

Doctor Atomic

by John Adams

Cast

J. Robert Oppenheimer (baritone)
Kitty Oppenheimer (mezzo-soprano or soprano)
General Leslie Groves (bass)
Edward Teller (dramatic baritone)
Robert R. Wilson (tenor)
Frank Hubbard (baritone)
Captain James Nolan (tenor)
Pasqualita (mezzo-soprano or contralto)

Act I, Scene 1

*(The laboratory of the Manhattan Project
at Los Alamos, New Mexico. June 1945)*

CHORUS

We believed that
“Matter can be neither
created nor destroyed
but only altered in form.”
We believed that
“Energy can be neither
created nor destroyed
but only altered in form.”
But now we know
That energy
may become matter,
and now we know that
matter may become energy
and thus be altered in form.
The end of June 1945 finds us
expecting from day to day
to hear of the explosion
of the first atomic bomb
devised by man.
All the problems are believed
to have been solved

at least well enough
to make a bomb practicable.
A sustained neutron chain reaction
resulting from nuclear fission
has been demonstrated;
production plants of several
different types are in operation,
building a stock pile
of the explosive material.
We do not know when the first
explosion will occur
nor how effective it will be.
The devastation from a single bomb
is expected to be comparable to that
of a major air raid by usual methods.
A weapon has been developed
that is potentially destructive
beyond the wildest nightmares
of the imagination;
a weapon so ideally suited
to sudden unannounced attack
that a country’s major cities
might be destroyed overnight
by an ostensibly friendly power.
This weapon has been created
not by the devilish inspiration
of some warped genius

but by the arduous labor
of thousands of normal men and women
working for the safety of their country.

TELLER

First of all, let me say
that I have no hope
of clearing my conscience.
The things we are working on
are so terrible
that no amount of protesting
or fiddling with politics
will save our souls.

OPPIE

“The soul is a thing so impalpable,
so often useless,
and sometimes so embarrassing
that at this loss I felt
only a little more emotion
than if, during a walk,
I had lost my visiting card.”

TELLER

I’ve found a new difficulty
with the latest design of the Super.
But since I haven’t thought it through yet,
I would rather talk about it later.

OPPIE

Talk about it now.

TELLER

No.

OPPIE

“Home stretch measures,” Edward.
“Ruthless, brutal people must
band together to force the
Fat Man components to dovetail
in time and space.”
The cowpuncher committee
has a mandate to “ride herd”
on the implosion program.

CHORUS

We surround the plutonium core
from thirty two points
spaced equally around its surface,

the thirty-two points
are the centers of the
twenty triangular faces
of an icosahedron
interwoven with the
twelve pentagonal faces
of a dodecahedron.
We squeeze the sphere.
Bring the atoms closer.
Til the subcritical mass
goes supercritical.
We disturb the stable nucleus.

OPPIE

We are bedeviled
by faulty detonators.
One detonator fizzles
or goes off a millionth of a second
too early or too late.

TELLER

It ruins the symmetry of
the Gadget’s nuclear guts...

OPPIE

No more quibbling
over the plutonium core.

TELLER

...and we’ve got a misfire.

OPPIE

It will be a solid ball.
We have you to thank for that, Edward.
We’ll kick-start the reaction
with a modulated initiator.

TELLER

Let me apologize for my rudeness.
I dislike group meetings.

OPPIE

Okay.
You don’t want to return to the meetings?
You don’t have to.
I’ll talk with you about your group’s work
by yourself.

TELLER

I received this letter
from my friend Leo Szilard.

OPPIE

Szilard's a bright fellow,
kind of a busy-body,
but very bright.

TELLER & MEN'S CHORUS

(reading Szilard's letter)

"Many of us are inclined to say
that individual Germans
share the guilt for acts
which Germany committed during this war
because they did not raise their voices
in protest against those acts.
Their defense that their protest
would have been of no avail
hardly seems acceptable,
even though these Germans
could not have protested without
running risks
to life and liberty.
We scientists,
working on 'atomic power',
are in a position
to raise our voices
without such risks,
even though we might incur
the displeasure of those who
are at present in charge.
The people of the United States
are unaware of the choice we face.
And this only increases
our responsibility in this matter.
We alone who have worked
on 'atomic power' —
we alone are in a position
to declare our stand."

