

LIBRETTO: THE INTELLIGENT DESIGNER AND THE UNIVERSE

Words: Marc Abrahams

Music: Arthur Sullivan, Johann Sebastian Bach, Giuseppe Verdi, Ludwig Van Beethoven
(Thanks to Dr. Thomas Michel for musical and pan-universal consultations.)

The Intelligent Designer and the Universe premiered as part of the 22nd First Annual Ig Nobel Prize Ceremony, at Sanders Theater, Harvard University, Cambridge, Massachusetts, on September 20, 2012. For this performance, some roles were split into parts, with the Designer, the Lawyer, and the Chief Scientist all gaining assistants. Video of the performance can be seen at www.improbable.com.

Original Cast

Stage manager and conductor:

David Stockton

Pianist: Patrick Yacono

Accordionist: Dr. Thomas Michel

The Designer: Maria Ferrante

The Designer's Assistant: Ben Sears

The Lawyer (Acts 1 and 2) and

Chief Scientist (Acts 3 and 4):

Roberta Gilbert

Scientist: Daniel Rosenberg

Legal Assistant (Act 1) and Scientist

(Acts 3 and 4): Marc Andelman

Other Scientists: Nobel laureates

Dudley Herschbach, Rich Roberts, Roy

Glauber, Eric Maskin, astrophysicist

Robert Kirshner, and all the 2012 Ig

Nobel Prize winners, past winners, and

24/7 Lecturers.

Costumes: Catherine Quick Spingler

ACT 1—A Legacy From Mr. Universe

NARRATOR [SPOKEN]: The wealthiest man in the world has died. His will is... peculiar. Very peculiar. It celebrates the fact that, as a young man, he won the Mister Universe competition. [Show PICTURE of him as a young man wearing his Mr. Universe sash.] He has bequeathed all his money—all his billions and billions, and billions and billions, and billions and billions of dollars—to,

in his words, “Do something nice for the Universe.” He specifies that the money—all of it—must be used to commission “the best dressmaker in the universe” to “make a beautiful, beautiful dress for the Universe.” The executor of the will, the world’s most expensive lawyer, is going to make a bundle executing this will. Tonight, here, right now, this lawyer is going to pay a visit to the world’s most intelligent designer... to offer her this lucrative—very, very, very, very... very, very lucrative—job. Let’s see what happens.

[MUSIC: “LITTLE BUTTERCUP” FROM HMS PINAFORE, BY ARTHUR SULLIVAN]

LAWYER:

[Recitat.]

Dear dress designer! I bring a commission.

Is it too big for e-ven your ambition?

This’ll sound insane—you’ll think the gods have joked:

The former Mr. Universe... has croaked.

[Song proper:]

He was Mr. Universe—yes, Mr. Universe!—

For a whole year, in his youth.

He dreamed of the universe—the entire universe!—

’Till he was long in the tooth.

In business he’d prospered—

Some small early loss spurred

His journey to riches and wealth.

He—risking disgrace!—took

A small job with Facebook,

Thus finding fine financial health!

His wealth multiplied—and

Yet, he’d go and hide, and

He’d dream—a dream some think

perverse!



The lawyer (Roberta Gilbert) offers the commission, as specified in the will left by the late former Mr. Universe. Photo: David Holzman.

He dreamed about spending the whole of his purse
On a gift for the whole universe.

He dreamed of a dress.
Who knows what this obsession might symbolize?
He’s a strange cat.
I drew up his will,
And he paid my whole bill.
And I richly appreciate that!

[MUSIC FOR THE ENTIRE SONG REPEATS, BUT THIS TIME SUNG BY THE DRESS DESIGNER:]

DRESS DESIGNER:

[Recitat:]

Dear legal minion! Yes, I have
ambition.
Much more than enough for your
commission!
I'm glad that it's me whom you have
picked.
And thank you, Mr. Universe... who
kicked.

[Song proper:]

Alas, Mr. Universe—poor Mr.
Universe!—
I know his story. It's fun!
How he as a teenager entered a contest
And somehow—good heavens!—he
won!

Big stars want a gown,
So they beat my door down.
Their bright starlight, they think, makes
you squint.

But from my perspective
Those actors collective-
ly shrink to a tiny, wee glint.

This will be my biggest,
Most publicized gig. Est-
imating the cost will be tough.
A dress on this scale
Demands worlds of detail.
It's expensive to buy all that stuff.

