit the environment
are no longer heroes for for many of us
you know
so it may not be it may be the case that
you know

some people we have politicians i won't mention any you can probably name them yourself who who take the role of fighting environmentalists who say the environmentalists are are a problem and we will do everything we can to you know dismantle the epa and i promise to get rid of it or whatever i guess i was pretty clear on who i was mentioning there anyhow um you know but it is the case that in a certain type of rhetoric that is you know more environmental rhetoric you know we see the people like gilgamesh who would indiscriminately come and clear-cut a forest they are they're the monstrous ones in doing such a thing again it's all a question of rhetoric though because the gilgamesh rhetoric is alive and well and you will read rhetoric that will cast the the person who you know will destroy the epa as as a great hero as important as as gilgamesh was yeah but from our perspective an environmental perspective the opposite rhetoric is is alive and well and and you know thank goodness or or be thankful for the planet in all its life that the new genus loki are are not the the monsters of the story being told but are the heroes of the story being told and again it'll depend on you know which of this these rhetorics you decide to take up what you make of rachel carson she could be and you know to many people would and i

would be and i asked you the question
what do you think of her would you how
many stories would you give the book
you know you may see her as one of the
most no
um amazing admirable
people of the last century and you may
read her
and you know the book may be
transformative for you
and you'll see her as certainly you know
a great hero
of the 20th century on the other hand i
gave you
you know a couple just gave you a couple
examples some people will see her
as as one of the most infamous people of
the 20th century
popping back on the screen again i guess
i feel strongly about this like
keep popping on the screen but um well
you you know it's it's really essential
that you know we we are aware of those
two rhetorics and aware
of of where they're coming from one
rhetoric you know being concerned about
the fate of of the planet and humanity
too right and it's become very clear i
mean
when you say a phrase like save the
planet
it always is sort of incomplete because
you have to ask the question
save it for what or for whom and almost
always it is an anthropocentric
statement so
really what you're saying is save the
planet for human beings
so if we're going to stop you know or or
slow down
significantly the climate crisis you
know who are we doing that for
um is it really to save the planet no

this
planet this rock in space will continue
on regardless of you know what its
climate is like and moreover
even if the climate should should get
out of control we pass a tipping point
and it should raise significantly
you know multiple degrees four or six
degrees celsius
or so um what that would mean those
temperatures would mean
the planet would be largely
uninhabitable for our species and
probably signaled
collapse of of modern culture um
i'm not saying we're going to hit that
but but we probably are going to hit
more than two but it doesn't mean that
your life wouldn't go on life
you know some life will is already
adapted to higher temperatures life will
be able to migrate some things will over
time ultimately evolve
life would go on even if human beings
don't so
it is a real question here of you know
whether
you are concerned about trying to to
stop these things and that
that is you know if that is what you
believe in then the people who
you know are proponents of that are
going to seem central other people
maybe not fully understanding or fully
believing that something like the
climate crisis
is happening we'll take the opposite
position that these people
are are trying to slow us down that alec
epstein would say we need to burn more
fossil fuels than anyone who tells you
differently they're a problem
the one thing i would i would always

suggest with this however is to look at
where this rhetoric is coming from
and so for the example of alec epstein
we know that he is directly funded by
so-called conservative think tanks which
are confunded by
directly by the fossil fuel industry and
people like the koch brothers
so um then he also works at prager
university which is not a university but
an online
content distribution system that is set
up by
um interests of fossil fuel interests
so it's always good to look at the
source of this and who's trying to
convince you whether they're doing it
really because they want to save the
planet even if just for human beings or
whether they're doing it to um to
to whether they're doing it for fossil
fuel or other
you know interest chemical interests in
the case of carson
um it is interesting to note and worth
noting that
you know uh genus loki means protector
of
place a specific place cedar forest was
a good one
but now if environmentalists are the new
genus loki and i would argue they are
then it's no longer quite a specific
place it's no longer a little
you know one forest that they're
protecting but rather
because they have a modern
notion of environmentalism i'm sorry
of ecology of connected ecosystems they
know
that everything is connected so it's not
just that you know what an insect
an insect and a robin are connected in