OPPIE

I think it improper
for a scientist
to use his prestige
as a platform
for political pronouncements.
The nation's fate
should be left in the hands

of the best men in Washington.

They have the information which
we do not possess.

Men like Marshall,

a man of great humanity and intellect —
it is for them to decide, not us.

WILSON

Actually, I'm organizing
a small meeting at our building. The title is
"The Impact of the Gadget on Civilization."

OPPIE

I saw the announcement.
I'd like to persuade you not to have it.
I feel that such a discussion in the lab,
in the technical area,
is quite inconsistent with what
we talk about there.

WILSON

These questions are not technical questions,
but political and social questions,
and the answers given to them
may affect all mankind for generations.
In thinking about them
the men on the project
have been thinking as citizens
of the United States
vitaly interested in the welfare
of the human race.

OPPIE

I might warn you — you could get in trouble
if you hold such a meeting.

WILSON

From radical to establishment figure
in two easy stages!

OPPIE

Isn't it better that I have
a voice within the government?

WILSON

This is a petition.
"To the President of the United States:
We, the undersigned scientists,
have been working in the field

of atomic power.
 Until recently we have had to fear
 that in this war the United States
 might be attacked
 by atomic bombs,
 and that her only defense
 might lie in a counterattack
 by the same means.
 Today, with the defeat of Germany,
 this danger is averted,
 and we feel impelled
 to say what follows..."

TELLER
(interrupting)
 The machinery has caught us in its trap...

WILSON
 ... and we can't stop now.
 You want to know if it works.

(continues reading from the petition)

"...Atomic bombs
 may well be effective warfare.
 But attacks on Japan
 cannot be justified until we make clear
 the terms of peace
 and give them a chance to surrender."

OPPIE
 What do we know about
 Japanese psychology?
 How can we scientists
 judge the way to end the war?

WILSON
 We must first devise a demonstration.
 Where there won't be any people.
 Not on a city. Or a demonstration
 right here in the desert.
 Let them send observers...
 see for themselves.

OPPIE
 What if it's a dud?

TELLER
 Every time we test it something goes wrong.
 Some component is failing.

OPPIE
 The Gadget Division...
 it's been thrown into turmoil.
 Yesterday we had blisters,
 blisters on the spheres' surface,
 infinitesimal,
 but large enough to cause a fatal misfit
 between the hemispheres.

WILSON
 Everybody is rushing around.
 They don't appear to be ready.
 But there's momentum.
 Everybody's working day and night.
 Nobody has a spare moment
 and we work like dogs.
 It's hard to stop and think
 as one ought to.

OPPIE
 Well, how do you feel?

WILSON
 Well, pretty excited.
 Like going out to save civilization.

OPPIE
 The test must go on as scheduled.
 Groves has talked with Conant
 and the "upper crust" in Washington.
 Doctor Stearns described the work
 they've already done on target selection.
 It was agreed that psychological factors
 in selecting the targets
 are of great importance.

CHORUS & OPPIE
 Kyoto.
 Population, one million.
 An intellectual center.
 Classified double-A target.
 Nagasaki: a secondary target.
 Yokohama. Nagoya. Fukuoka. Hiroshima.

TELLER

(to Oppie)

You used your scientific stature
to give political advice
in favor of immediate bombing?

OPPIE

I explained that the visual effect
of an atomic bombing would be tremendous.
A brilliant luminescence
rising to a height
of up to twenty thousand feet.
The neutron effect of the explosion
would be dangerous to life
for a radius of at least
two-thirds of a mile, a brilliant
luminescence.

TELLER

Our only hope is
to convince everybody
that the next war will be fatal.
For this purpose actual combat use
might be the best thing.

WILSON

No. Before the bomb is used
Japan must have some warning.
A couple of days in advance.
It's our position as a great
humanitarian nation.
It's the fair play of our people.