I'll do up a dress
That will fully express
The weird whims of that poor plutocrat.
And thanks to his will,
I'll submit a big bill.
And I richly appreciate that!

ACT 2—The Engineering Work Commences

NARRATOR [SPOKEN]: Now let's
eavesdrop on our glamorous dress
designer, surrounded by her corps of
glamorous assistants.

She's about to give herself a pep talk—
reminding herself that this dress may be
bigger than the others, and it may be a
bigger deal—but to a good designer, a
dress is just a dress. You design it using
the basic methods that got you where
you are today. Where is she today?
She's right here, in her glamorous
workshop, pacing back and forth on her
glamorous floor.



*The designer beguiles an astrophysicist
(Robert Kirshner). Photo: Mike
Benveniste.*

And she's about to realize she could
use a little help from some scientists.

*[THE DESIGNER IS IN HER
WORKSHOP. BEHIND HER,
ASSISTANTS ARE CARRYING BITS
OF OLD DRESSES (MAYBE ON
DUMMIES) BACK AND FORTH]*

*[MUSIC: "MISIRLOU", TRADITIONAL
GREEK TUNE]*

THE DRESS DESIGNER:

[VERSE 1]

How to design a dress for the universe?
How to design a dress for the universe?
Prior to starting, do all the proper prep.
Normal procedure will guide your
ev'ry step.

Answer the standard questions for the
task.

Those are the questions that you need
to ask.

Measure the values for the parameters.
(That's what the pros do—but not the
amateurs!)

The standard questions are the same—
Are the same—
Are the same—
Same for EV'RY dress!



Photo: Mike Benveniste.

MEASUREMENTS! Hips, waist, bust
cannot be too tight!

When will the dress be worn?
Daytime? Or at night?

What is the wearer's age? Got to get
that right!

[VERSE 2]

I will design a dress for the universe.
I will design a dress for the universe.
MEASUREMENTS? I can't make these
ones by myself.

continued >



Photo: Alexey Eliseev.

Nor can I get them easily, “off-the-shelf.”

I know just who to turn to, to assist.
It’s obvious: Ask an astrophysicist.
An astrophysicist can help with these clothes.

They measure more things than you just might suppose.

They measure with the proper tools.
Proper tools!
Proper tools!
They are no one’s fools!

Units conversion? No need to get upset.
Inches or centimeters? No need to fret.
Parsecs or light years? Either is fine—
no sweat.

ACT 3—Measure for Measure: A-Dressing the Universe

NARRATOR [SPOKEN]:

The intelligent designer, questions in hand, decides to consult the experts: astrophysicists. She goes to a scientific meeting of all the top astrophysicists. The astrophysicists are delighted. This is the first time—ever—that someone from the fashion industry asked them for advice.

Now let’s join all those astrophysicists—including their chief scientist—as they deliver their advice to the dress designer.

[MUSIC: LUTE SUITE IN E MINOR, BWV 996: V, BOURÉE, J.S. BACH]

CHIEF SCIENTIST:

We can measure the height of a map or a chart. *[someone puts a chart next to her and tape-measures its height]*

We can measure the pace of the beating of my heart. *[someone holds a stethoscope to her chest]*

We can measure the weight of a handful of dirt. *[someone smears dirt on her]*

We can measure me for a shirt. *[someone puts a shirt on her]*

We can measure the mass of a droplet of rain. *[someone pours water on her head]*

We can measure electrical current in my brain. *[someone puts wires on her head]*

We can measure the density of human fat. *[someone applies calipers across her butt]*

We can measure me for a hat. *[someone puts a hat on her]*

Measure light from afar, that comes right from a star—though the star may look blo-obby.

When you measure, it’s nice to be really precise—But inaccuracy’s a curse!

Measure THIS, measure THIS! Measure THAT, measure THAT! It’s my job—and it’s also my hobby!

If I could... if I can... yes, I should!
I will plan... how to measure the whole universe!

Measure thingamajigs. See if they might be Higgs. If they are, don’t act sno-obby.

When you measure, it’s nice to be really precise—but inaccuracy’s a curse.

Measure THIS, measure THIS! Measure THAT, measure THAT! It’s my job—and it’s also my hobby!

If I could... if I can... yes, I should!
I will plan... how to measure the whole universe!

[ALL THE SCIENTISTS NOW GATHER BEHIND/AROUND THE CHIEF SCIENTIST, AS THE DRESS DESIGNER AND THE CHIEF SCIENTIST SING A DUET]

[MUSIC: LIBIAMO, FROM “LA TRAVIATA,” GIUSEPPE VERDI.]

