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<time begin="00:00:00.50"/><clear/>[music]

<time begin="00:00:33.04"/><clear/>>> Dan Colley: Good
evening.

<time begin="00:00:33.99"/><clear/>I'm Dan Colley, the

Director of the Center for Tropical

<time begin="00:00:38.28"/><clear/>and Emerging Global Diseases
here at UGA.

<time begin="00:00:40.84"/><clear/>And it's truly a pleasure to
welcome

everyone here this evening to the first

<time begin="00:00:47.71"/><clear/>in a new lecture series,
Global

Health: Voices from the Vanguard.

<time begin="00:00:53.78"/><clear/>Now Voices from the Vanguard
has grown

out of a collaboration between Pat Thomas,

<time begin="00:01:00.49"/><clear/> the Knight Chair in Health
and Medical

Journalism in the Grady College of Journalism

<time begin="00:01:05.61"/><clear/>and Mass Communication, and
myself, in The

Center for Tropical Emerging Global Diseases

<time begin="00:01:10.69"/><clear/>with additional support
from

the President's Venture Fund.

<time begin="00:01:14.46"/><clear/>And the series, however, was
actually founded

more broadly on what some of us perceive

<time begin="00:01:22.83"/><clear/>as a real desire by UGA to
provide its

students and faculty with perspectives

<time begin="00:01:29.39"/><clear/>on global issues, including
global health.

<time begin="00:01:33.63"/><clear/>Now over the last several
years UGA

has steadily, and very positively,

<time begin="00:01:38.52"/><clear/>chosen to invest in
global

health related endeavors.

<time begin="00:01:42.73"/><clear/>And it has done this through
the

establishment of units, such as the center

<time begin="00:01:47.77"/><clear/>that I'm director of, The
Center for

Drug Discovery, Biomedical Health

<time begin="00:01:52.15"/><clear/>and Sciences Institute, The

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Institute for
Behavioral Research, The Knight Chair in Health
<time begin="00:01:57.79"/><clear/>and Medical Journalism, The
College of
Public Health, and multiple other programs
<time begin="00:02:05.07"/><clear/>and the faculty in those
programs
in veterinary medicine, ecology,
<time begin="00:02:09.35"/><clear/>agriculture, and the social
sciences.
<time begin="00:02:12.70"/><clear/>Now such programs have either
been
at UGA for a long time, or are new,
<time begin="00:02:19.00"/><clear/>but they all bear on global
health.
<time begin="00:02:21.24"/><clear/>And there's actually quite a
collection of them.
<time begin="00:02:24.17"/><clear/>And the purpose of those,
obviously,
from the universities point of view is
<time begin="00:02:29.05"/><clear/>to enrich the milieu of
the student experience here at UGA.
<time begin="00:02:35.12"/><clear/>Now as we speak, this week
and
next, some of us are working hard
<time begin="00:02:39.70"/><clear/>to synthesize these
multiple,
successful, and burgeoning activities
<time begin="00:02:44.30"/><clear/>into a broadly encompassing
spectrum to try
<time begin="00:02:47.67"/><clear/>and coalesce interest
in global health at UGA.
<time begin="00:02:51.32"/><clear/>We're doing this by applying
through
an NIH Grant mechanism called,
<time begin="00:02:54.79"/><clear/>Frameworks for Global
Health.
<time begin="00:02:57.09"/><clear/>So, by attending this
evening's lecture
you will not only be hearing from one
<time begin="00:03:03.22"/><clear/>of global health's purely
bright stars, and I'll
leave it to Dr. Lee to elaborate
<time begin="00:03:08.54"/><clear/>on our distinguished guest in
a minute.
<time begin="00:03:10.88"/><clear/>But your also being here
is

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contributing to this grant.

<time begin="00: 03: 15. 65"/><clear/>For those of you who write
biomedical

grants, like I do, you can look at Voices

<time begin="00: 03: 21. 72"/><clear/>from a Vanguard as
preliminary data.

<time begin="00: 03: 25. 78"/><clear/>Without preliminary data you
pretty

much don't get a grant these days.

<time begin="00: 03: 30. 72"/><clear/>You can think about it if
you're not in

the biomedical sciences as seed money.

<time begin="00: 03: 35. 16"/><clear/>Voices from the Vanguard is
what we're using,

the kind of thing we're using in this grant.

<time begin="00: 03: 41. 76"/><clear/>So I will definitely comment
on the people

here, and all of those things in the grant.

<time begin="00: 03: 47. 08"/><clear/>So I'll end simply by saying
that we're

gratified that each of you has made the effort

<time begin="00: 03: 51. 84"/><clear/>to come out this evening. I'm
sure you'll

be fascinated by what you're going to hear,

<time begin="00: 03: 56. 45"/><clear/>and I hope that you'll come
back

for the other three lectures

<time begin="00: 03: 59. 69"/><clear/>in this series throughout the
semester.

<time begin="00: 04: 02. 48"/><clear/>Each will be quite different,
because

they're meant to, they're designed to try

<time begin="00: 04: 09. 32"/><clear/>and introduce you to the ways
that people,

innovative people, have attacked the problems,

<time begin="00: 04: 14. 44"/><clear/>huge challenges of global
health.

<time begin="00: 04: 17. 16"/><clear/>So thank you for coming.

<time begin="00: 04: 18. 60"/><clear/>And with that I'll turn it
over to

Dr. David Lee, our Vice President

<time begin="00: 04: 22. 03"/><clear/>for Research and Associate
Provost.

<time begin="00: 04: 23. 51"/><clear/>[applause]

<time begin="00: 04: 32. 65"/><clear/>>> Dr. David Lee: Thank you
Dan,

thank you for giving me the opportunity to

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<time begin="00:04:37.04"/><clear/>add an administrative
welcome; administrative,

<time begin="00:04:40.73"/><clear/>but warm welcome to
everybody

who's here tonight.

<time begin="00:04:43.76"/><clear/>And I would like to begin by
thanking Dan, and

also Patricia Thomas for taking the initiative

<time begin="00:04:50.98"/><clear/>to organize, what I'm sure
is

going to be a very important,

<time begin="00:04:54.48"/><clear/>thought provoking, and
informative

lecture series.

<time begin="00:04:59.56"/><clear/>And I'm delighted to be
here

to help kick this off.

<time begin="00:05:03.26"/><clear/>It's a series of talks by
individuals,

<time begin="00:05:05.21"/><clear/>who I think are truly
making

a difference in the world.

<time begin="00:05:08.00"/><clear/>And I think that will be
very

apparent from the talk tonight.

<time begin="00:05:11.73"/><clear/>And in that vein I can think
of no

better way to kick off this series

<time begin="00:05:15.97"/><clear/>than with tonight's speaker,
Victoria Hale, who

is currently Founder, Chief Executive Officer,

<time begin="00:05:22.82"/><clear/>and Chair of the Board of
Directors

at the Institute of OneWorld Health.

<time begin="00:05:26.99"/><clear/>So the relatively dry facts
here

are that Victoria earned her PhD

<time begin="00:05:31.85"/><clear/>in pharmaceutical
chemistry

from UC San Francisco.

<time begin="00:05:35.70"/><clear/>And then moved to the FDA,
bypassed the

traditional post doctorate and went right

<time begin="00:05:41.55"/><clear/>to work at the Federal Drug
Administration

as a reviewer of drug applications.

<time begin="00:05:47.77"/><clear/>And spent five years doing

that.

<time begin="00:05:49.69"/><clear/>And I think she would say it
was an important,

informative experience as she gained a lot

<time begin="00:05:54.65"/><clear/>of important experience
working with many drug

companies, and many, many different drugs.

<time begin="00:05:59.54"/><clear/>And eventually became
such

an expert that she became one

<time begin="00:06:02.37"/><clear/>of the FDA's teachers of how
that process works.

<time begin="00:06:06.73"/><clear/>She then went to the other
side of the

street and went to work with Genentech,

<time begin="00:06:11.92"/><clear/>which some of you may know
is,

<time begin="00:06:13.68"/><clear/>is one of the
granddaddies

of the biotechnology industry.

<time begin="00:06:18.05"/><clear/>Got started when I was a
graduate student,

and it's certainly one of the most successful

<time begin="00:06:22.44"/><clear/>of the, of the
biotechnology

companies to this date.

<time begin="00:06:25.87"/><clear/>And I think she spent about
three years there

working in their neuropharmacology division.

<time begin="00:06:32.06"/><clear/>Well about three years into
doing that I think

she got to thinking that there had to be more

<time begin="00:06:36.54"/><clear/>to life, or there had to be
more to a satisfying

career, and perhaps her sense of wanting

<time begin="00:06:41.94"/><clear/>to do something in terms
of

social action, social justice,

<time begin="00:06:45.66"/><clear/>led her to take a
sabbatical.

<time begin="00:06:48.65"/><clear/>And she tells me, I think I
got this story

straight, that after only about three

<time begin="00:06:53.32"/><clear/>or four months into that
sabbatical she'd

already begun to develop a business plan

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<time begin="00:06:58.73"/><clear/>for what you'll hear
about

tonight, which is this,

<time begin="00:07:01.85"/><clear/>what has become the
Institute

for OneWorld Health.

<time begin="00:07:05.12"/><clear/>Over the next couple of years
she actually

set up a consulting company to help others

<time begin="00:07:12.59"/><clear/>with drug development,
drug

marketing, and so on.

<time begin="00:07:15.76"/><clear/>But during that time, and
that was

also providing valuable experience,

<time begin="00:07:19.88"/><clear/>during that time really
helped this, during that

time this, the plan for what she's going to talk

<time begin="00:07:26.72"/><clear/>about tonight really
germinated

and developed.

<time begin="00:07:29.63"/><clear/>And was, that experience as a
consultant

was part of the formative period.

<time begin="00:07:36.46"/><clear/>So as a result of this
thinking and this

soul searching she came to the conclusion

<time begin="00:07:45.64"/><clear/>that what she wanted to do
was to

set up a nonprofit drug company.

<time begin="00:07:51.27"/><clear/>And to some this seems like
a

counterintuitive sort of thing.

<time begin="00:07:55.16"/><clear/>A nonprofit drug company that
would address

many of the world's important disease problems,

<time begin="00:08:02.62"/><clear/>orphan diseases, diseases
that for one reason

or another major pharmaceutical companies

<time begin="00:08:08.39"/><clear/>and government have
decided

not to go anywhere near.

<time begin="00:08:12.32"/><clear/>Often because there's no
major

profit at the end of a long

<time begin="00:08:15.82"/><clear/>and tedious drug
discovery

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and marketing process.

<time begin="00:08:19.76"/><clear/>And so she decided to pursue
this challenge.

<time begin="00:08:23.63"/><clear/>And I'm sure along the way in
the early days

got a lot of negative feedback from friends

<time begin="00:08:28.28"/><clear/>and colleagues who probably
thought she

was pretty crazy to be pursuing what,

<time begin="00:08:33.13"/><clear/>to many must have seemed like
a

frustrating and fruitless chorus.

<time begin="00:08:41.28"/><clear/>Well, in fact she's
proved

everybody wrong; the naysayers.

<time begin="00:08:44.82"/><clear/>And over time she's gotten a
lot of support

from the Bill and Melinda Gates Foundation.

<time begin="00:08:50.79"/><clear/>You may know that they're
very

interested in global diseases.

<time begin="00:08:55.30"/><clear/>She's had help from the
World

Health Organization.

<time begin="00:08:59.53"/><clear/>She's partnered effectively
with the

University of California at Berkeley.

<time begin="00:09:03.78"/><clear/>And in fact, now Major
Pharma, which had

looked at this whole thing skeptically

<time begin="00:09:08.84"/><clear/>from the beginning, is now
looking for ways

to partner with her and help her as part

<time begin="00:09:13.24"/><clear/>of their effort to convince
the rest of us

that they really do want to do the right thing.

<time begin="00:09:19.52"/><clear/>And so collectively with this
support, this

institute that Victoria has formed is developing

<time begin="00:09:28.67"/><clear/>and bringing to market,
beginning to bring

to market, drugs that will be used

<time begin="00:09:34.63"/><clear/>to treat a variety of very
important

global diseases, such as malaria,

<time begin="00:09:40.07"/><clear/>such as forms of
diarrhea,

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Leishmani asis, and others.

<time begin="00:09:46.77"/><clear/>And so this is as you'll

hear, a remarkable story.

<time begin="00:09:52.31"/><clear/>And predictably Victori a

has

been recognized, increasingly,

<time begin="00:09:56.79"/><clear/>for her pioneering and

inspiring efforts.