OPPIE

(in counterpoint with the following chorus)

The Secretary of War concludes —
that we cannot give the Japanese
any warning;
that we should seek to make a profound
psychological impression
on as many inhabitants as possible.
Doctor Conant suggests
a vital war plant as
the most desirable target,
employing a large number of workers
and closely surrounded by worker's houses.

MALE CHORUS

(continuing to read the petition)

“A nation which sets the precedent
of using these newly liberated
forces of nature
for purposes of destruction
may have to bear responsibility
of opening the door to an era of devastation
on an unimaginable scale.”

OPPIE

Truman will never see that petition.
Security officials will deem it
a superfluous document
in light of the decisions
being made at highest levels.
I've already told them in Washington
that several strikes would be feasible.

WOMEN'S CHORUS

All the resources of the United States,
moral and material,
may have to be mobilized
to prevent the advent of such
a world situation.

TELLER

The more decisive a weapon is
the more surely it will be used,
and no agreements will help.
Could we have started the atomic age
with clean hands?

Scene 2

(Kitty and Oppie are alone in their living room. He is reading documents, oblivious to her)

KITTY

Am I in your light?
No, go on reading
(the hackneyed light of evening
quarreling with the bulbs;
the book's bent rectangle
solid on your knees)
only my fingers in your hair,
only, my eyes
splitting the skull
to tickle your brain with love

in a slow caress blurring the mind,
 kissing your mouth awake
 opening the body's mouth
 stopping the words.
 This light is thick with birds, and
 evening warns us beautifully of death.
 Slowly I bend over you,
 slowly your breath
 runs rhythms through my blood
 as if I said I love you
 and you should raise your head.
 Listening, speaking
 into the covert night:
 Did someone say something?
 Love, am I in your light? Am I?
 See how love alters the living face
 go spin the immortal coin through time
 watch the thing flip through space tick, tick.

OPPIE

*(Text taken from Baudelaire's erotic poem,
 "Un hémisphère dans une chevelure,")*

Long let me inhale, deeply,
 the odor of your hair,
 into it plunge the whole of my face,
 like a thirsty man
 into the water of a spring,
 and wave it in my fingers
 like a scented handkerchief,
 to shake memories into the air.
 If you could know all that I see!
 all that I feel!
 all that I hear in your hair!
 My soul floats upon perfumes
 as the souls of other men
 float upon music.
 Your hair contains an entire dream,
 full of sails and masts;
 it contains vast seas
 whose soft monsoons
 bear me to delightful climates
 where space is deeper and bluer,
 where the atmosphere
 is perfumed with fruit,
 with foliage and with human skin.
 In the ocean of your hair
 I see brief visions
 of a port resounding with
 melancholy songs,

of vigorous men of all nations
 and ships of all shapes
 outlining their fine and complicated
 architectures
 against an immense sky
 where eternal heat
 languidly quivers...
 In the glowing fire-grate of your hair
 I inhale the odor of tobacco
 mingled with opium and sugar;
 in the night of your hair
 I see the infinity
 of tropical azure resplendent;
 on the downed banks of your hair
 I inebriate myself with
 the mingled odors of tar,
 of musk and of coconut oil.
 Long let me bite your heavy,
 black tresses... it seems to me
 that I am eating memories.

KITTY, OPPIE

The motive of it all was loneliness,
 All the panic encounters and despair
 Were bred in fear of the lost night, apart,
 Outlined by pain, alone.
 Promiscuous as mercy.
 Fear-led and led again to fear
 ... toward the cave where
 part fire and part
 Pity lived in that voluptuousness
 To end one
 and begin another loneliness.
 This is the most intolerable motive :
 Must be given back to life again,
 Made superhuman
 Made superhuman, made human, out of pain
 Turned to the personal,
 the pure release:
 The rings of Plato
 and Homer's golden chain
 Or Lenin with his cry
 of Dare We Win.

KITTY

Those who most long for peace
 now pour their lives on war.
 Our conflicts carry
 creation and its guilt,

these years' great arms
are full of death and flowers.
A world is to be fought for,
sung, and built:
Love must imagine the world...