an ecosystem but
ecosystems themselves are connected so
one ocean
is connected so what's happening in one
ocean will affect another ocean
and when you do something like introduce
co2 or other
greenhouse gases into the atmosphere it
doesn't really matter where you
introduce them right so
you could burn a gallon of gasoline here
in the united states you could burn it
across the world
you could introduce co2 in an entirely
different way
it doesn't really matter because it will
impact ultimately the global climate if
you
release enough of it and and we are and
have been especially in the last six
decades
if released enough of it all the impact
will be everywhere so if you want to
if you want to stop it you you can't
just say i'm going to get everyone in my
town not to drive cars and
they don't release gasoline that'll
solve the problem no
you need to get everyone on the planet
to reduce driving cars and other
and other things to reduce co2 and
that's a huge job
but when you have someone like you know
al gore you know when gore comes on the
scene
he's an environmentalist in this global
sense and
that that becomes incredibly complicated
right because
you have nearly 200 different countries
on this planet
and you know even in those in the united
states you have lots of different

regions and lots of different beliefs
that people hold
either individually or in regions and or
because of groups that they affiliate
themselves with
so it's a really tough thing you'd have
to get everyone to agree with it
which is all the more remarkable at
cop21 you may know the paris agreement
was signed
and all the nations on on earth agreed
that they would do it that they would
try to go along with this that it was a
real problem that they would do
everything
um of course it is to our great shame
that the united states is the one nation
on
on earth that will not go along with him
that has pulled out of as you may donald
trump pulled us out of cop21
so um environmentalists obviously that
was a sad day because people like gore
china's loki for the planet realized
that you know we all have to be
in this together it's not like you know
one person can do it
it is now a global problem
yeah also worth noting that
environmentalists now
are unlike thoreau less likely to look
to the past than the future
in other words thoreau um and the way
he's received especially in the 1960s as
sort of the harbinger of a back to land
movement that you could just go out
in the middle of nowhere and live a
simpler kinder life
and you could kind of basically turn the
clock back and live the way people did
however many centuries or thousands of
years ago
you know um

people may be aware of a past locus of
menace you know carson and gore both
show that they are
but they're they're less concerned with
that they're less concerned with saying
how do we go back and live and you know
can we all go back and
live in the woods and and live a simpler
life
well they don't take that question up
because it wouldn't work not for 7.75
billion people
which is our current global population
they
you know realized that you know
if we're going to do something we have
to start thinking about the future
in other words you know it's not so much
what would like a simple life in the
country would like but
how do you make life in cities more
environmentally
safe you know how do you do that how do
you you increase mass transportation how
do you make sure that we're not
basing or how do you get us away from
basing our energy used on fossil fuels
how do you shift to things like solar
how do you do that and that's not you
know so
maybe that's a better maybe simpler
example
it's not like saying how do you live
without electricity and live a simpler
life
well you're going to need electricity we
don't even need more of it we need you
know 10
of the world's electricity now goes to
running the internet and that's only
going to
increase how do you get better safer
electricity so

it's poised to the future it's poised to
you know
a future that has you know greater
proliferation the internet and more
things like you know 3d
more or less energy use that's not
something from the past that's a future
and
and in a way it kind of goes back to
that renaissance early modern thing
right
we can talk about you know the past and
and equaling the achievements of the
past and being like the past
or we can look to you know a brave new
future and try to figure out how to live
there
and people like carson and gore you know
they acknowledge
that we're going to need you know the
trampolines of modernity that we're
going to need you know
things like you know control of insect
populations and all but how do we do
this in a safe way
that's that's the real question yeah
and i would argue that silent spring
addresses one of the the opening
questions of the course
you know why approach environmental
issues from a literary perspective
and you know the scientists who did all
the research and
again these are the people that you know
are in all the footnotes or two and
silent spring they did they did
amazing work that brought the world but
that
that made us aware of the problem but
the questions there is who is
us they made us in the sense of other
scientists who were the problem and all
but then the question is how do you

communicate that
to the general public and honestly
you know of all them none of them did it
right none of them
um took on the the idea of communicating
yet
but one of the answers here is that you
know from a literary perspective
it's these people communicators that
that it's communicators that they can do
it and rachel carson is a great example
of it
to disseminate this information to a
broader audience
al gore is another good example of it
these these people
brought them took the message they
understood it and and gore
you know if you've uh if hopefully
you've seen
an inconvenient truth you know he
understands he's talked to scientists
he's a pretty bright
guy he understands what's going on
and then he his job is to process it and
communicate it to
everyone else and that's rachel carson's
job and
you know yep that
is an incredibly important role for
i would argue you know the environmental
humanities
generally but also literature itself it
can have other roles too i believe that
literature can
can not just be sort of spokesman for
for scientists and all i mean that
that's a role but an important one and
we see it here is role but it can also
directly intervene in problems by
understanding culture and trying to
to affect um cultural change that will
impact us all