<time begin="00:09:59.86"/><clear/>In 2003 she was selected as

a

Leadership foundation fellow

<time begin="00:10:03.90"/><clear/>of the International Women's

Forum.

<time begin="00:10:06.76"/><clear/>In 2004 she was named to

the

Scientific American Fifty,

<time begin="00:10:11.38"/><clear/>which is an annual list

recognizing

outstanding acts

<time begin="00:10:14.49"/><clear/>of Leadership in science and

technology.

<time begin="00:10:17.28"/><clear/>Also in that same year she

was named one

of the outstanding social entrepreneurs

<time begin="00:10:21.94"/><clear/>by the Schwab Foundation for

Social

Entrepreneurship based in Switzerland.

<time begin="00:10:27.84"/><clear/>And in this past year,

2005,

she was named the winner,

<time begin="00:10:33.15"/><clear/>women of the year by the

Women

Healthcare Executives Group.

<time begin="00:10:37.71"/><clear/>And she's also received other

honors,

including being asked to be an advisor

<time begin="00:10:43.22"/><clear/>to the World Health

Organization.

<time begin="00:10:45.20"/><clear/>So I don't want to take any

more time here,

<time begin="00:10:47.68"/><clear/>but I did want to give you

the

background for this remarkable story.

<time begin="00:10:51.65"/><clear/>So without further adieu,

please join

me in thanking Victori a for

<time begin="00:10:56.93"/><clear/>being here tonight, and being

the

person to help launch this important series.

<time begin="00:11:02.31"/><clear/>Victoria we're really

delighted

that you're here.

<time begin="00:11:04.33"/><clear/>Thank you very much.

<time begin="00:11:05.51"/><clear/>[applause]

<time begin="00:11:15.89"/><clear/>>> Victoria Hale: It's a

pleasure to be here.

<time begin="00:11:18.18"/><clear/>We've talked about this Dan,

for how long?

<time begin="00:11:20.25"/><clear/>About a year?

<time begin="00:11:21.67"/><clear/>I think so.

<time begin="00:11:22.52"/><clear/>I'd like to begin with one

little story about

Dan, who was a founding scientific advisor

<time begin="00:11:28.11"/><clear/>of the Institute for OneWorld

Health.

<time begin="00:11:30.29"/><clear/>I came to visit him while he

was still

at CDC, Director of Parasitic Diseases.

<time begin="00:11:37.78"/><clear/>And I said, I'm going to

start a

nonprofit, and I'd like your advice.

<time begin="00:11:42.47"/><clear/>I'm going to pursue parasitic

diseases, and why?

<time begin="00:11:46.25"/><clear/>Because we know the

pharmaceutical

industry will admit

<time begin="00:11:50.37"/><clear/>that that is not an area

where we would be competing.

<time begin="00:11:53.79"/><clear/>And which diseases should we

pursue?

<time begin="00:11:58.17"/><clear/>Dan had his ideas, and every

advisor

that I spoke to had their own ideas.

<time begin="00:12:03.66"/><clear/>And I asked him again,

do

you think it will work?

<time begin="00:12:08.14"/><clear/>And he said, well, I

think

you're on the right track,

<time begin="00:12:11.35"/><clear/>and I think you should give

it your best shot.

<time begin="00:12:13.97"/><clear/>Now some advisors who I've

talked to

after the fact have said, you know,

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<time begin="00: 12: 19. 11"/><clear/>I never did believe that this was going to work.

<time begin="00: 12: 21. 58"/><clear/>I couldn't tell you that

at

the time, I kept it to myself.

<time begin="00: 12: 24. 78"/><clear/>But not true for Dan.

<time begin="00: 12: 26. 24"/><clear/>He hoped that it, he hoped

that it would work.

<time begin="00: 12: 27. 93"/><clear/>So I can say that he was an

early

believer, so thank you Dan Colley.

<time begin="00: 12: 32. 31"/><clear/>Okay, so I have a few slides

regarding

a few of the diseases that we'll talk

<time begin="00: 12: 41. 10"/><clear/>about here, and a little bit

of statistics.

<time begin="00: 12: 43. 49"/><clear/>Then we'll get into

background of the

pharmaceutical industry in this sector,

<time begin="00: 12: 48. 38"/><clear/>and these diseases, and why

One

World Health needed to exist,

<time begin="00: 12: 52. 35"/><clear/>or a nonprofit

pharmaceutical

sector needed to exist.

<time begin="00: 12: 56. 28"/><clear/>And I'll go through our

lead

program, in Leishmaniasis.

<time begin="00: 13: 00. 18"/><clear/>And then a bit

about another program of ours,

<time begin="00: 13: 02. 98"/><clear/>a malaria project with

a university, UC Berkeley.

<time begin="00: 13: 06. 09"/><clear/>And then I'll wind up with a

zinger for you, a

real challenge to you, you who are sitting here,

<time begin="00: 13: 13. 64"/><clear/>and your friends nearby.

<time begin="00: 13: 16. 12"/><clear/>So let's proceed.

<time begin="00: 13: 17. 98"/><clear/>I'm gonna turn this a little

bit.

<time begin="00: 13: 22. 66"/><clear/>I have to point towards this,

right?

<time begin="00: 13: 26. 76"/><clear/>Let's see.

<time begin="00: 13: 29. 10"/><clear/>Good. Right.

<time begin="00: 13: 30. 55"/><clear/>So the, the text is very

small at the top, but my,

<time begin="00: 13: 33. 71"/><clear/>my major point here is

there's tremendous need.

<time begin="00: 13: 37. 14"/><clear/>This slide presents for you

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overlapping burdens

of tropical diseases, including malaria.

<time begin="00:13:43.97"/><clear/>In the darker sections are

one, the darker

countries are ones that have tremendous number

<time begin="00:13:51.13"/><clear/>of diseases, and inordinate

burden.

<time begin="00:13:53.46"/><clear/>The hatched sections are

ones, it's hard to

see, where malaria is of highest incidence.

<time begin="00:14:01.12"/><clear/>Think we could dim these

lights a little bit?

<time begin="00:14:04.99"/><clear/>Is that possible?

<time begin="00:14:06.50"/><clear/>This is gonna be a

challenge.

<time begin="00:14:10.29"/><clear/>

<time begin="00:14:12.27"/><clear/>Great. I think I may take you

up on your

offer to flip the slides please, thank you.

<time begin="00:14:21.22"/><clear/>

<time begin="00:14:23.07"/><clear/>Thanks very much.

<time begin="00:14:24.45"/><clear/>Okay. So a little bit about

why

these diseases are important.

<time begin="00:14:29.08"/><clear/>And I know that those of you

who are gathered

here at 6 PM, you should be eating dinner,

<time begin="00:14:33.44"/><clear/>but thank you for coming,

know

that these diseases are important.

<time begin="00:14:36.99"/><clear/>And you do, you do care

for

them, and people with them

<time begin="00:14:40.09"/><clear/>or you wouldn't be here.

<time begin="00:14:42.41"/><clear/>These diseases are listed in

order of the

number of deaths that they cause globally.

<time begin="00:14:48.46"/><clear/>Individuals of all ages, so

adults

and children are combined here.

<time begin="00:14:52.17"/><clear/>And we see that Africa is

disproportionally

represented,

<time begin="00:14:56.62"/><clear/>particularly with malaria

deaths and HIV.

<time begin="00:15:01.89"/><clear/>Respiratory infections and

diarrheal diseases

are the number one and number three killers.

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<time begin="00: 15: 06. 18"/><clear/>And those are particularly
complicated,

because multiple pathogens are involved.

<time begin="00: 15: 11. 38"/><clear/>And I propose that the world
has shied

away from, and scientists have been hesitant

<time begin="00: 15: 16. 72"/><clear/>to tackle these diseases,
because of the issue

<time begin="00: 15: 19. 49"/><clear/>of multiple pathogens,
and

that we need to do better.

<time begin="00: 15: 22. 15"/><clear/>And we need to learn to work
together

if we're going to get at the number one

<time begin="00: 15: 25. 54"/><clear/>and number three causes of
deaths in the world.

<time begin="00: 15: 27. 97"/><clear/>And we can do it if we come
together.

<time begin="00: 15: 32. 71"/><clear/>In Asia the leading causes
of

death are respiratory infections,

<time begin="00: 15: 36. 52"/><clear/>diarrheal disease, and
TB.

<time begin="00: 15: 38. 32"/><clear/>So just, you can find these
data on the web.

<time begin="00: 15: 41. 99"/><clear/>It the place that I, next
slide

please, educated myself growing

<time begin="00: 15: 46. 03"/><clear/>up in the U.S. I'd say I
didn't know much

about what was going on elsewhere in the world.

<time begin="00: 15: 52. 17"/><clear/>A little problem arose, for
me

as a pharmaceutical scientist,

<time begin="00: 15: 56. 75"/><clear/>once you know that certain
drugs aren't

being developed and they could be developed,

<time begin="00: 16: 01. 18"/><clear/>how can you not act?

<time begin="00: 16: 03. 08"/><clear/>Once you know, how can
you

continue doing what you're doing?

<time begin="00: 16: 07. 12"/><clear/>These are, back one slide,
yeah that's right.

<time begin="00: 16: 12. 12"/><clear/>Just again a reminder that
Africa, the

African continent disproportionately suffers

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<time begin="00: 16: 17. 91"/><clear/>from deaths due to infectious
diseases with

Asia and the Middle East in the middle.

<time begin="00: 16: 24. 55"/><clear/>I was surprised to see, this
is data from

Jeff Sachs that Europeans have half the number

<time begin="00: 16: 31. 05"/><clear/>of deaths from
infectious

disease compared to the Americas.

<time begin="00: 16: 34. 32"/><clear/>And I suppose that is all of
the

Americas and that's why it's different.

<time begin="00: 16: 38. 72"/><clear/>Okay, next slide.

<time begin="00: 16: 39. 44"/><clear/>Thanks. And why do we

have

these problems?

<time begin="00: 16: 44. 16"/><clear/>Why are there disease

diseases?

<time begin="00: 16: 46. 86"/><clear/>And then why are there the

consequences

that no new drugs for some diseases,

<time begin="00: 16: 52. 83"/><clear/>no new vaccines for some

diseases?

<time begin="00: 16: 54. 37"/><clear/>And that is poverty.

<time begin="00: 16: 56. 18"/><clear/>It's the ability to pay.

<time begin="00: 16: 57. 57"/><clear/>It really is that

simple.

<time begin="00: 17: 00. 21"/><clear/>It's unfortunate, but

the

good part of that is

<time begin="00: 17: 04. 26"/><clear/>if it's simple then perhaps

there

is a remedy that is within reach.

<time begin="00: 17: 07. 88"/><clear/>And that one can imagine,

and

that one can put forth.

<time begin="00: 17: 12. 60"/><clear/>Next slide please.

<time begin="00: 17: 15. 72"/><clear/>So the problem with a large

part

of the world living in poverty,

<time begin="00: 17: 20. 99"/><clear/>and a small part of the world

not living in

poverty is that the small part of the world

<time begin="00: 17: 27. 56"/><clear/>that has the resources gets

the

investment, the R and D in everything.

<time begin="00: 17: 33. 16"/><clear/>In technology, but in

particular

this slide conveys the 10

<time begin="00:17:37.95"/><clear/>90 gap, and R and D for

health.

<time begin="00:17:41.31"/><clear/>And consider the

last phrase on the slide.

<time begin="00:17:47.37"/><clear/>We all have known one

person

or one family in our life

<time begin="00:17:52.08"/><clear/>who has experienced the

death

of a child, and it is a horror.

<time begin="00:17:55.22"/><clear/>An absolute horror.

<time begin="00:17:56.83"/><clear/>I hope it hasn't happened

to

any of you in the room.

<time begin="00:18:00.65"/><clear/>But it's a very rare

occurrence in our

world, and we are blessed for that.

<time begin="00:18:06.77"/><clear/>And it is obvious, but I

think not stated enough

that 98% of the deaths of children or the deaths

<time begin="00:18:13.94"/><clear/>that occur during

childhood

occur in the developing world,

<time begin="00:18:16.31"/><clear/>just devastating. And it

shouldn't happen

in the year, in this new century.

<time begin="00:18:21.42"/><clear/>These are, this is a photo

that I took of young

girls in, in Bihar, state of India.

<time begin="00:18:28.08"/><clear/>It's a very poor state in

India where

we're doing our first program.

<time begin="00:18:32.07"/><clear/>Next slide.