DESIGNER:

What size? That’s the question I’m asking you, guys.

Put me wise. Simply summarize: Keep it simple. Keep it terse.

What size should I plan to make this merchandise?

Give me numbers—the shape and size of the universe!

I’ll calculate how much cloth to buy.
(I bet I get a volume discount!
I bet you—yes!—a volume discount!
I bet you it’s pretty big.)

What size?

YOU have studied this. So, you must KNOW!

You have DATA!

Now, what do your data show?

CHIEF SCIENTIST:

We-ell...

We... have measured the light coming from

Distant stars and supernovas, and nebulae—

A task that non-scientists may think is dumb.

But it’s useful to us... Maybe to you—let’s see!

DESIGNER: The HEIGHT? How tall is the universe?

CHIEF SCIENTIST: Each time we measure it, it's bigger.

DESIGNER: The WEIGHT? How full is its figure?

CHIEF SCIENTIST: Your guess... is just as good as ours!

DESIGNER: The AGE? Can you tell me a number for THAT?

CHIEF SCIENTIST: We CAN... with a billion year caveat.

DESIGNER:
These answers are useless for making a dress!
It's depressing! You're only guessing At what is—more... or less?— A body of knowledge that's really a mess!
It's an odd—even shoddy—body. It's UUUUSE-less!

[FROM THIS POINT ON, THE DESIGNER IS DESPAIRING— BUT THE SCIENTISTS ARE ALL ECSTATIC.]

DESIGNER: I don't how I'm going to dress this up!

CHIEF SCIENTIST: Well... maybe you don't really have to.

DESIGNER: The MONEY! I would be daft to...

BOTH: Just let the universe alone....

[THE DESIGNER SINGS THE REMAINING LINES DESPAIRINGLY, ABOUT THE SITUATION. THE SCIENTISTS SING THEM ECSTATICALLY, ABOUT THE UNIVERSE]

[ALL THE OTHER SCIENTISTS CROWD CLOSELY BEHIND AND AROUND THE TWO MAIN CHARACTERS.]

CHIEF SCIENTIST: Oh, beautiful, beautiful uuu-niverse! The uuu-niverse is so beau-ti-ful!

DESIGNER:
Ohhhhhhhhhhhhhhhhhhhhhhh!
[despairing]

CHIEF SCIENTIST: Oh, beautiful, beautiful uuu-universe! [ecstatic]



The designer beguiles an astrophysicist (Roy Glauber). Photo: Mike Benveniste.



Closeup of the designer beguiling an astrophysicist (Roy Glauber). Photo: Alexey Eliseev.

DESIGNER:
Ohhhhhhhhhhhhhhhhhhhhhhh!
[despairing]

CHIEF SCIENTIST: So beautiful!
[ecstatic]

DESIGNER:
Ohhhhhhhhhhhhhhhhhhhhhhh!
[despairing]

ALL SCIENTISTS: So! So! So
Beautiful!
[ecstatic]

DESIGNER: Oh!
Ohhhhhhhhhhhhhhhhhhhhhhh!
[despairing]

ALL SCIENTISTS: So! So! So
Beautiful! Soooooo!
[ecstatic]

DESIGNER: Oh!
Ohhhhhhhhhhhhhhhhhhhhhhh!
[despairing]

[THE DESIGNER'S LOUD, DESPAIRING FINAL "OH" CONTINUES LONG, LONG AFTER
continued >



The designer's assistant (Ben Sears) is beguiled by and attempts to beguile an astrophysicist (Robert Kirshner). Photo: Mike Benveniste.



Three scientists (left to right: Daniel Rosenberg, Marc Andelman, Roberta Gilbert) conduct a measurement. Photo: Alexey Eliseev.



The three scientists explain how to measure the universe. Photo: David Holzman.

EVERYONE ELSE HAS FINISHED SINGING—FOLLOWED BY A MOMENTARY PAUSE IN WHICH SHE REALIZES SHE LOOKS A BIT SILLY, AND THEN GIVES A FINAL, EMBARRASSED, QUICK “Oh!”]

ACT 4—The Universe's New Clothes

NARRATOR [SPOKEN]: It's time for the thrilling conclusion to our opera.

The astronomers have told the dress designer that... they honestly cannot tell her how to make a dress that will fit the universe... honestly... HONESTLY.