Scene 3

(The Alamogordo test site. It is early evening of the night before the test of "Little Boy", the first plutonium bomb. As pressure mounts from Washington to proceed immediately with the test, a powerful electrical storm has arisen, threatening cancellation of the test. General Groves and Oppenheimer huddle around the desk of the chief meteorologist, Jack Hubbard. July 15, 1945)

GROVES
What the hell is wrong with the weather?

OPPIE
The weather is whimsical.

HUBBARD
Thunderheads began moving
into the area at 04.00 hours.

GROVES
Lightning...
What if it hits the tower
and detonates the bomb?

OPPIE
Rain is probably ruining
the electrical connections.

Hubbard
General, weather forecasters
have opposed the test date for months...
it was set within a window
of unfavorable conditions:
thunderstorms, rain,
high winds, inversion layers.
You overrode us, sir.

GROVES
Is this insubordination?

HUBBARD
Now we are onsite,
and conditions are exactly
the worst possible,
with an electrical storm threatening
not just the test,
but the lives of those setting it up.

GROVES
Five hundred U.S. Superfortresses
are raining incendiary bombs
on four Japanese cities.
Our B-29's are destroying
half of every Jap city they hit.
The President of the United States
is talking to Joe Stalin in the morning
in Potsdam.
This test will proceed as scheduled,
with full weather compliance
or you will spend the rest of your life
behind bars,
Mister Meteorologist.

HUBBARD
We are seeing storm clouds coming in
over the Chupadera Mesa and the Oscuras.

GROVES
I am asking for a firm prediction
as when the storm will pass.

OPPIE
(recite phrases from the Bhagavad Gita)
I am the heat of the sun;
and the heat of the fire am I also:
Life eternal and death.
I let loose the rain, or withhold it.
Arjuna, I am the cosmos revealed,
and its germ that lies hidden.

HUBBARD
Sir, the volatility of the season
makes such prediction impossible.

GROVES
So, you are refusing to forecast
good weather for the test?

HUBBARD

I recommend we postpone the decision
until our next weather conference
at 2:00 a.m.

GROVES

Hubbard, I want a specific time.

HUBBARD

At that time,
I will recommend postponing the test
until 5:30 a.m.,
when the thunderstorms
would be dissipated
by the first rays of the sun.

GROVES

I demand a signed weather forecast.
I warn you...
if you are wrong, I will hang you.

HUBBARD

I'll sign the report, sir.

OPPIE

If we postpone, I'll never get my people
up to pitch again.
I hear Fermi
just rushed into the mess hall
pleading for postponement.
A sudden wind shift
could deluge the camp
with radioactive rain after the shot.
The evacuation routes are inadequate.
It could be a catastrophe.

GROVES

If I have to compromise security
by sending an evacuation force
into nearby towns,
our cover's blown.
The secret of the test
will end up headlined
in tomorrow's newspapers.
So far the press
is exercising voluntary censorship.

NOLAN

With respect, sir,

Anyone with two good eyes
could have found Los Alamos
just by following the trail of beer cans
from Santa Fe.

But ever since the first grams of plutonium
arrived at Los Alamos, sir,
the medical division has been studying
the toxic properties of the deadly metal.
Its metabolism is similar to radium:
enough of it in the human body
eats through vital tissues,
disintegrates human kidneys
and causes fatal bone cancer.
Sir, no cure has yet been found
for the agonies that result
from overexposure
to fallout and radiation.

OPPIE

Feelings of heat and cold,
pleasure and pain,
are caused by the contact of the senses
with their objects.
They come and they go, never lasting long.
You must accept them.

GROVES

You what?

OPPIE

I said...
Watch out for the rattlesnakes.

GROVES

I have been preoccupied with many matters,
but the prospect of fallout
has not been high on my priority list.
Now you're telling me that we
should be ready to evacuate Trinity?
Bring in troops and trucks to get
everyone out
at a moment's notice,
if something goes wrong?

NOLAN

That could be the case, sir.

GROVES

What are you, a Hearst propagandist?

OPPIE

A serene spirit accepts pleasure and pain
with an even mind,
and is unmoved by either.
He alone is worthy of immortality.

NOLAN

I'm having to double
as camp psychologist.
I keep in constant touch with a team
of psychiatrists at Oak Ridge.
Several of the younger scientists
are talking wildly of failure
and possible disaster.
Their fears are threatening
to infect the rest of the camp.
Two hours ago,
one young scientist became hysterical
and had to be removed under sedation.