<time begin="00:18:33.46"/><clear/>So, global health

inequities,

what are they about?

<time begin="00:18:37.39"/><clear/>What causes them?

<time begin="00:18:39.22"/><clear/>If we understand what causes

them then

maybe we can do something about them.

<time begin="00:18:45.17"/><clear/>Number one is poverty.

<time begin="00:18:47.02"/><clear/>We can go through the list of

others.

<time begin="00:18:50.66"/><clear/>But basically, if you, again,

are very,

very poor, you have different diseases.

<time begin="00:18:57.01"/><clear/>And, and because those

Hal e. txt

di seases

are so di fferent,

<time begin="00: 19: 00. 54"/><clear/>organi zati ons that devel op
new medi ci nes,

and I'm not sure that you realize

<time begin="00: 19: 06. 97"/><clear/>that almost all new medi ci nes
in the

world if they are western medi ci nes,

<time begin="00: 19: 13. 26"/><clear/>not tradi ti onal herbal
medi ci ne, are

devel oped by western pharmaceuti cal compani es.

<time begin="00: 19: 17. 85"/><clear/>They may not be di scovered
by

western pharmaceuti cal compani es,

<time begin="00: 19: 20. 10"/><clear/>they may be di scovered by
uni versi ti es, yeah?

<time begin="00: 19: 22. 67"/><clear/>But they are devel oped by
western pharmaceuti cal

compani es and go through regul atory agenci es.

<time begin="00: 19: 27. 97"/><clear/>So we need some time for
compani es in Indi a,

okay, in Asia, in Indi a and in Chi na to learn

<time begin="00: 19: 35. 59"/><clear/>to do the new drug R and D
process.

<time begin="00: 19: 38. 01"/><clear/>And maybe some of thi s will
change, al though

I'll say to you that in my di scussi ons

<time begin="00: 19: 42. 99"/><clear/>wi th compani es in Indi a,
thei r

target markets are the same

<time begin="00: 19: 46. 01"/><clear/>as pharmaceuti cal compani es
in the west.

<time begin="00: 19: 48. 96"/><clear/>So we may mai ntai n thi s
probl em

of no new drug R and D,

<time begin="00: 19: 53. 50"/><clear/>even though pharmaceuti cal
compani es

devel op the ski lls el sewhere in the world.

<time begin="00: 19: 57. 57"/><clear/>Let me add as well, I believe
that the

world was more concerned wi th these di seases

<time begin="00: 20: 02. 32"/><clear/>when col oni al i sm was in
vogue, in fashi on.

<time begin="00: 20: 07. 14"/><clear/>When European countri es
pul led out

of i ts col oni es, thei r col oni es,

<time begin="00: 20: 14. 72"/><clear/>they pulled away their
compassion,

their passion, and energy, and finances,

<time begin="00: 20: 19. 71"/><clear/>and resources as well,
unfortunately.

<time begin="00: 20: 22. 44"/><clear/>If there is anything good
that can come from

the military, militarism that is occurring

<time begin="00: 20: 28. 57"/><clear/>in the world, this little
editorial on my

part, it would be that it puts westerners back

<time begin="00: 20: 34. 02"/><clear/>into parts of the world that
we pulled

out of decades or centuries ago.

<time begin="00: 20: 40. 13"/><clear/>And I hope that

that turns out to be the case.

<time begin="00: 20: 44. 61"/><clear/>Go ahead. So, the neglected
diseases,

<time begin="00: 20: 48. 60"/><clear/>the really neglected diseases
are

not anymore, HIV, TB, and malaria.

<time begin="00: 20: 56. 25"/><clear/>We have a little disagreement
about that

in the global health sector.

<time begin="00: 21: 00. 50"/><clear/>I have malaria here on the
list.

<time begin="00: 21: 04. 04"/><clear/>But the general consensus
is,

something's been going well in global health.

<time begin="00: 21: 08. 33"/><clear/>There is quite a bit of,

<time begin="00: 21: 10. 79"/><clear/>quite a few resources
being

applied to HIV, TB, and malaria.

<time begin="00: 21: 14. 93"/><clear/>That still leaves a long

list of diseases, however.

<time begin="00: 21: 17. 26"/><clear/>And diseases that affect
half

of the world if you're talking

<time begin="00: 21: 21. 18"/><clear/>about nematodes or
worms.

<time begin="00: 21: 23. 93"/><clear/>Diarrheal diseases is an

arena that we're moving into,

<time begin="00: 21: 27. 12"/><clear/>and it's a tremendous
market

if you think about it.

<time begin="00: 21: 30. 10"/><clear/>The top four there, the first
two

being enteric, then malaria, and shisto,

Hale.txt

<time begin="00: 21: 38. 71"/><clear/>one of Dan's favorites.

<time begin="00: 21: 40. 35"/><clear/>Tremendous markets, but

they don't attract industry.

<time begin="00: 21: 44. 51"/><clear/>They just don't have the

ability to pay.

<time begin="00: 21: 47. 50"/><clear/>Go on, next slide.

<time begin="00: 21: 48. 48"/><clear/>Thanks. So, for malaria,

just

for example, deaths in Africa.

<time begin="00: 21: 53. 41"/><clear/>Okay, almost all deaths

from

malaria are in Africa.

<time begin="00: 21: 57. 23"/><clear/>And the mortality is

compounded by poor

public health infrastructure,

<time begin="00: 22: 02. 12"/><clear/>Lack of access to new

medicines,

lack of education.

<time begin="00: 22: 05. 45"/><clear/>But most importantly, I

believe, the social,

political, and economic turmoil that leads

<time begin="00: 22: 11. 58"/><clear/>to or supports a lack

of will to make a change.

<time begin="00: 22: 15. 20"/><clear/>And I'd like to demonstrate

by this

slide and make one point here.

<time begin="00: 22: 21. 14"/><clear/>We all work very hard in

technology.

<time begin="00: 22: 24. 48"/><clear/>We live in a part of the

world

that's very technologically oriented.

<time begin="00: 22: 27. 44"/><clear/>And if the technology is

developed

we'll have access to that technology.

<time begin="00: 22: 30. 85"/><clear/>It will get to us.

<time begin="00: 22: 32. 39"/><clear/>That is not true in many

parts of the world.

<time begin="00: 22: 35. 94"/><clear/>We can work our hardest, and

a miracle can

happen, and we can develop a malaria vaccine.

<time begin="00: 22: 40. 74"/><clear/>Wouldn't that, that would

be

a miracle at this point.

<time begin="00: 22: 42. 95"/><clear/>But really has you know,

incredible coverage.

<time begin="00: 22: 45. 14"/><clear/>And that doesn't mean that

it

would save lives right away.

<time begin="00: 22: 49. 50"/><clear/>There are huge issues
after

the technology is developed.

<time begin="00: 22: 53. 38"/><clear/>There are huge issues after
regulatory approval,

and they don't involve high technology.

<time begin="00: 22: 58. 76"/><clear/>They involve low
technology.

<time begin="00: 23: 00. 17"/><clear/>They involve going out into
very rural places,

and education, and working with governments,

<time begin="00: 23: 06. 02"/><clear/>and generating a will and
a

force to make something happen.

<time begin="00: 23: 11. 04"/><clear/>So malaria right across
the

middle, a belt around the middle.

<time begin="00: 23: 16. 34"/><clear/>So focus on drugs now.

<time begin="00: 23: 21. 30"/><clear/>Doctors Without Borders did a
quick survey

of all drugs approved in a 15-year period.

<time begin="00: 23: 28. 58"/><clear/>So about 1,400 of them, and
13 of them,

1%, were approved for tropical diseases.

<time begin="00: 23: 35. 64"/><clear/>1% of new drug
approvals.

<time begin="00: 23: 38. 81"/><clear/>The catch to this is only one
of them

was approved for a tropical disease

<time begin="00: 23: 44. 53"/><clear/>in humans as its first
indication.

<time begin="00: 23: 46. 85"/><clear/>So this counts second
indications, etcetera. Most

<time begin="00: 23: 49. 51"/><clear/>of these drugs were
approved

for veterinary disease,

<time begin="00: 23: 54. 74"/><clear/>for agricultural purposes
first.

<time begin="00: 23: 57. 29"/><clear/>The animals before the
people.

<time begin="00: 23: 59. 21"/><clear/>It's very unfortunate.

<time begin="00: 24: 00. 69"/><clear/>But let's turn that into an
opportunity here.

<time begin="00: 24: 03. 75"/><clear/>We can go to and work with
veterinary

health, animal health companies, right?

Hale.txt

<time begin="00:24:08.21"/><clear/>They do have these leads, and they are
still in the parasitic drug business.

<time begin="00:24:12.76"/><clear/>And some of these drugs as well were approved
for other indications, oncology for instance,

<time begin="00:24:17.67"/><clear/>and then came to tropical diseases.

<time begin="00:24:19.30"/><clear/>So it's very sad and obvious that you saw
the list of the number of tens of millions,

<time begin="00:24:24.70"/><clear/>of hundreds of millions of people who have

tropical diseases that we have these numbers,

<time begin="00:24:30.24"/><clear/>these percentages of new drug approvals.

<time begin="00:24:33.06"/><clear/>So the world has not stood by idly.

<time begin="00:24:38.75"/><clear/>And I, and my organization, and

our colleagues, and friends,

<time begin="00:24:42.83"/><clear/>we're not the first to come

up with a solution.

<time begin="00:24:46.05"/><clear/>The world decided about 10 years ago that

there should be public private partnerships.

<time begin="00:24:51.77"/><clear/>Okay, so that's the PPP.

<time begin="00:24:53.75"/><clear/>Public always come first, as it should.

<time begin="00:24:55.66"/><clear/>The public, public sector

players are the leaders in this.

<time begin="00:24:58.56"/><clear/>And public private partnerships were

developed in response to this market failure.

<time begin="00:25:04.30"/><clear/>We don't like to say the word market failure

when we're talking to pharmaceutical companies.

<time begin="00:25:09.64"/><clear/>If you want someone to partner with you,

you don't like to, you know, rub it in.

<time begin="00:25:14.48"/><clear/>But that's really,

basically

what it is.

<time begin="00:25:20.26"/><clear/>These programs were generally

Hale.txt

funded, not by
private corporations, not by corporations;
<time begin="00:25:27.87"/><clear/>however, they were
generally
funded by the public sector.
<time begin="00:25:31.78"/><clear/>There are about 16, I think,
that exist now
that develop drugs, or vaccines, or diagnostics.
<time begin="00:25:41.46"/><clear/>And it works reasonably
well
for those three big diseases,
<time begin="00:25:44.87"/><clear/>which I opened with to tell
you
they're not so neglected anymore.
<time begin="00:25:47.89"/><clear/>And one of the reasons
they're not so neglected
is these exact public private partnerships
<time begin="00:25:51.82"/><clear/>that have been able to
bring
pharmaceutical companies together
<time begin="00:25:54.90"/><clear/>with the World Health
Organization, and with
universities, and with various players,
<time begin="00:26:00.41"/><clear/>governments, etcetera, and
make this happen.
<time begin="00:26:03.30"/><clear/>But they're not perfect.
<time begin="00:26:05.15"/><clear/>Next slide.
<time begin="00:26:06.44"/><clear/>And these are the
reasons.
<time begin="00:26:08.40"/><clear/>This is part of my
strategic
analysis of what was needed.
<time begin="00:26:12.68"/><clear/>So early on with public
private
partnerships it was pretty clear to me
<time begin="00:26:17.27"/><clear/>that you wouldn't be able to,
it will work
for a few diseases, but we wouldn't be able
<time begin="00:26:21.44"/><clear/>to attract a company to
develop
a new drug for onchocerciasis.
<time begin="00:26:27.31"/><clear/>It just wouldn't happen.
<time begin="00:26:28.52"/><clear/>Leishmaniasis, we
could, the list goes on.
<time begin="00:26:32.85"/><clear/>So it works for some
diseases, but not for others.
<time begin="00:26:35.87"/><clear/>Our first choice is a good
old drug that

Hale.txt

was off patent, an old aminoglycoside.

<time begin="00:26:40.30"/><clear/>And it was a piece of
low

hanging fruit that really was a sure shot.

<time begin="00:26:43.95"/><clear/>It was a great

first product.

<time begin="00:26:46.31"/><clear/>But it never would have
worked in the

existing public private partnerships,

<time begin="00:26:49.71"/><clear/>because there was no
intellectual

property around it.

<time begin="00:26:52.74"/><clear/>Nothing that anyone could
own.

<time begin="00:26:54.29"/><clear/>A generic company anywhere
in

the world could make it.