that's kind of a separate issue but
right now the important thing to realize
is you know why approach things from a
literary perspective
well because from a literary perspective
by the way here we are um don't worry
um up here next time i see you 17 and 18
will be there
but
it it is interesting to think about
the the role of literature the role of
communication
and and how it works so science is one
thing but being able to get a message
out to people
is another and and i would argue now
of course with the climate crisis but
with so many other things
and there's so much disinformation out
there and the disinformation is often
incredibly well funded i mean we know
that you know
tens and tens of millions of dollars are
spent every year by fossil fuel interest
directly
by even individual fossil fuel companies
like as much as 30 million dollars a
year
each and then other groups much more
that enormous amount of money is being
spent on campaigns of disinformation
and there's a lot of disinformation out
there on all sorts of different things
so it really the climate crisis is a
good example
you know the problem right now is not
that we don't have the technology
to solve the climate crisis we do people
will tell you we don't have storage
worked out and all with respect to
um to solar and things like that there's
truth to that but
but we are at a point where we could

sufficiently address the issue now
and of course we should welcome new
technology like in storage and all that
will help
but that's not the problem the problem
is not
you know technology right now the
problem is getting everyone
to agree that we need to change this
and then be willing to act to make the
change
that's the challenge right now and that
is a challenge
not for scientists but it's a challenge
for communicators and other
people who impact you know public
opinion that we really need
to communicate to people and to get them
convinced that it's a real problem and
again with all the disinformation trying
to convince them it's not a problem
that's hard but then beyond that you
know once you realize
the problem even if you're opera if
you're only caring you know
anthropocentrically about yourself
we still need to do something about it
so if you acknowledge
the problem then what do we do about it
that that needs to be done as well
but again that's not a job really for
scientists i mean the scientists
in terms of the climate crisis they've
already done their job they've proved
beyond any reasonable doubt
you know as you may know the figure
tablet is you know 97
of them agree the climate crisis is
happening that number is actually
probably considerably higher
so you know that's beyond any reasonable
doubt that there's
there's there's reason to intervene we

absolutely should do it
we just have to convince everyone that
we need to do it
and convince them that they have to help
do it that
convincing is the job for the
environmental humanities i would argue
and more specifically why why literature
and
communication is so important um and i
mean that in communication in
in a broader sense not just you know
doing it by text and all of course
videos and and other things are um
very important too and it all is
important i mean there's there's you
know people do
eco uh musicology music and all can be
impact
okay but i would argue that this all has
to to play a role in it
and again you might have thought that
you know the only way we could approach
you might have thought you know if
you're a student thinking about the
different things that you can do with
your life
that if you wanted to make some sort of
direct intervention in the climate
crisis or to make the world a better
place environmentally
that you you had to do natural sciences
and all
first if that's what you want to do and
you know you're you lean in that
direction like it absolutely by all
means do it
but if not and you thought well maybe
then you know because
you're not a science person that that
wasn't that really kind of ruled out
that you could make any intervention
well no you can make an intervention and

i say that with great confidence because
i don't i don't know you don't know your
situation but
um pretty much anything you're
interested in any field you're
interested in any anything at all um
you see with the film like the true cost
i mean you could be really just
interested in fashion
and you can make a difference right
sustainable fashion rethinking fashion
law in fact when we get to
to buddhism the way it was enacted in
japan we're going to talk about fashion
again the kind of things that can be
done
but it you know anyone
interested in anything can make a
difference here and
the humanities have a big role to play
in that but okay
next time we're going to take up
buddhism and we're going to talk about
how
you know this non-western culture you
know
looked at these issues in in
in its like underlying theory and then
how this played out
culturally so how a different belief
system
and form cultural practices how for
example with clothing
near in a different relationship was
formed with clothing in part because of
the
belief system and then unfortunately
we're going to talk about the influence
of the west
because you know these cultures that
existed for thousands of years in some
cases
had an encounter with the west going

back a few hundred years
um and specifically like in the age of climate change in the last um you know two or three hundred years in the colonial era
where these beliefs collided with western beliefs and didn't always survive or fare very well and as we'll see in some cases to the detriment of the planet
so what we're really talking about is the global impact then of western thinking which
you know buddhism is an interesting example in its own right but it is interesting to think about this
how the colonial project and and what i mean by that is the spread of western thinking and western values
has now impacted the entire planet and even the cultures that we wouldn't characterize as as western
how they fared you know with the collision their collision with the west
so that's what we're taking up next time so
uh until then i'll see you soon