GROVES

There is an air of excitement at the camp
that I do not like.
This is a time when calm deliberation
is most essential.
Oppenheimer is getting advice
from all sides on what he should
or should not do.
The best thing I can do is
introduce as much of an atmosphere
of calm as possible into this very
tense situation.
The main problem is the weather.
We have the best weathermen
the armed forces can give us.
Their predictions have always
been on the money.
The only time they've been wrong
is right now...
on the day it counts.
Get them out of here.
From now on I'm making my own
weather predictions.

Orchestral Interlude

OPPIE

General, you are bearing up

with remarkable fortitude.
Only your waistline is suffering.

GROVES

I've been urged to take action.
As child I often ate
great quantities of food,
Sweets and choc'late, and so forth.
This was a subject of concern to my mother
and to my stepmother.
I have here detailed diets that were,
at least in theory, intended to be followed.
I did stick to one last August and September.
You can see my daily menus
and my weight. Here, see:
On August 7 I weighed 227 pounds.
By September 24 I am down to 212.
All the menus
are meticulously drawn up,
down to the last calorie.
In this particular diet
the average number of calories per day
is only one thousand twenty.
It would hardly keep a bird alive.
But then there's the two brownies —
200 calories
and on September 15
"3 pieces of chocolate cake —
300 calories."
You don't look so good.
Get some sleep. I'll turn in myself.

(To the duty officer)

I want Kistiakosky,
Bainbridge and Officer Bush
up on that bomb tower
to prevent potential sabotage.
Goodnight.

OPPIE

(Text taken from John Donne's Holy Sonnet)
Batter my heart,
three person'd God; for, you
As yet but knock, breathe, knock,
breathe, knock, breathe
Shine, and seek to mend;
Batter my heart, three person'd God;
That I may rise, and stand, o'erthrow

me, and bend
 your force, to break,
 blow, break, blow,
 break, blow burn
 and make me new.
 Batter my heart, three person'd God; for you
 As yet but knock, breathe, knock,
 breathe, knock, breathe
 Shine, and seek to mend;
 Batter my heart, three person'd God;
 That I may rise, and stand,
 o'erthrow me, and bend
 Your force, to break,
 blow, break, blow, break,
 blow burn and make me new.
 I, like an usurpt town, to another due,
 Labor to admit you, but oh, to no end,
 Reason your viceroy in me,
 me should defend, but is captiv'd,
 and proves weak or untrue,
 Yet dearly I love you,
 and would be lov'd fain
 But am betroth'd unto your enemy,
 Divorce me, untie, or break that knot again,
 Take me to you, imprison me, for I
 Except you enthrall me, never shall be free,
 Nor ever chaste, except you ravish me.

Act II, Scene 1

(The Oppenheimer house, two hundred miles from the test site. It's two a.m. on July 16. Aria Kitty "PacuaEve," based on the poem "Easter Eve," by Muriel Rukeyser, 1945.)

KITTY

Wary of time
 O it seizes the soul tonight
 I wait for the great morning of the west
 confessing with every breath mortality.
 Moon of this wild sky struggles to stay
 whole
 and on the water
 silvers the ships of war.
 I go alone in the black-yellow light
 all night waiting for day,

while everywhere the sure death of light,
 the leaf's sure return to the root
 is repeated in million,
 death of all man to share.
 Whatever world I know shines ritual death,
 wide under this moon
 they stand gathering fire,
 fighting with flame,
 stand fighting in their graves.
 All shining with life as the leaf,
 as the wing shines,
 the stone deep in the mountain,
 the drop in the green wave,
 Lit by their energies, secretly, all things
 shine.
 Nothing can black that glow of life;
 although each part go crumbling down
 itself shall rise up whole.
 Now I say there are new meanings;
 now I name death our black
 honor and feast of possibility
 to celebrate casting of life on life.
 This earth-long day
 between blood and resurrection
 where we wait
 remembering sun,
 seed, fire; remembering
 that fierce Judaeon Innocent who risked
 every immortal meaning on one life.
 Given to our year
 as sun and spirit are,
 as seed we are blessed
 only in needing freedom.
 Now I say that the peace
 the spirit needs is peace, not lack of war,
 but fierce continual flame.
 For all men: effort is freedom,
 effort's peace, it fights.
 And along these truths
 the soul goes home,
 flies in its blazing to a place
 more safe and round than Paradise.
 Night of the soul,
 our dreams in the arms of dreams
 dissolving into eyes that look upon us.
 Dreams the sources of action,
 the meeting and the end,
 a resting-place among the flight of things.