<time begin="00:26:56.82"/><clear/>That's okay with us, but
that's not

okay with pharmaceutical companies

<time begin="00:27:00.76"/><clear/>who participate in public
private partnerships.

<time begin="00:27:02.83"/><clear/>Not yet anyway.

<time begin="00:27:03.54"/><clear/>It may be in the future.

<time begin="00:27:05.62"/><clear/>The mission of these troubled
private

partnerships is often quite narrow,

<time begin="00:27:08.94"/><clear/>as it should be.

<time begin="00:27:10.54"/><clear/>We need to focus on, for
instance,

the medicines from malaria adventure.

<time begin="00:27:13.32"/><clear/>Extremely successful in
bringing forward

new medicines still in research stage,

<time begin="00:27:18.31"/><clear/>the newest ones, new
mechanisms

of action for malaria.

<time begin="00:27:22.38"/><clear/>Where do you fit a drug that
is old, or off

patent in that sector, in that PPP?

<time begin="00:27:29.47"/><clear/>You don't.

<time begin="00:27:30.67"/><clear/>Where do you fit a new
technology to address

the shortage in artemisinin that exists?

<time begin="00:27:34.75"/><clear/>Well you don't.

<time begin="00:27:35.81"/><clear/>It doesn't fit the
mission.

<time begin="00:27:37.10"/><clear/>So these PPP's that exist to

development
medicines have to stay narrow,
<time begin="00:27:42.15"/><clear/>except the technologies are
not
narrow, the beauty of technologies.
<time begin="00:27:45.53"/><clear/>And in our society, the
beauty
of science is that,
<time begin="00:27:48.86"/><clear/>the discoveries are as
wide as we imagine they are.
<time begin="00:27:52.53"/><clear/>Are as broad and
creative as we allow them to be.
<time begin="00:27:56.21"/><clear/>So we wanted to be an
organization
that would, that could take on some
<time begin="00:28:00.01"/><clear/>of these more creative
projects
that didn't fit elsewhere.
<time begin="00:28:03.67"/><clear/>And they're dependant on
philanthropy, as we've talked about.
<time begin="00:28:08.85"/><clear/>That's okay when you're in
the research phase.
<time begin="00:28:11.43"/><clear/>But as these research
programs
are successful and move
<time begin="00:28:14.53"/><clear/>up into real drug
development
programs, it gets quite expensive.
<time begin="00:28:18.45"/><clear/>And our philanthropical
organization, such
as the Bill and Melinda Gates Foundation,
<time begin="00:28:21.73"/><clear/>are going to be able to fund
the
development of three antimalarials
<time begin="00:28:25.64"/><clear/>at one public private
partnership.
<time begin="00:28:27.39"/><clear/>And eight diagnostics for
tuberculosis
at another public private partnership.
<time begin="00:28:30.89"/><clear/>And four different vaccines
for
another disease elsewhere.
<time begin="00:28:35.46"/><clear/>I don't think we can ask
one foundation to do that.
<time begin="00:28:39.27"/><clear/>I think that they, well
they've made it clear
that they want other funders to participate.
<time begin="00:28:43.72"/><clear/>Next slide please.
<time begin="00:28:45.81"/><clear/>So, I'll tell you what really

inspired me

first to believe that we could do this.

<time begin="00: 28: 53. 08"/><clear/>Once you learn what's going
on with global

health and how many needs there are, the answer,

<time begin="00: 28: 58. 43"/><clear/>the solution becomes,
how

many opportunities are there?

<time begin="00: 29: 02. 77"/><clear/>So within our sector,
who's

in the pharmaceutical sector, the,

<time begin="00: 29: 07. 51"/><clear/>the beauty of it is it's a
wealthy sector.

<time begin="00: 29: 10. 09"/><clear/>And there's a lot of money
put into discovery.

<time begin="00: 29: 12. 96"/><clear/>Okay so, so many more
discoveries are made

than can ever be developed.

<time begin="00: 29: 17. 81"/><clear/>And much of that is what

should be mined and pursued

<time begin="00: 29: 21. 87"/><clear/>for leads for potential new
medicines.

<time begin="00: 29: 24. 20"/><clear/>I think I'll skip the rest,
but basically

huge untapped potential opportunities.

<time begin="00: 29: 30. 00"/><clear/>Next slide please.

<time begin="00: 29: 31. 71"/><clear/>So why a new player

was needed, is needed?

<time begin="00: 29: 35. 39"/><clear/>Many infectious diseases lack
R and D

programs, noone's developing new cures.

<time begin="00: 29: 41. 80"/><clear/>In addition, there is a
tremendous gap

between the cultures and the language

<time begin="00: 29: 46. 66"/><clear/>of the very technical
pharmaceutical

industry and global health players.

<time begin="00: 29: 52. 61"/><clear/>There wasn't anyone
effectively

working that gap.

<time begin="00: 29: 55. 12"/><clear/>The World Health Organization
does its best,

<time begin="00: 29: 57. 78"/><clear/>but it is a small
organization

with very little funding.

<time begin="00: 30: 00. 62"/><clear/>And it appeared to us, and to
me,

that there needed to be someone

Hal e.txt

<time begin="00: 30: 04. 86"/><clear/>who could bridge the
gap.

<time begin="00: 30: 06. 48"/><clear/>Who could speak to people in
global

health community about what was needed.

<time begin="00: 30: 10. 46"/><clear/>What the product would need
to look

like, what it would need to cost.

<time begin="00: 30: 13. 79"/><clear/>And work with
pharmaceutical

companies to make that happen.

<time begin="00: 30: 18. 00"/><clear/>So, just a reminder, one
billion people live

on less than a dollar a day. They need to eat,

<time begin="00: 30: 25. 55"/><clear/>sleep, dress themselves,
children have shelter.

<time begin="00: 30: 30. 82"/><clear/>About three billion live
on

less than two dollars a day.

<time begin="00: 30: 34. 08"/><clear/>So our product has to cost
pennies, our drugs.

<time begin="00: 30: 38. 40"/><clear/>So OneWorld Health was
formed.

<time begin="00: 30: 42. 39"/><clear/>With that recognition of
tremendous

opportunities that come from universities

<time begin="00: 30: 47. 67"/><clear/>and academia, and a very
large number

of extremely committed scientists.

<time begin="00: 30: 53. 25"/><clear/>Scientists in my industry who
would

say to me, if you start it I'll come.

<time begin="00: 30: 57. 97"/><clear/>You know the movie, what's it
called?

<time begin="00: 30: 59. 74"/><clear/>If you build it they
will

come, about the baseball team.

<time begin="00: 31: 03. 80"/><clear/>What's it called?

<time begin="00: 31: 04. 23"/><clear/>Field of Dreams.

<time begin="00: 31: 04. 91"/><clear/>There you go.

<time begin="00: 31: 07. 34"/><clear/>This is the way OneWorld
Health

has turned out to be.

<time begin="00: 31: 10. 49"/><clear/>It's very cool.

<time begin="00: 31: 12. 05"/><clear/>There are many passionate
scientists who say,

no I chose this field, I chose this sector,

Hal e. txt

<time begin="00: 31: 21. 11"/><clear/>because they wanted to help
someone.

<time begin="00: 31: 23. 21"/><clear/>And I can't remember the last
time

I felt that I did after a days work.

<time begin="00: 31: 28. 60"/><clear/>I work hard.

<time begin="00: 31: 29. 68"/><clear/>I work hard.

<time begin="00: 31: 30. 15"/><clear/>And my company is good to
me.

<time begin="00: 31: 31. 33"/><clear/>And you know something?

<time begin="00: 31: 33. 32"/><clear/>I'm not ready to leave quite
yet.

<time begin="00: 31: 35. 62"/><clear/>Then in many cases I
have

a mortgage, I have kids,

<time begin="00: 31: 38. 36"/><clear/>I have golden handcuffs,
but

I want to volunteer for you.

<time begin="00: 31: 42. 43"/><clear/>Or you know something?

<time begin="00: 31: 43. 55"/><clear/>I'm just, I'm up to here, I
want to leave.

<time begin="00: 31: 46. 08"/><clear/>So we have many more
volunteers than we can,

<time begin="00: 31: 48. 78"/><clear/>use and wonderful
opportunities

to tap great employees.

<time begin="00: 31: 52. 28"/><clear/>So we have 50, about 50 or 55
employees now.

<time begin="00: 31: 54. 91"/><clear/>We couldn't do any of it

without philanthropic investment.

<time begin="00: 31: 58. 39"/><clear/>And almost all of that
funding has come

from the Bill and Melinda Gates Foundation.

<time begin="00: 32: 02. 34"/><clear/>140 million dollars to

date, just tremendous.

<time begin="00: 32: 06. 41"/><clear/>And we are but one small

nonprofit organization in San Francisco.

<time begin="00: 32: 11. 92"/><clear/>We will open an office in
India, but we can't

do this without a very large number of partners.

<time begin="00: 32: 17. 18"/><clear/>And a lot of what I do is
build, work on trust,

<time begin="00: 32: 21. 52"/><clear/>and building
relationships,

and maintaining relationships.

<time begin="00: 32: 24. 81"/><clear/>People who work in this
sector, and

companies who come into this sector,

Hal e. txt

<time begin="00: 32: 28. 84"/><clear/>do not do it for business reasons.

<time begin="00: 32: 30. 58"/><clear/>This does not make business sense

to engage in any of these diseases.

<time begin="00: 32: 34. 48"/><clear/>You're here because you want to be here.

<time begin="00: 32: 35. 90"/><clear/>And it's about personal relationships.

<time begin="00: 32: 37. 55"/><clear/>So it, to recognize that is very important,

and it takes a lot of energy to maintain them.

<time begin="00: 32: 43. 65"/><clear/>Across cultural barriers, age

barriers, all kinds of barriers.

<time begin="00: 32: 49. 29"/><clear/>So, OneWorld Health is a

simple experiment designed

<time begin="00: 32: 53. 00"/><clear/>to model the successful pharmaceutical industry.

<time begin="00: 32: 55. 78"/><clear/>Really, is it this simple?

<time begin="00: 32: 57. 21"/><clear/>Could we just remove profit and

keep everything else the same?

<time begin="00: 33: 00. 32"/><clear/>So that's what we did.

<time begin="00: 33: 01. 67"/><clear/>Our first project had to be successful,

had to be quick, had to be inexpensive,

<time begin="00: 33: 05. 55"/><clear/>otherwise no one would fund

us further.

<time begin="00: 33: 09. 11"/><clear/>We focused on research and development, in

particular development, and we focused on drugs.

<time begin="00: 33: 14. 98"/><clear/>We do have one vaccine in our portfolio,

and that's a little bit of an experiment.

<time begin="00: 33: 19. 47"/><clear/>We have very strategic selection of drugs.

<time begin="00: 33: 21. 86"/><clear/>We did not want to have to develop

a sales and marketing force.

<time begin="00: 33: 26. 15"/><clear/>So choose a drug that will be distributed

by others, or can be distributed by others.

<time begin="00: 33: 30. 45"/><clear/>So you can just orchestrate

and

watch, that's naive isn't it?

<time begin="00: 33: 34. 19"/><clear/>Watch that distribution
happen.

<time begin="00: 33: 35. 54"/><clear/>It's never like that.

<time begin="00: 33: 36. 68"/><clear/>But to approach that.

<time begin="00: 33: 38. 79"/><clear/>And our first program is in
India.

<time begin="00: 33: 40. 53"/><clear/>We need to go to Africa and
we need to

go soon, but we also needed a government

<time begin="00: 33: 44. 91"/><clear/>that was committed to a
particular disease,

and a reasonable amount of infrastructure.

<time begin="00: 33: 50. 59"/><clear/>So OneWorld Health, this is
our mission

statement, develops safe, effective,

<time begin="00: 33: 55. 02"/><clear/>and affordable for the
poorest

people in the world, new medicines.

<time begin="00: 34: 00. 99"/><clear/>New medicines for diseases of
poverty.

<time begin="00: 34: 04. 02"/><clear/>For people with diseases of
poverty.

<time begin="00: 34: 06. 75"/><clear/>We identify promising drug
candidates,

because lots of them sent to us.

<time begin="00: 34: 12. 51"/><clear/>We've had some beautiful
insecticides,

some fantastic advanced bed nets,

<time begin="00: 34: 18. 98"/><clear/>some incredible rehydration
solution.

<time begin="00: 34: 21. 77"/><clear/>We really try to focus

on the drugs.

<time begin="00: 34: 25. 86"/><clear/>There are lots of great
technologies

that have nowhere to go.