But... the astronomers have recently made a discovery. They discovered that... the universe is filled with lots of mysterious STUFF... STUFF that pulls everything together—STUFF that SHAPES the universe. But... this STUFF is not something they can actually see. It's some kind of MATTER, but it's DARK. So they call it: “dark matter.”

This invisible, dark matter gives the astronomers an idea—a way to solve the dress designer's problem. Let's watch as the chief scientist suggests—ever so gently—a traditional, almost fairy-tale, form of fraud.

[MUSIC: “Ode to Joy” from Ludwig Van Beethoven's 9th Symphony.]

[NOTE: ONE PHRASE—“Comes-From-Being-Carefully-And-Stylishly-And-Expensively-And-Extremely-Well-Dressed”—IS INTENTIONALLY JammedAwkwardlyTogetherWithMany MoreSyllablesThanNotes.]

[1st VERSE:]——

CHIEF SCIENTIST:

We have noticed something pretty strange about the universe. SOMETHING holds the parts together, all around the universe. SOMETHING dark that we cannot see— with funny amounts of gravity. SOMETHING WE CAN'T SEE is what gives shape to the whole universe.

[2nd VERSE:]——

Oh, it's pretty puz-zl-ing. It truly is MYSTERIOUS!

NO ONE CAN EXPLAIN THE

SCIENCE. Honest! I am serious! BUT... if SOMEONE... were... to SUGGEST... that SHAPE-LI-NESS... Comes-From-Being-Carefully-And-Stylishly-And-Expensively-And-Extremely-Well-Dressed...

[PAUSE TO LET THAT THOUGHT SINK IN]

[SPOKEN]: Let me repeat that. [SUNG, REPEATING THE PHRASE] SHAPE-LI-NESS... Comes-From-Being-Carefully-And-Stylishly-And-Expensively-And-Extremely-Well-Dressed...

[PAUSE TO LET THAT THOUGHT SINK IN]

[SPOKEN]:

CHIEF SCIENTIST: Got it? Are you having a scientific breakthrough here?

DESIGNER [SLOWLY]: Uh...

Why yes. I am having... a scientific breakthrough here.

CHIEF SCIENTIST [SLOWLY]: You mean to say “Eureka”?

DESIGNER [SLOWLY]: Uh, yes. I mean to say “Eureka.”

CHIEF SCIENTIST: Good.

CHIEF SCIENTIST [SUNG]: TELL YOUR STORY! Claim some glory! Go on! Be IMPERIOUS!

[3rd VERSE:]——

[CHIEF SCIENTIST SAYS/SINGS NEXT LINE BOTH CONSPIRATORIALLY AND AS IF SPEAKING TO A CHILD WHO MUST BE SPOON-FED A CLEVER LIE TO MEMORIZE AND THEN LATER REPEAT TO OTHER PEOPLE]

CHIEF SCIENTIST:

TAILORED from a COSMIC, BLACK variety of DU-U-UCT TAPE...

[CHIEF SCIENTIST'S VOICE TRAILS OFF. CHIEF SCIENTIST THEN GESTURES AS IF TO SAY “OK, I GAVE YOU THIS HINT. NOW YOU TAKE OVER, AND FINISH THE STORY.”]

DESIGNER [excitedly cooking up the story as she sings]:

SOMEONE... made a SLINKY DRESS, of PERFECT size, and PERFECT shape.

SOMEONE... WHO could it be? Yes, WHO could it be? Guess what? It's ME!

GO LOOK at the universe! MY DRESS will leave you all agape!

[ALL CHEER. THE DESIGNER AND THE CHIEF SCIENTIST THEN POINT INTO THE DISTANT SKY, AND SING.]

[4th VERSE:]——

CHIEF SCIENTIST:

Hitherto the universe was nothing much to publicize.

Now expensive tailoring has primed it for the public's eyes.

DESIGNER:

SEXY cosmos—sexy, oh YES!—it's wearing a "LITTLE" cocktail DRESS.

People on the intertubes will strain to see its boobs and thighs.

[5th VERSE:]——

DESIGNER AND CHIEF SCIENTIST: That is how the story ends, a story of humanity.

There was no real glory—only marketeering vanity.

No Higgs boson, no Man of Steel. And we kept our clothes on! No big deal.

This is how the universe decays into insanity.



The opera's rousing finale. Photo: David Holzman.



At opera's end, all take a bow (or not). Photo: Mike Benveniste.

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