Orchestral Interlude

*“Lightning in the Sangre de Cristo
Mountain”*

*(Seven-month-old Katherine Oppenheimer
awakens, crying)*

PASQUALITA

(The Cloud-flower Lullaby)

In the north the cloud-flower blossoms,
And now the lightning flashes,
And the now the thunder clashes,
And now the rain comes down!
A-a-aha, a-a-aha, my little one.

Scene 2

*(The test site “Trinity.”
Midnight on 16 July 1945)*

WILSON

It’s midnight, Jack.
There’s quite a fierce storm
going on up here.
I have a certain amount of respect...
ah...for that atomic bomb,
being right next to it.
Sparks seem to be flying.
Lightning is striking all around.

HUBBARD

Introducing considerations
the minimum specifications
under which this operation
can be conducted.
If you ask me, testing this thing tonight
is a blunder of the first magnitude.

WILSON

I’ve got to attach this canister
to the top of the tower.
...tubes to measure the speed
of the bomb’s chain reaction —
Rossi and I have been rechecking
it all night.
I have to have it all turned on

and test it before
You know, I’m really scared
about this object here in the tower.
A short while ago
a model of the X unit
fired spontaneously in a storm.
This weather is really something
you don’t like be around
with a bomb nearby.
I’m leaving for my station
at North-10,000.

HUBBARD

The men in charge of monitoring
expected fallout
are prepared for two alternatives —
a “North Blow” or a “South Blow.”
If the winds hold in their
current position,
the shelter at N-10,000
will be inundated with radioactive debris.

WILSON

I’ve dreamed the same dream
several nights running.
I’m almost at the top of the tower
and then I misstep,
and I’m falling,
a long, slow fall,
and each time, before I strike the ground,
I wake up sweating.

PASQUALITA

In the west the cloud-flower blossoms,
And now the lightning flashes,
And now the thunder clashes,
And now the rain comes down!
A-a-aha, a-a-aha, my little one.

KITTY

To the farthest west,
the sea and the striped country
and deep in the camps among
the wounded cities
half-world over, the waking dreams of night
outrange the horrors.
Past fierce and tossing skies
the rare desires shine
in constellation.

I hear your cries, you little voices
of children
swaying wild, night lost,
in black fields calling.

I hear you
as the seething dreams arrive
over the sea
and past the flaming mountains.

PASQUALITA

In the south the cloud flower blossoms,
And now the lightning flashes,
And now the thunder clashes,
And now the rain comes down!
A-a-aha, a-a-aha, my little one.

GROVES

A delay in issuing the Potsdam ultimatum
could result in a delay
in the Japanese reaction,
with a further delay
to the atomic attack on Japan.

*(Oppenheimer rolls himself one cigarette
after another and puffs them down to the
ash.)*

GROVES

Obviously, a reasonable time
has to be allowed
for the Japanese
to consider the ultimatum.

TELLER

Fermi is taking wagers
as to whether the bomb will
ignite the atmosphere,
and if so,
whether it will destroy
just New Mexico
or the entire world.

GROVES

I fail to appreciate your black humor,
Doctor Teller.
This is exactly the kind of loose talk
that might paralyze
the enlisted men with fright.

OPPIE

Edward's a great one
for oddball problems, General.

TELLER

I asked for and have obtained
a most important assignment,
one that many consider superfluous.
There had been some suggestions
that we might have miscalculated,
that the explosion could be much larger
than we had anticipated.
Might we not be setting off
a huge chain reaction that will
encircle the globe in a sea of fire?
It's my job to make a last check
and review.