<time begin="00: 34: 28. 85"/><clear/>And we propped up as a
nonprofit health

something, and when you Google us you find us.

<time begin="00: 34: 33. 61"/><clear/>And so we have some great
opportunities

that we'd actually like to share.

<time begin="00: 34: 36. 69"/><clear/>We'd like to put out
publicly,

rather than just say no thank you to.

<time begin="00: 34: 40. 72"/><clear/>Like to get, have a place for

Hal e. txt

them to go in

the world, so that people know about them.

<time begin="00: 34: 44. 50"/><clear/>We complete animal and human

clinical trials.

<time begin="00: 34: 46. 75"/><clear/>That's our primary work.

<time begin="00: 34: 48. 14"/><clear/>We're in downtown San

Francisco.

<time begin="00: 34: 49. 83"/><clear/>Picture this, we don't have

laboratories.

<time begin="00: 34: 51. 91"/><clear/>We're counting on you to have

done the research,

<time begin="00: 34: 55. 45"/><clear/>and for you to to have

taken

the work as far as you can.

<time begin="00: 34: 59. 25"/><clear/>Maybe with a

company, maybe not.

<time begin="00: 35: 01. 61"/><clear/>And then we pick it up

and,

and move it from there.

<time begin="00: 35: 04. 70"/><clear/>This, the work that we do

truly depends

on the work that comes before us.

<time begin="00: 35: 10. 32"/><clear/>And standing on the shoulders

of

others, leveraging the work of others.

<time begin="00: 35: 14. 55"/><clear/>There is plenty of

quality

manufacturing in the world.

<time begin="00: 35: 17. 09"/><clear/>We do not have a

factory.

<time begin="00: 35: 18. 85"/><clear/>I think it would be a great

idea to produce,

<time begin="00: 35: 22. 01"/><clear/>to set up manufacturing

facilities

in the continent of Africa.

<time begin="00: 35: 25. 93"/><clear/>Have Africans run them and

make your

own medicines, it's very empowering.

<time begin="00: 35: 29. 32"/><clear/>But at this time we use

opportunities

that exist in India.

<time begin="00: 35: 33. 21"/><clear/>Tremendous manufacturing

facilities.

<time begin="00: 35: 34. 84"/><clear/>We'd like to learn more

about

China in the near future.

<time begin="00: 35: 37. 45"/><clear/>And we take it all the

way

through regulatory approval.

<time begin="00: 35: 40. 04"/><clear/>So our guiding principles,
the first, and we got

this right away with OneWorld Health in talking

<time begin="00: 35: 48. 13"/><clear/>with big Pharma executives
who passed

our business plan through four retired CEO's.

<time begin="00: 35: 54. 28"/><clear/>And we were uniformly
rejected and criticized,

because they thought we were going to compete.

<time begin="00: 36: 00. 37"/><clear/>So we made that very
clear.

<time begin="00: 36: 03. 03"/><clear/>You didn't read our target
diseases?

<time begin="00: 36: 05. 03"/><clear/>You know, can you even
pronounce them?

<time begin="00: 36: 06. 67"/><clear/>I mean really,
trypanosomiasis

and leishmaniasis, come on.

<time begin="00: 36: 10. 14"/><clear/>This is not diabetes and it's
not

hypertension; it's not even oncology.

<time begin="00: 36: 13. 90"/><clear/>There are western diseases
that lack therapy.

<time begin="00: 36: 16. 71"/><clear/>There are many orphan diseases
that need therapy.

<time begin="00: 36: 19. 59"/><clear/>We have been, I don't want to
say

tempted, because we weren't tempted,

<time begin="00: 36: 23. 64"/><clear/>but there has been
organization who

have come to us in the U.S. to ask,

<time begin="00: 36: 27. 16"/><clear/>well can you please help us
with the

Huntington's disease drug.

<time begin="00: 36: 29. 53"/><clear/>We're ready to go now.

<time begin="00: 36: 30. 26"/><clear/>We've been doing research for
30

years, or a Parkinson's disease drug.

<time begin="00: 36: 33. 09"/><clear/>And we've said no.

<time begin="00: 36: 34. 97"/><clear/>There needs to be a path for
those,

but it won't be at OneWorld Health.

<time begin="00: 36: 38. 68"/><clear/>Do not duplicate available
resources,

that's use the manufacturing in India.

<time begin="00: 36: 43. 74"/><clear/>Focus on development, not
research.

<time begin="00: 36: 46. 39"/><clear/>You do the research, and

we'll do the development.

<time begin="00: 36: 49. 46"/><clear/>Be a bridge between those two
sectors that don't

speak the same language or the same culture,

<time begin="00: 36: 54. 26"/><clear/>and don't particularly like
each other, to

tell you the truth, or respect each other.

<time begin="00: 37: 00. 16"/><clear/>Sustainability is an issue
for

any organization, any nonprofit.

<time begin="00: 37: 05. 49"/><clear/>And I do believe that
OneWorld Health

can be partly sustainable in the future.

<time begin="00: 37: 09. 19"/><clear/>It is important, however,
that our decision

of which drugs to develop and which diseases

<time begin="00: 37: 15. 21"/><clear/>to work in, not influence,
our desire to

be sustainable, not influence our decision

<time begin="00: 37: 22. 21"/><clear/>of which drugs to pursue
and

which diseases to work in.

<time begin="00: 37: 24. 62"/><clear/>Because if we were only to
pursue TB, malaria,

HIV, whether it's some small western market,

<time begin="00: 37: 32. 91"/><clear/>then those neglected, very
neglected

diseases would be very neglected again.

<time begin="00: 37: 36. 32"/><clear/>So we always will have a
mixture.

<time begin="00: 37: 39. 90"/><clear/>And everybody has to
enjoy

themselves, or this doesn't work.

<time begin="00: 37: 43. 76"/><clear/>Everyone has to want to be
there.

<time begin="00: 37: 45. 27"/><clear/>And keeping that
scenario

rolling, as people change,

<time begin="00: 37: 48. 82"/><clear/>as the project changes is
really a challenge.

<time begin="00: 37: 50. 94"/><clear/>Keeping your, all your

partners at the table.

<time begin="00: 37: 53. 50"/><clear/>So we focus on diseases.

<time begin="00: 37: 56. 43"/><clear/>Oh, no this is not what I

Hal e. txt

wanted to say here.

<time begin="00:38:00.82"/><clear/>This is what OneWorld Health
has done that

is, I hope, provides a take home message

<time begin="00:38:09.21"/><clear/>for you, if you care to
do

something like this in the future.

<time begin="00:38:12.38"/><clear/>And it is to, that we have
focused on

disease in new and creative ways

<time begin="00:38:17.30"/><clear/>with the technologies that
we've brought in.

<time begin="00:38:19.51"/><clear/>We chose parasitic diseases
where

there have been, as yet, no vaccines.

<time begin="00:38:24.35"/><clear/>But drugs do cure, drugs do
save lives.

<time begin="00:38:27.19"/><clear/>We have believed in and
studied

old drugs and old technologies.

<time begin="00:38:32.80"/><clear/>Just because you're new
doesn't mean

you're better than everything else that's

<time begin="00:38:36.79"/><clear/>out there is our
philosophy.

<time begin="00:38:38.81"/><clear/>We adopt high risk, high
reward

projects that do not go elsewhere.

<time begin="00:38:44.09"/><clear/>And I encourage you to
consider that as well.

<time begin="00:38:45.91"/><clear/>But I would say that
shouldn't

be your first project.

<time begin="00:38:49.27"/><clear/>You should have a project
that's a sure

shot, that's in the bag, so to speak.

<time begin="00:38:53.20"/><clear/>And then consider these

high risk, high reward programs.

<time begin="00:38:58.28"/><clear/>We work hard to provide
industry

with opportunity to participate.

<time begin="00:39:02.18"/><clear/>And we're talking with all of
them now.

<time begin="00:39:04.23"/><clear/>It's really wonderful.

<time begin="00:39:05.21"/><clear/>It's been a fast forward
in

Hale.txt

my mind, the time in which it took for
<time begin="00:39:09.98"/><clear/>it to switch between us
knocking on industry's door,
<time begin="00:39:12.48"/><clear/>and industry knocking on our
door.
<time begin="00:39:14.41"/><clear/>We've said we want to
partner.
<time begin="00:39:15.65"/><clear/>And they said, well we'll
watch
and figure out who you are.
<time begin="00:39:17.44"/><clear/>And if you can develop a
drug, and then we'll decide.
<time begin="00:39:19.67"/><clear/>And now they're all coming
to
us, which is glorious.
<time begin="00:39:22.85"/><clear/>Then we can initiate
more
programs and pass them on.
<time begin="00:39:27.44"/><clear/>And find more
opportunities
and license them out.
<time begin="00:39:31.55"/><clear/>And get more done,
advance
global health and engage the industry.
<time begin="00:39:35.75"/><clear/>If we don't engage the
industry then we're
<time begin="00:39:38.26"/><clear/>kidding ourselves really
about what can be accomplished.
<time begin="00:39:41.40"/><clear/>So we need to work with
industry.
<time begin="00:39:43.72"/><clear/>And you know something?
<time begin="00:39:45.13"/><clear/>They want to do it, they
just
have no idea how to do it.
<time begin="00:39:47.89"/><clear/>They haven't thought about
it.
<time begin="00:39:49.72"/><clear/>So they're very,
you need to think differently.
<time begin="00:39:53.57"/><clear/>Okay. So we like to say that
we focus on
the middle of this slide, the development,
<time begin="00:40:01.02"/><clear/>the D. So we work on
[unclear], formulations,
preclinical studies, clinical trials,
<time begin="00:40:05.48"/><clear/>technology transfer from
manufacturing,
and then regulatory approvals.
<time begin="00:40:09.30"/><clear/>In reality, that was the
case for our first project.

Hale.txt

<time begin="00: 40: 13. 01"/><clear/>But we need to back up and
move forward

with some of our other diseases.

<time begin="00: 40: 18. 29"/><clear/>My challenge as a CEO of this
organization is

to not have us spread too widely, not, I'd,

<time begin="00: 40: 26. 23"/><clear/>rather have us do fewer

projects and finish them up

<time begin="00: 40: 30. 73"/><clear/>and do them well, then spread
very broadly and

be overwhelmed by the number of disciplines

<time begin="00: 40: 37. 33"/><clear/>that we're engaged in, and
the

number of activities we have,

<time begin="00: 40: 40. 32"/><clear/>or the number of projects
that we have.

<time begin="00: 40: 43. 75"/><clear/>So this is our pipeline, a
paromycin

license will be submitted, the dossier,

<time begin="00: 40: 50. 69"/><clear/>regulatory dossier to
the

government of India this quarter, Q1.

<time begin="00: 40: 53. 93"/><clear/>So we expect an answer
shortly there after.

<time begin="00: 40: 57. 26"/><clear/>And we hope for an
approval.

<time begin="00: 40: 59. 05"/><clear/>And that's all that I can
say.

<time begin="00: 41: 00. 74"/><clear/>We don't know, and you really
do have to wait.

<time begin="00: 41: 02. 81"/><clear/>Having been at FDA,
sometimes

companies are surprised.

<time begin="00: 41: 06. 45"/><clear/>I don't know.

<time begin="00: 41: 07. 18"/><clear/>I would be very embarrassed
if

I were surprised with this one,

<time begin="00: 41: 11. 60"/><clear/>having I lead this company for
some time.

<time begin="00: 41: 14. 99"/><clear/>We have a small Chagas

disease program.

<time begin="00: 41: 17. 87"/><clear/>We have a large
artemisinin

program that I'll tell you about in a bit.

<time begin="00: 41: 22. 79"/><clear/>And we have a diarrhea
disease

program that's coming;

Hale.txt

<time begin="00:41:25.71"/><clear/>we haven't announced that one
yet.

<time begin="00:41:28.27"/><clear/>And a malaria vaccine.

<time begin="00:41:29.90"/><clear/>I think I have to speed this

up, cause

we have a little slide to show you.

<time begin="00:41:34.19"/><clear/>Next slide.

<time begin="00:41:35.45"/><clear/>Oh, this is visceral

leish'.

<time begin="00:41:36.48"/><clear/>Okay. Then we'll get to the

video.

<time begin="00:41:39.39"/><clear/>Our first disease visceral

leishmaniases, kala-azar,

black fever, we chose because it was perfect.

<time begin="00:41:47.00"/><clear/>It was in a region of

the

world that was contained.

<time begin="00:41:51.30"/><clear/>It is a disease that has no

animal

reservoir, well in this part of the world.

<time begin="00:41:56.92"/><clear/>So if you can treat people

and kill sand

flies then you can eliminate the disease.

<time begin="00:42:02.54"/><clear/>Just a tremendous

possibility.

<time begin="00:42:04.91"/><clear/>The disease is in,

primarily

affecting India, primarily one state

<time begin="00:42:09.35"/><clear/>and spreading radially

out

to Bangladesh and Nepal.

<time begin="00:42:12.66"/><clear/>Next slide.

<time begin="00:42:15.03"/><clear/>We had Newsweek produce a

five page piece.

<time begin="00:42:18.80"/><clear/>Did you see it this summer in

the health,

special health addition?

<time begin="00:42:22.51"/><clear/>Five pages on visceral

leishmaniases

in Newsweek.

<time begin="00:42:25.19"/><clear/>That's a dream come

true.

<time begin="00:42:26.15"/><clear/>This is one of the photos

from the photographer.

<time begin="00:42:28.75"/><clear/>This is one of our

physicians

Hale.txt

in the blue plaid shirt

<time begin="00:42:31.60"/><clear/>diagnosing VL in the
field.

<time begin="00:42:33.02"/><clear/>This is another one of our
sites.

<time begin="00:42:35.87"/><clear/>The balding man is
another

of our investigators.

<time begin="00:42:38.11"/><clear/>Notice in the upper right
that

he was trained in London and Edinburgh.

<time begin="00:42:41.80"/><clear/>And he came back to
Bihar.

<time begin="00:42:43.99"/><clear/>All four of our
investigators,

"leishmaniacs," trained in the UK.

<time begin="00:42:49.53"/><clear/>And then came back to

run Kal a-azar clinics.

<time begin="00:42:53.00"/><clear/>Just tremendous.

<time begin="00:42:54.37"/><clear/>One lives in Barnas,

[unclear] and commutes.

<time begin="00:42:58.75"/><clear/>This is me learning to
palpate livers and

spleens with one of our investigators.

<time begin="00:43:04.98"/><clear/>And our first drug,
beautiful

promolmycin.

<time begin="00:43:09.35"/><clear/>Again, an old
antibiotic.

<time begin="00:43:11.30"/><clear/>I've said a lot of this
already.

<time begin="00:43:12.98"/><clear/>The cost for cure will
be

between \$10 and \$20 dollars.

<time begin="00:43:16.25"/><clear/>Sounds like a lot if you

think about malaria cures.

<time begin="00:43:18.80"/><clear/>If you're really cured from
visceral leishmaniasis

it really only happens once in your life.

<time begin="00:43:25.18"/><clear/>And present cures are
between

100 and 200 dollars.

<time begin="00:43:29.27"/><clear/>And so this is a tremendous
advance.

<time begin="00:43:30.71"/><clear/>To 21 day intramuscular
therapy once a day.

<time begin="00:43:34.19"/><clear/>We're doing a trial soon that

will

examine whether 14 days is sufficient

<time begin="00:43:38.75"/><clear/> if we increase the dose.

<time begin="00:43:41.22"/><clear/> Which would make it, by
far,

the shortest therapy.

<time begin="00:43:43.20"/><clear/> All the other therapies are
28 days or longer.

<time begin="00:43:46.90"/><clear/> So we are, we're very
thrilled

with this product.

<time begin="00:43:50.56"/><clear/> But it's not approved
yet.

<time begin="00:43:51.56"/><clear/> I have to say, to
emphasize.

<time begin="00:43:53.19"/><clear/> Good. This is one of our
clinical sites.

<time begin="00:43:55.84"/><clear/> This is inside one of
the

buildings that you saw a photo of.

<time begin="00:43:59.02"/><clear/> Notice the beds have a,
they're nice metal

framed beds, and the floor is pretty clean.

<time begin="00:44:03.68"/><clear/> I think they did clean up
a

little bit before we came.

<time begin="00:44:05.79"/><clear/> But there are no mattresses
on

the beds, they're just cloths.

<time begin="00:44:10.04"/><clear/> The patients are packed
in.

<time begin="00:44:12.63"/><clear/> Children sleep three to
a

bed in epidemic situations.

<time begin="00:44:16.41"/><clear/> Kala-azar is a pretty bad way
to die,

not that there is a good way to die.

<time begin="00:44:22.29"/><clear/> But you have basically
pancytopenia.

<time begin="00:44:25.34"/><clear/> So you die of
opportunistic

infections, a lot like AIDS.

<time begin="00:44:28.47"/><clear/> You die of the complications
of severe anemia.

<time begin="00:44:32.39"/><clear/> Or you die from
hemorrhage.

Hale.txt

<time begin="00:44:34.27"/><clear/>It's a very bad way to
go

over a period of a few months.

<time begin="00:44:38.03"/><clear/>So it is an agonizing
protracted suffering.

<time begin="00:44:41.65"/><clear/>Next slide.

<time begin="00:44:43.45"/><clear/>And we received a 30 million
dollar grant.

<time begin="00:44:45.78"/><clear/>All the work that we did in
the development

of paromomycin was 17 million dollars.

<time begin="00:44:49.85"/><clear/>It actually cost more than
that.

<time begin="00:44:50.91"/><clear/>Probably about 25, we're
gonna cost this out.

<time begin="00:44:53.19"/><clear/>We had so many volunteers
we

were able to do it for 17.

<time begin="00:44:56.39"/><clear/>We got a grant recently from
the Bill and

Melinda Gates Foundation for 30 million

<time begin="00:45:00.24"/><clear/>to figure out how to get this
product out there.

<time begin="00:45:02.00"/><clear/>Remember when I said we don't
do distribution?

<time begin="00:45:04.58"/><clear/>Well we don't, but somebody
has to do it.

<time begin="00:45:06.32"/><clear/>And that will be the
government of India.

<time begin="00:45:08.96"/><clear/>Well, and the disease exists,
because

some government didn't do its job,

<time begin="00:45:13.20"/><clear/>yes, so the government of
Bihar.

<time begin="00:45:15.93"/><clear/>And we're relying most
heavily on

nonprofits, nonprofit organizations,

<time begin="00:45:20.54"/><clear/>and a little bit on the, on
the private sector.

<time begin="00:45:22.51"/><clear/>[music]

<time begin="00:45:28.11"/><clear/>>>Man: From ABC News
Headquarters in New

York, this is World News Tonight.

<time begin="00:45:32.51"/><clear/>[music]

<time begin="00:45:42.04"/><clear/>>>Tonight ABC News,

together

with TIME Magazine,

<time begin="00: 45: 44. 66"/><clear/>is launching an unprecedented
week

long series, Prescription for Survival,

<time begin="00: 45: 49. 22"/><clear/>focusing on global
health

issues that affect all of us.

<time begin="00: 45: 52. 12"/><clear/>Tonight's subject, the
world's worst

diseases, and why most of them are ignored

<time begin="00: 45: 56. 66"/><clear/>by major drug companies,
despite the fact

that they make millions of people sick.

<time begin="00: 46: 00. 75"/><clear/>ABC's Judy Muller

reports from San Francisco.

<time begin="00: 46: 05. 17"/><clear/>>> Judy Muller: They're
called

neglected diseases.

<time begin="00: 46: 07. 20"/><clear/>Parasitic illnesses that
affect millions of people

in poor countries, mostly in Africa and Asia.

<time begin="00: 46: 13. 34"/><clear/>Neglected because most
drug

companies don't make

<time begin="00: 46: 16. 11"/><clear/>medicines for people

who cannot afford to pay.

<time begin="00: 46: 19. 17"/><clear/>>>Man 2: These people don't
represent a market,

there's no return on investment there.

<time begin="00: 46: 22. 52"/><clear/>>> Judy Muller: Black
fever,

almost 100% fatal, elephantiasis,

<time begin="00: 46: 25. 76"/><clear/>more than 40 million

people disfigured, river blindness,

<time begin="00: 46: 30. 80"/><clear/>more than a quarter million
blinded,

sleeping sickness, also fatal, spread by the Tsetse fly.

<time begin="00: 46: 36. 87"/><clear/>And the big killers,
malaria

and children's diarrhea.

<time begin="00: 46: 39. 97"/><clear/>These neglected tropical
diseases aren't being neglected by everyone, but

getting the attention of one organization here

<time begin="00: 46: 47. 50"/><clear/>in San Francisco, The
Institute for OneWorld

Health is the nation's first not-for-profit,

<time begin="00: 46: 51. 84"/><clear/>pharmaceutical company.

<time begin="00: 46: 53. 51"/><clear/>[inaudible]

<time begin="00: 46: 56. 17"/><clear/>>> Judy Muller: Company

founder Victoria Hale
is a corporate pharmaceutical scientist who came
<time begin="00:47:00.16"/><clear/>up with a solution, I look for
existing drugs
that have been dropped by the big companies.
<time begin="00:47:05.52"/><clear/>Drugs that could be used
to
cure these neglected diseases.
<time begin="00:47:08.63"/><clear/>Her first target, black
fever.
<time begin="00:47:11.52"/><clear/>>> Victoria Hale: You
hemorrhage and die.
<time begin="00:47:13.24"/><clear/>It's a terrible way to
die.
<time begin="00:47:15.01"/><clear/>>> Judy Muller: Using the off
patent drug called
paromomycin, and funding from the Bill
<time begin="00:47:18.62"/><clear/>and Melinda Gates Foundation,
OneWorld
Health has finished clinical trials
<time begin="00:47:26.09"/><clear/>in India that cured 94% of
the patients.
<time begin="00:47:36.15"/><clear/>Great progress, but there are
a
lot of other parasites out there.
<time begin="00:47:41.27"/><clear/>>> Victoria Hale: The problem
with infectious
diseases is the bug that you are going after, it changes
<time begin="00:47:47.91"/><clear/>it mutates, it develops
resistance.
<time begin="00:47:49.22"/><clear/>You have to keep developing
new medicines.
<time begin="00:47:50.30"/><clear/>And it is that which is not
happening.
<time begin="00:47:50.93"/><clear/>>> Judy Muller: Drug
companies, of
course, are businesses, not charities.
<time begin="00:47:52.31"/><clear/>But some are getting
involved.
<time begin="00:47:53.06"/><clear/>Merck took an existing
heart worm medicine for dogs,
<time begin="00:47:54.32"/><clear/>and turned it into a very
effective
treatment for river blindness in people.
<time begin="00:47:56.36"/><clear/>>> Man 3: We were lucky

Hale.txt

enough

to find something that worked,

<time begin="00: 47: 57. 74"/><clear/>and we've done what we can to
make it available,

<time begin="00: 47: 59. 51"/><clear/>[inaudible]

<time begin="00: 48: 03. 53"/><clear/>>> Judy Muller: Even so, the
diseases that

afflict 90% of the world's population,

<time begin="00: 48: 07. 62"/><clear/>get only 10% of the health
dollars.

<time begin="00: 48: 10. 28"/><clear/>Most of those dollars go to
western

lifestyle problems, cholesterol,

<time begin="00: 48: 14. 37"/><clear/>di gestive problems, erectile
dysfunction.

<time begin="00: 48: 18. 90"/><clear/>>> Victoria Hale: I am
frustrated.

<time begin="00: 48: 20. 51"/><clear/>I understand that, and I
believe that

the way to address it is not to go in

<time begin="00: 48: 28. 01"/><clear/>and change this enormous
system that exists.

<time begin="00: 48: 30. 81"/><clear/>But to build a system that
can work with

what already exists and to make it happen.

<time begin="00: 48: 36. 30"/><clear/>>> Judy Muller: And in one
corner of the

world, this one company is doing just that.

<time begin="00: 48: 41. 36"/><clear/>Judy Muller, ABC News, San
Francisco.

<time begin="00: 48: 44. 06"/><clear/>>> Victoria Hale: So it's a
big deal

with ABC News talks about black fever.

<time begin="00: 48: 48. 13"/><clear/>It really is.

<time begin="00: 48: 50. 30"/><clear/>There's a lot of good things
happening.

<time begin="00: 48: 51. 61"/><clear/>Now I'm going to wind up and
get to that zinger

I told you about, that challenge for you.

<time begin="00: 48: 57. 67"/><clear/>But let me talk for a
moment

about social entrepreneurship.

<time begin="00: 49: 02. 01"/><clear/>And then I actually do want
to talk about

one of our high risk, high reward projects.