I've spent a great deal of time
indulging in controlled fantasies,
trying to dream up new,
undiscovered laws of nature
that a sudden release of atomic energy
might bring into play.

There was a possibility
that the test blast might touch off
a natural phenomenon
that is not contrary
to our knowledge,
but perhaps beyond our experience.
In July, three years ago,
I made some of the initial
calculations,
and my figures indicated
that the bomb would, indeed,
create enough heat
to ignite the earth's atmosphere.

OPPIE

You'll remember that
I immediately called a halt
to those meetings.
We asked Bethe
about your numbers.
His calculations showed
that even the extreme pressures
and temperatures
reached in the interior of our explosion
will not be high enough
to fuse the hydrogen with either

nitrogen or helium.
The Gadget won't set fire to the atmosphere.

TELLER

My revised figures agree with Bethe's.
I can find no reason to believe
the test shot will touch off
the destruction of the world,
no reason to think that
our advance calculations
are not entirely correct.

OPPIE

Edward,
the test will be delayed an hour or more.

TELLER

The climax
of our two-billion dollar experiment:
Will we have a "dud," a "fizzle"
at Trinity?

(Everyone notices the rain)

This drizzle is bone-chilling.
Here...I've brought a bottle of suntan lotion.
Pass it around.

HUBBARD

The winds have actually shifted
a full 360 degrees
in the last twelve hours.
Thundershowers
and thirty-mile-an-hour winds
are raking the test site.

PASQUALITA

In the east the cloud-flower blossoms,
And now the lightning flashes...

GROVES

You are eight minutes late.

HUBBARD

General, a night rain
in a tropical air mass
behaves differently from a standard
southwestern afternoon storm.
This is no normal storm, sir.

Neither Bainbridge nor I
have slept in over two days.
There is still hope for a shot.
Maybe some time
between dawn at five a.m.
and sunrise at six.

OPPIE

Prepare to fire
at five-thirty.

Scene 3

Countdown Part I

(The final countdown begins at 5:10 a.m. with a crashing rendition of the "Star-Spangled Banner" Just as Bainbridge gives the signal to Sam Allison in the control center, radio station KCBA in Delano, California, crosses wave lengths with the Trinity frequency. The station, operated by the Office of War Information, opens its morning Voice of America broadcast to Latin America. The National Anthem provides stirring accompaniment to the countdown announcement.)

GROVES

The program has been plagued from the start
by the presence of certain scientists
of doubtful discretion and uncertain loyalty.
It was agreed in Washington
that nothing can be done
about dismissing these men
until after the bomb has actually been used,
or, at best,
until after the test has been made.

OPPIE

O yes, Time has returned;
now Time reigns absolute;

GROVES

After some publicity concerning
the weapon is out, steps should be taken
to sever these scientists from the program

and to proceed with a general weeding out
of personnel no longer needed.

OPPIE

...and with the hideous old man
the whole of his demoniac retinue
has returned,
Memories, Regrets,
Spasms, Fears,
Afflictions, Nightmares,
Rages and Neuroses.

*(Five-year-old Peter Oppenheimer
awakens.)*

KITTY

To keep the weakness secret.
To keep it secret
To deny it and break through.
In the dream of chieftains,
the corn distinct again
in gold-white tuft-feathers.
The roads all paved,
stony, savage;
the knocking in the chest resumed.
Your father has a passion for freedom
Rang and rang in the small boy's head.

PASQUALITA

Then word came from a runner,
a stranger:
"They are dancing
to bring the dead back,
in the mountains."
We danced at an autumn fire,
we danced the old hate and change,
the coming again of our leaders.
But they did not come.

WILSON

I just finished reading
The Magic Mountain
by Thomas Mann
and of course
to go to this mysterious mountain
on the top of which
there would be a secret laboratory
which we would go into,
the doors would slam shut

and a few years later
we would come out bearing
an atomic bomb...

OPPIE

I assure you that now the seconds
are strongly and solemnly
accentuated and each one,
spouting out of the clock, says:
"I am Life, insupportable,
implacable Life!"