<time begin="00: 49: 07. 20"/><clear/>
<time begin="00: 49: 08. 69"/><clear/>We've won several

Hal e. txt

rewards

for social entrepreneurship,

<time begin="00: 49: 13. 15"/><clear/>and people have asked me how
do you define it?

<time begin="00: 49: 16. 55"/><clear/>You can Google it and find a
few definitions.

<time begin="00: 49: 19. 43"/><clear/>I don't want to define it, I
just want

to share with you my thoughts.

<time begin="00: 49: 25. 48"/><clear/>So the world needs all of
us.

<time begin="00: 49: 30. 89"/><clear/>We're all here for a
reason.

<time begin="00: 49: 34. 40"/><clear/>You may have found your
reason,

and some of you may not.

<time begin="00: 49: 40. 40"/><clear/>If as you're wondering
through the world

something tugs at your heart, stop and listen.

<time begin="00: 49: 48. 84"/><clear/>It's important to
listen.

<time begin="00: 49: 51. 12"/><clear/>It's important to be
quiet.

<time begin="00: 49: 52. 29"/><clear/>We live in a noisy world
where time for

silence and silence itself doesn't exist.

<time begin="00: 49: 59. 22"/><clear/>So just a few

words to contemplate for you.

<time begin="00: 50: 02. 72"/><clear/>So I'm not gonna be silent
for you.

<time begin="00: 50: 05. 56"/><clear/>Examine that world and
this

world, and find a significant problem.

<time begin="00: 50: 11. 31"/><clear/>One that means something to
you, but

that doesn't overwhelm you.

<time begin="00: 50: 16. 20"/><clear/>One that really

goes, does something to you.

<time begin="00: 50: 22. 05"/><clear/>You're going to need that in
the

hard days, in the dry periods.

<time begin="00: 50: 27. 62"/><clear/>You're gonna need that
heart

felt reason for, to get you through.

<time begin="00: 50: 33. 13"/><clear/>Identify opportunities
don't

Hal e. txt

focus on the problem.

<time begin="00: 50: 37. 82"/><clear/>Focus on the solutions.

<time begin="00: 50: 41. 13"/><clear/>Talk to lots of people

and

study the work of others.

<time begin="00: 50: 46. 24"/><clear/>There have been some pretty

impressive

efforts that in the end,

<time begin="00: 50: 50. 28"/><clear/>if people had just consulted

with mothers

who treat babies in the developing world,

<time begin="00: 50: 57. 90"/><clear/>you would know that that

formulation will never work,

<time begin="00: 51: 00. 72"/><clear/>or that price is never

going

to do it.

<time begin="00: 51: 05. 63"/><clear/>There're lots of people

in

the world who've thought,

<time begin="00: 51: 09. 05"/><clear/>about what you

are thinking about tangentially.

<time begin="00: 51: 12. 87"/><clear/>Acknowledge that there

will

be obstacles, there will be problems.

<time begin="00: 51: 16. 80"/><clear/>There is, there are in

your laboratories every day,

<time begin="00: 51: 21. 46"/><clear/>and there are in any work

that you take on.

<time begin="00: 51: 24. 08"/><clear/>Sometimes the problems

are

people in a situation where

<time begin="00: 51: 29. 51"/><clear/>you're impacting global

health

situation and you want to affect change.

<time begin="00: 51: 34. 53"/><clear/>So be aware that it isn't

always an experimental

problem, it can be a personal or human problem.

<time begin="00: 51: 42. 56"/><clear/>And then persevere.

<time begin="00: 51: 44. 46"/><clear/>Really it takes tremendous

passion and

keep that vision that you evolve over time.

<time begin="00: 51: 50. 12"/><clear/>And then stick with it till

you finish it.

<time begin="00: 51: 52. 68"/><clear/>There are also lots of

great

ideas that when the work is hard,

<time begin="00: 51: 57. 53"/><clear/>when the well goes dry people

say that's it.

<time begin="00: 52: 00. 82"/><clear/>I've done all that I

can.

<time begin="00: 52: 02. 35"/><clear/>And it's often just after
that next

mountain that you have success.

<time begin="00: 52: 06. 86"/><clear/>That there is that

oasis; that little bit of water

<time begin="00: 52: 11. 19"/><clear/>that you need to continue, so
stay with it.

<time begin="00: 52: 15. 68"/><clear/>Next slide.

<time begin="00: 52: 16. 96"/><clear/>And if you are to choose a
first project.

<time begin="00: 52: 19. 53"/><clear/>I'm gonna skip this,
because

it says a lot about what we do.

<time begin="00: 52: 24. 10"/><clear/>But the last point is, it's
so important

to talk about the work that you do,

<time begin="00: 52: 29. 62"/><clear/>but I learned in California
from the Dotcom

bust that if you talk too much you end

<time begin="00: 52: 36. 35"/><clear/>up not getting your work
done,

and then your company fails,

<time begin="00: 52: 39. 24"/><clear/>and then the whole darn
sector fails.

<time begin="00: 52: 41. 33"/><clear/>So keep your head down
early.

<time begin="00: 52: 42. 84"/><clear/>Your first project is
everything.

<time begin="00: 52: 44. 84"/><clear/>Once you have a first success
the

paths and gates in life open up.

<time begin="00: 52: 50. 12"/><clear/>So really be serious and be
focused.

<time begin="00: 52: 52. 73"/><clear/>Thanks. So our high-risk

project that we took on was one

<time begin="00: 52: 59. 52"/><clear/>that is a bit different from
our normal program.

<time begin="00: 53: 03. 27"/><clear/>This isn't a drug
development

lab producing a product here,

<time begin="00: 53: 06. 35"/><clear/>we're addressing a
global

shortage, and a cost problem

<time begin="00: 53: 10. 71"/><clear/>with artemisinin
antimalarials.

Hale.txt

<time begin="00: 53: 13. 10"/><clear/>So artesunate, artemuser
[assumed]

a little bit of arteether perhaps,

<time begin="00: 53: 16. 63"/><clear/>through the partnership
with

University California Berkeley, and QB3,

<time begin="00: 53: 20. 44"/><clear/>Quantitative Biology 3, which
is Berkeley,

San Francisco and Santa Cruz campuses.

<time begin="00: 53: 25. 04"/><clear/>It is very high-risk
science,

synthetic biology, extremely elegant.

<time begin="00: 53: 31. 14"/><clear/>We plan to build a metabolic
system with

e coli, pick the genes out of artemisia,

<time begin="00: 53: 37. 63"/><clear/>the plant that produces
artemisinin

antimalarial's and put them into e coli.

<time begin="00: 53: 43. 59"/><clear/>It's something.

<time begin="00: 53: 45. 35"/><clear/>There are high highs and low
lows when

the next gene does or doesn't hit it.

<time begin="00: 53: 51. 12"/><clear/>But we are right on
course.

<time begin="00: 53: 53. 70"/><clear/>The project is 14 months in
now.

<time begin="00: 53: 56. 06"/><clear/>We're actually ahead of
milestones, so we're

quite pleased with the project.

<time begin="00: 54: 00. 18"/><clear/>Next slide.

<time begin="00: 54: 01. 01"/><clear/>Is the wrap up of it.

<time begin="00: 54: 02. 13"/><clear/>So we're working with the
Keasling

Lab, chemical engineers at UC Berkeley,

<time begin="00: 54: 06. 58"/><clear/>and Amyris, a small
biotech

start up, and OneWorld Health.

<time begin="00: 54: 11. 24"/><clear/>So we will decide, as
OneWorld

Health, whether to be the producer,

<time begin="00: 54: 16. 91"/><clear/>the fermenter, of this
product in e coli.

<time begin="00: 54: 21. 19"/><clear/>Or to engage a pharmaceutical
partner and have

them do it, and have them put their name on it.

<time begin="00: 54: 26. 81"/><clear/>We'd need a substantial
philanthropic

donation,

<time begin="00:54:30.13"/><clear/>and cut in costs of the

product to do that.

<time begin="00:54:32.68"/><clear/>So we're still deciding.

<time begin="00:54:33.49"/><clear/>There's a lot of business

plan work that needs to

be done now in organization, and they've,

<time begin="00:54:38.29"/><clear/>we're paying some really

expensive

analysts to do that and companies.

<time begin="00:54:44.68"/><clear/>So the purpose of the

project, again

is to, it's for five, over five years,

<time begin="00:54:48.45"/><clear/>reduce the cost by five fold

we're saying,

and guarantee that there's not a shortage again

<time begin="00:54:55.81"/><clear/>of these very fine

antimalarial's.

<time begin="00:54:59.03"/><clear/>

<time begin="00:55:00.14"/><clear/>So to wrap up.

<time begin="00:55:01.53"/><clear/>There are many global

infectious

diseases that we can do something about.

<time begin="00:55:05.70"/><clear/>You read about preventable

illnesses and

deaths, and there really are.

<time begin="00:55:09.56"/><clear/>And you're working on many of

them

in your laboratories, as I learned today.

<time begin="00:55:12.79"/><clear/>It was a great day, by the

way, thank you.

<time begin="00:55:14.48"/><clear/>I was tired from it, which is

good.

<time begin="00:55:18.29"/><clear/>Most of these problems,

however, let's

accept it, they will not be solved

<time begin="00:55:22.33"/><clear/>by the current

corporations,

or systems, or governments.

<time begin="00:55:26.92"/><clear/>That's too bad.

<time begin="00:55:27.96"/><clear/>But it also is an

opportunity.

<time begin="00:55:29.67"/><clear/>Take those problems and

turn

them into opportunities.

<time begin="00:55:32.44"/><clear/>Be, you no see the positive

side.

Hal e. txt

<time begin="00: 55: 35. 67"/><clear/>We have to create the
new

solutions and the new paths.

<time begin="00: 55: 38. 05"/><clear/>We can't imagine that
those

who are in a situation,

<time begin="00: 55: 41. 30"/><clear/>where something is not
working,

will figure out what to do.

<time begin="00: 55: 43. 91"/><clear/>Sometimes we, sometimes you
need the

freshness from the outside to figure it out.

<time begin="00: 55: 50. 01"/><clear/>So, here is the zinger for
you, my challenge

to you as an audience, then we'll finish up.

<time begin="00: 55: 57. 49"/><clear/>Who leads in global
health?

<time begin="00: 56: 00. 47"/><clear/>Does global health need a
leader?

<time begin="00: 56: 01. 78"/><clear/>I suppose would be the first
question.

<time begin="00: 56: 03. 87"/><clear/>I think that the words
of

Conway, what is his first name?

<time begin="00: 56: 10. 22"/><clear/>I've forgotten.

<time begin="00: 56: 10. 79"/><clear/>He's the former president
of

the Rockefeller Foundation.

<time begin="00: 56: 14. 33"/><clear/>Used a few words at a global
health conference.

<time begin="00: 56: 16. 98"/><clear/>He said, the state of
global

health is total anarchy.

<time begin="00: 56: 22. 34"/><clear/>And I, if you think about
it,

everyone is doing their own thing,

<time begin="00: 56: 25. 49"/><clear/>and working by
themselves.

<time begin="00: 56: 27. 69"/><clear/>And my reflection on
that

was, is that a problem?

<time begin="00: 56: 33. 74"/><clear/>Is there one right way to do
things?

<time begin="00: 56: 35. 73"/><clear/>Is there one group who knows
better than others?

<time begin="00: 56: 37. 85"/><clear/>So who is leading?

Hale.txt

<time begin="00:56:39.71"/><clear/>I'll tell you from
partnerships

with the WHO, it's not.

<time begin="00:56:43.39"/><clear/>Is the Bill and Melinda
Gates

Foundation leading?

<time begin="00:56:47.64"/><clear/>They're told, you are
leading, whether they

want to or not, they're told they're leading.

<time begin="00:56:51.71"/><clear/>And they say, we don't want
to lead,

we want to empower, we want to fund.

<time begin="00:56:54.64"/><clear/>So we have a reluctant
leader.

<time begin="00:56:57.79"/><clear/>Is the NIH leading?

<time begin="00:56:58.91"/><clear/>Not in global health, you
know CDC.

<time begin="00:57:01.04"/><clear/>Perhaps in some element of
global

health, in Epidemiology

<time begin="00:57:04.34"/><clear/>and some other spheres.

<time begin="00:57:06.18"/><clear/>There's a question of
which

continent is leading.

<time begin="00:57:08.44"/><clear/>Who cares more?

<time begin="00:57:09.50"/><clear/>Who has more schools of
tropical medicine?

<time begin="00:57:12.30"/><clear/>Which government gives more
money?

<time begin="00:57:15.87"/><clear/>Does that define
leadership?

<time begin="00:57:19.14"/><clear/>And finally, this is it for
you, is Harvard

the university that leads in global health?

<time begin="00:57:25.44"/><clear/>So here's my challenge on the
next slide.

<time begin="00:57:27.42"/><clear/>They certainly have the
most

resources, okay, get the most attention.

<time begin="00:57:31.43"/><clear/>So I have a proposal for you,
for

the State of Georgia, actually.

<time begin="00:57:35.99"/><clear/>I propose that Georgia has a
critical mass of

expertise and passion in vision and leadership.

<time begin="00:57:44.42"/><clear/>And if you got it all

Hal e. txt

together,

now that's the challenge, right?

<time begin="00:57:48.84"/><clear/>Get everyone to come

together

and work together,

<time begin="00:57:54.54"/><clear/>that you'd be quite a

force;

quite a force to deal with.

<time begin="00:57:58.18"/><clear/>So I challenge you to do

that.

<time begin="00:58:00.97"/><clear/>And all that you would need,

you have the,

you need three things to make this happen.

<time begin="00:58:05.52"/><clear/>You need passionate people,

and I, you

really have them in this group.

<time begin="00:58:10.28"/><clear/>I may not have named the

alliance, the

government alliance correctly in,

<time begin="00:58:15.34"/><clear/>I'm sure I'm missing a few

initiatives

that we've talked about today.

<time begin="00:58:19.64"/><clear/>You have the people,

very

passionate, and in critical mass.

<time begin="00:58:23.49"/><clear/>You have the technologies,

okay, they

exist, where you can access them.

<time begin="00:58:28.72"/><clear/>All that you need is

fundin g,

and I have that solved here too.

<time begin="00:58:31.83"/><clear/>Next slide.

<time begin="00:58:33.18"/><clear/>Okay. What do you think

about

the Georgian Global ites?

<time begin="00:58:39.97"/><clear/>Isn't that good?

<time begin="00:58:41.32"/><clear/>Or the Georgian Dozen or the

Georgi an Dreamers?

<time begin="00:58:44.71"/><clear/>You have that here too.

<time begin="00:58:46.37"/><clear/>You really, really do.

<time begin="00:58:48.66"/><clear/>And all you have to do is

believe it,

and go out and ask for it and make it happen.

<time begin="00:58:54.05"/><clear/>And as I offered today at

lunch, if you need a

nonprofit pharmaceutical company we'll open an

<time begin="00:58:58.39"/><clear/>office in Georgia.

<time begin="00:58:59.16"/><clear/>I don't know that you

Hale.txt

do.

<time begin="00:59:00.86"/><clear/>If you decide to go the

Georgia [unclear] okay and I'm passing, there are

lots of things you can do in global health.

<time begin="00:59:05.18"/><clear/>But I really encourage you

to, can you

back up one slide, really, really think about,

<time begin="00:59:11.22"/><clear/>really think about taking a

leadership roll.

<time begin="00:59:13.52"/><clear/>Really thinking about leaving

affiliations

at the door, leaving egos at the door,

<time begin="00:59:19.91"/><clear/>so personal and

professional,

and really coming together.

<time begin="00:59:23.64"/><clear/>It's tremendous what you

have.

<time begin="00:59:25.50"/><clear/>It really is.

<time begin="00:59:26.76"/><clear/>I will tell you though, to

be

honest, I'm working with the University

<time begin="00:59:29.61"/><clear/>of California and telling

them the same thing.

<time begin="00:59:31.93"/><clear/>But I think that you're way

ahead

in terms of the probability of success compared

<time begin="00:59:37.90"/><clear/>to the University of

California and Stanford.

<time begin="00:59:40.22"/><clear/>So, I'm available for

consultation

anytime, pro bono, okay?

<time begin="00:59:47.44"/><clear/>Okay. Let me wrap it up now

here.

<time begin="00:59:52.02"/><clear/>Okay. So in conclusion, a

nonprofit

pharmaceutical company can exist

<time begin="00:59:56.47"/><clear/>and should exist, needs to

exist.

<time begin="00:59:58.54"/><clear/>Nonprofit vaccine companies,

they're

coming along, we know of two

<time begin="01:00:01.78"/><clear/>that we really helped and

they exist now.

<time begin="01:00:03.85"/><clear/>You'll hear from one of them

in one of

your lectures; one of the four speakers.

Hal e. txt

<time begin="01: 00: 08. 50"/><clear/>And we' re thri vi ng.

<time begin="01: 00: 10. 36"/><clear/>I' ll tell you honestl y it' s
still hard.

<time begin="01: 00: 12. 01"/><clear/>I don' t, I have two
sons,

13 and 7, and they bal ance,

<time begin="01: 00: 15. 70"/><clear/>I have a wonderful
husband

that works with me too.

<time begin="01: 00: 19. 29"/><clear/>My chil dren gi ve us bal ance
in li fe,

but I don' t get home for di nner enough.

<time begin="01: 00: 23. 03"/><clear/>So I' m not sayi ng anywhere
here that it' s easy.

<time begin="01: 00: 25. 79"/><clear/>It' s hard still.

<time begin="01: 00: 27. 52"/><clear/>And I thi nk that anythi ng
worthwhi le is hard.

<time begin="01: 00: 30. 70"/><clear/>And that' s okay.

<time begin="01: 00: 33. 00"/><clear/>If you' re in the place in
li fe

where that' s what you want to do.

<time begin="01: 00: 38. 24"/><clear/>I ndustry and academi c
sci enti sts

are very anxi ous.

<time begin="01: 00: 40. 99"/><clear/>Here you are, to get
goi ng

and to advance technol ogi es,

<time begin="01: 00: 44. 69"/><clear/>speci fi cal l y for these
negl ected di seases.

<time begin="01: 00: 46. 94"/><clear/>Young sci enti sts gi ve me hope
for the future.

<time begin="01: 00: 49. 74"/><clear/>The i ncredi bl e vol ume, vol ume
of

passi on that comes through emails and letters

<time begin="01: 00: 58. 20"/><clear/>from young peopl e, please may
I

have just two minutes of your time.

<time begin="01: 01: 02. 53"/><clear/>I want, I' m gonna live a 100
years, because

of all of these technol ogi es that we have.

<time begin="01: 01: 07. 01"/><clear/>A hundred more years, I
goi ng

to be on thi s globe, okay?

<time begin="01: 01: 10. 02"/><clear/>And it' s a fri cken mess, and
I

want to do something about it.

<time begin="01: 01: 13. 52"/><clear/>I want to commi t

Hal e.txt

personally

to do something about it.

<time begin="01:01:15.64"/><clear/>Please tell me what to
do

with my career, with my life.

<time begin="01:01:18.67"/><clear/>Just steer me toward a path
and

then I'll take it, just two minutes time.

<time begin="01:01:22.92"/><clear/>And we don't have time.

<time begin="01:01:25.68"/><clear/>We're doing other
things.

<time begin="01:01:26.85"/><clear/>So we have an email
message

that we send back.

<time begin="01:01:29.80"/><clear/>It doesn't matter what path
you take.

<time begin="01:01:34.53"/><clear/>There are so many
opportunities.

<time begin="01:01:36.47"/><clear/>There is not one path,
there's

so, so many paths.

<time begin="01:01:39.99"/><clear/>But keep that; keep that
spark that you have.

<time begin="01:01:44.29"/><clear/>I said to a few of my hosts
here today, right.

I haven't been on an undergraduate campus

<time begin="01:01:48.93"/><clear/>in a while, UCSF is all
graduates.

<time begin="01:01:50.76"/><clear/>I spend quite a bit of
time

there, and I guess I'm at Berkeley

<time begin="01:01:53.43"/><clear/>when classes are going
on,

I don't see the students.

<time begin="01:01:55.92"/><clear/>They look so young.

<time begin="01:01:56.65"/><clear/>Of course I'm not aging,
myself.

<time begin="01:02:00.64"/><clear/>But that passion it, it truly
does give me hope

that whatever we begin now will be taken on

<time begin="01:02:05.84"/><clear/>and continued by future
generations.

<time begin="01:02:07.76"/><clear/>I absolutely believe it.

<time begin="01:02:08.67"/><clear/>I have no doubts at all.

<time begin="01:02:11.67"/><clear/>Leadership.

<time begin="01:02:13.12"/><clear/>Leadership is desperately

Hale.txt

lacking.

<time begin="01:02:15.93"/><clear/>Don't let that be a
deterrent.

<time begin="01:02:17.50"/><clear/>It just means that you
may

have to lead yourself at times.

<time begin="01:02:20.64"/><clear/>Keep that vision clear
when

you do lead.

<time begin="01:02:23.56"/><clear/>Industry does want to
participate.

<time begin="01:02:26.41"/><clear/>They don't know how.

<time begin="01:02:28.20"/><clear/>They're waiting for your to
ask, convince

them to make it right for them.

<time begin="01:02:32.13"/><clear/>And it's not just
pharmaceutical

industry; there are lots of industries.

<time begin="01:02:36.05"/><clear/>We have fantastic offers from
IBM and

Intel, and I don't know who else,

<time begin="01:02:41.49"/><clear/>offering what they can

to advance global health.

<time begin="01:02:45.25"/><clear/>I bet you can get one from
Coca

Cola if you knocked on the door.

<time begin="01:02:48.48"/><clear/>Yeah? And there's plenty of
money in the world.

<time begin="01:02:52.00"/><clear/>You must believe that.

<time begin="01:02:53.10"/><clear/>There truly is plenty of
money.

<time begin="01:02:56.35"/><clear/>It's our job as scientists,
we don't

do a good job of translating the importance

<time begin="01:03:01.84"/><clear/>of what we do, the
significance of what we do.

<time begin="01:03:03.65"/><clear/>There is fear of
biotechnology in

Europe, and therefore [assumed] in Africa.

<time begin="01:03:08.15"/><clear/>How did that happen?

<time begin="01:03:09.48"/><clear/>It's our fault.

<time begin="01:03:10.50"/><clear/>It's our responsibility.

<time begin="01:03:12.34"/><clear/>And if we are unable to
attract other families

other than the Bill and Melinda Gates Foundation

<time begin="01:03:18.21"/><clear/>into global health,
Al though

Rockefeller has been there, and

Hale.txt

<time begin="01:03:20.75"/><clear/>the Welcome family,

which I don't think they exist any more,

<time begin="01:03:23.30"/><clear/>but were there very, very
early.

<time begin="01:03:26.09"/><clear/>If we can't invite any
other

families and convince them to be

<time begin="01:03:29.39"/><clear/>in global health

then that's our fault.

<time begin="01:03:31.48"/><clear/>It really is.

<time begin="01:03:32.03"/><clear/>We're not trying hard

enough.

<time begin="01:03:33.50"/><clear/>Because there are many, many,

many

families who have considerable wealth,

<time begin="01:03:39.59"/><clear/>and they want to leave a

legacy in

the world, they want to leave it

<time begin="01:03:42.29"/><clear/>in print, and they don't know

what to do.

<time begin="01:03:45.76"/><clear/>They really don't know

what

to do, and they're begging.

<time begin="01:03:48.02"/><clear/>Okay, next slide.

<time begin="01:03:53.43"/><clear/>So thank you to all of

our

partners, in particular the Bill

<time begin="01:03:56.79"/><clear/>and Melinda Gates

Foundation;

98% of our funding.

<time begin="01:04:00.07"/><clear/>I've gotten to know them very

well, and

would not be here without them.

<time begin="01:04:04.77"/><clear/>They believed in us early;

in

technology and in entrepreneurs.

<time begin="01:04:08.29"/><clear/>And we put that together,

that's what we're

trying to do here, put them together.

<time begin="01:04:12.02"/><clear/>And all of our partners.

<time begin="01:04:15.38"/><clear/>Next slide.

<time begin="01:04:16.68"/><clear/>Thank you, Dan and Pat,

and

the university, and the center.

<time begin="01:04:21.20"/><clear/>I think I forgot a word in

the center.

<time begin="01:04:23.93"/><clear/>Global, yeah, oh my
goodness.

Hal e. txt

<time begin="01:04:25.71"/><clear/>Yes. Okay.

<time begin="01:04:26.63"/><clear/>I'll get next; invite me

back

next time I'll get it right.

<time begin="01:04:32.68"/><clear/>Okay. No, this is it,

this is my life philosophy.

<time begin="01:04:37.89"/><clear/>Never believe that a

small

number of people can't change the world,

<time begin="01:04:41.21"/><clear/>it truly is the only thing

that ever has.

<time begin="01:04:43.56"/><clear/>Thank you.