PASQUALITA

The winter dawned,
but the dead did not come back.
News came on the frost,
"The dead are on the march!"
We danced in prison to a winter music,
many we loved
began to dream of the dead.
They made no promises,
we never dreamed a threat.
And the dreams spread.

KITTY

And love which contains all human spirit,
all wish,
the eyes and hands,
sex, mouth, hair, the whole woman —
fierce peace I say at last,
and the sense of the world.

OPPIE

There is only one second in the life of men
whose mission it
is to announce good news,
the good news which fills every man
with an inexplicable fear.

TELLER

The only saviors
are the ham sandwiches
and hot coffee.
We've got an informal betting pool going.
Everybody puts in a dollar —
whoever guesses the explosive yield
is a rich man.

OPPIE

I guess 300 tons of TNT.

TELLER

A very low estimate,
not much more than thirty ten-ton
blockbuster bombs —
in other words, what you're predicting
is we'll get nothing more than a fizzle.

GROVES

I confess my utter amazement
that these scientists are glooming
over their coffee cups
about their uncertainties
of the coming test.

TELLER

The bomb has a blackboard potential
of nearly twenty thousand tons.
That's twenty kilotons of TNT.

OPPIE

No one thinks for a minute
we'll achieve a yield like that.

TELLER

Bethe and Ulam guess small:
five to seven kilotons.
The scientists refuse to believe
what their own calculations tell them.

GROVES

I confess that I am not optimistic myself.
Maybe a forty-sixty
chance of success.

TELLER

I alone scoff at my colleagues' pessimism.
I pick forty-five kilotons.

CHORUS

(Quoted from the Bhagavad Gita)

At the sight of this,
your Shape stupendous,
Full of mouths and eyes,
feet, thighs and bellies,
Terrible with fangs, O master,
All the worlds are fear-struck,

even just as I am.

When I see you, Vishnu, omnipresent,
Shouldering the sky,
in hues of rainbow,
With your mouths agape
and flame-eyes staring —
All my peace is gone;
my heart is troubled.

Scene 4

Countdown, Part II

GROVES

Lieutenant Bush.
Keep a weather eye on Oppenheimer.
There is concern our high-strung director
might have a breakdown at the last minute.

TELLER

The radio connection with the control tower
is out of order, and no one really knows
when the bomb will go off
or where to look for it.
The scientists are standing around
in the dark
and munching candy bars as we wait
for some divine revelation
to tell us when the shot will go.

OPPIE

To what benevolent demon
do I owe the joy of being
thus surrounded with mystery,
with silence, with peace and with perfumes?
O beatitude!
That which we generally call life,
even when it is fullest and happiest,
has nothing in common
with that supreme life
with which I am now acquainted
and which I am tasting
minute by minute, second by second!
No! There are no more minutes,
there are no more seconds!
Time has disappeared;
it is Eternity that reigns now!

(A green rocket arches in the sky to the south, slowly descends, flashes briefly, then dims and vanishes in the blackness. A siren sounds.)

OPPIE

That's their signal.
The shot will go in five minutes.
Everyone should take his place
in the trenches.

HUBBARD

The sky is clear to the east
and over Ground Zero
and south ten-thousand.
But overcast to the west.
We have visibility
greater than sixty miles.
The surface wind from the east southeast
is three to six miles per hour
below five hundred feet.
The rain has stopped.

PASQUALITA

In the summer dreaming was common
to all of us,
the drumbeat hope,
the bursting heart of wish,
music to bind us
as the visions streamed
and midnight brightened to belief.

KITTY

Dreamers wake in the night
and sing their songs.
In the flame-brilliant midnight,
promises arrive, singing to each of us
with tongues of flame:
"We are hopes, you should have hoped us,
We are dreams,
you should have dreamed us."
Calling our name.

OPPIE

Zero minus two minutes.
The two-minute warning rocket
has sputtered out prematurely.

TELLER

That was an ominous sign.

OPPIE

Lord, these affairs are hard on the heart.

(Nothing moves and nothing is heard, only a rhythmic countdown over the loudspeaker. At 45 seconds, an engineer presses the timer switch. The tours begin firing with haunting precision. "One, zero." A mournful silence, and the beginning of a new era.)

End of the opera