

THE NOTHING THAT IS

*Libretto adapted by Libby Larsen*¹

PART ONE: LOGOS² ॐ

Baritone:

In the beginning there was logos and
logos was with God and logos was God.³

Chorus:

Chora, Yavat-tavat
Bindu, Psephos,
Theta, Theca,
Teca, Sipos,
Sipocelentis,
Sifra, Sifr, . . .

Chorus:

Nihil, Null,
Nihte, Nulla figura
Sûnya, Kha,
Akàsa, Zefiro,
Zeviro, Zero,
Zypher, Ziffer,
Aught, Naught.

Chorus:

*Luna. Deus et Omnium.
One minus one plus one...*

Baritone:

In the beginning, logos, God
not to exist or exist...

Space...àkàsa et Omnium.
Sky...nulla et Omnium.
Logos...et Omnium.
Viya dambar àkàsa sùnya
yama rama veda.
Akàsa et Omnium.
Nulla et Omnium.
Deus et Omnium

Speaker One:

The world of appearances may or may not be
real, or both may be real and may not be
real—or may be indescribable; or may be real
and indescribable, or unreal and indescribable;
or in the end may be real and unreal and
indescribable.

Speaker One:

void
sky
space

Speaker Two:

sûnya
kha
àkàsa

Sky.⁴
Atmosphere.
Space.
Void.
Primordial couple.
Rama.
Veda.

Zero.
Zero.
Zero.
Zero.
Zero.
Three.
Four.

Speaker Two:

There is no strife, no prejudice, no national
conflict in outer space as yet. Its hazards are
hostile to us all. We choose to go to the moon.
But why, some say, the moon? They may well
ask why climb the highest mountain?⁵

¹In reading this libretto, note that horizontally aligned texts will be heard either simultaneously or sequentially.

²Logos, Greek for *word* and *ratio*.

³John 1:1.

⁴Translated by Kristen McQuillin from *Lokavibhaga*, an Indian cosmology treatise from 458 AD.

⁵Adapted from John F. Kennedy, Address at Rice University, September 12, 1962.

PART TWO: TO ZERO

Chorus:

Time, like an ever-rolling stream,
Bears all its sons away;
They fly, forgotten, as a dream
Dies at the op'ning day.

Chorus:

Luna. Deus et Omnium.
One minus one plus one...

Speaker One:

T minus 08:05:00
T minus 07:15:07
T minus 06:30:00

Speaker Two:

Launch Vehicle Propellant Loading.

Life, like a vain amusement, flies,
A fable or a song;
By swift degrees our nature dies,
Nor can our joys be long.

Luna. Deus et Omnium.
One minus one plus one...

T minus 04:17:00
T minus 04:02:00
T minus 03:32:00
T minus 03:30:00

Flight Crew alerted.
Medical Examination.
Breakfast.
One hour hold.

Our souls would learn the heav'nly art
T'improve the hours we have,
That we may act the wiser part,
And live beyond the grave.⁶

Chorus

Luna. Deus et Omnium.
One minus one plus one...

Baritone:

All three men breathing.⁷

Speaker One:

T minus 02:00:00

T minus 01:55:00
T minus 01:51:00

Speaker Two:

Mission Control Center/
Spacecraft command checks.
Abort advisory system checks.
A space vehicle emergency
detection system test.

Chorus:

Thy wonders to thy servants show,
make thy own work complete:

then shall our souls thy glory know,
and own thy love was great.

Speaker One:

T minus 00:43:00
T minus 00:42:00
T minus 00:40:00
T minus 00:30:00
T minus 00:20:00
T minus 00:15:00
T minus 00:06:00
T minus 00:05:30
T minus 00:05:00
T minus 00:03:07

Speaker Two:

Retract Apollo access arm to standby position.
Arm launch escape system.
Final launch vehicle range safety checks.
Launch vehicle power transfer test
Shut down LM operational instrumentation.
Spacecraft to internal power.
Space vehicle final status checks.
Arm destruct system.
Apollo access arm fully retracted.
Firing command (automatic sequence).

⁶Psalm 90, metrical version by Isaac Watts.

⁷Text from *Project: Apollo 13, Ex Luna, Scientia, From the Moon, Knowledge*; compiled by Anthony W. Haukap.

Speaker One:	Speaker Two:
T minus 00:00:50	Launch vehicle transfer to internal power.
T minus 00:00:37	Apollo 13 is go.

Chorus:	Baritone:	Speaker One:	Speaker Two:
T minus 0:00:10	All three men breathing.	T minus 00:00:08.9	Ignition sequence start.
T minus 0:00:09		Booster.	Ignition, flight.
T minus 0:00:08			
T minus 0:00:07			
T minus 0:00:06		Flight.	Roger.
T minus 0:00:05		Control.	Clock start, flight.
T minus 0:00:04		Flight.	Roger.
T minus 0:00:03	All three men breathing.		
T minus 0:00:02		00:00:02	All engines running.
T minus 0:00:01		00:00:01	Two, One.
T minus 0:00:00		00:00:00	Zero, we have commit.

PART THREE: PURE ZERO

Baritone:

We start, then, with nothing, pure zero.
 But this is not the nothing of negation.
 For not means other than, and other is
 merely a synonym of . . . second. As such
 it implies a first; while the present pure
 zero is before every first. The world of
 appearances may or may not be real, . . .
 The nothing of negation is the nothing
 of death, which comes second to, or after,
 everything. But this pure zero is the
 nothing of not being born . . . no thing,
 no compulsion, no law. As such, pure
 zero is boundless, boundless possibility.⁸

Chorus:

One plus one minus one. . . . Luna.
 ...no thing, no compulsion, no law.
 Boundless freedom, boundless.

Chorus:

00:05:32
 00:05:37

Speaker One:

00:05:30

Lovell:

CapCom:

00:08:18

00:08:38

Speaker Two:

At five minutes thirty seconds into the launch,
 we continue to look very good.

“Inboard.”

“Roger. We confirm inboard out.”

At eight minutes, seventeen seconds, we show a
 velocity of eighteen thousand feet per second.
 Continuing to burn on the second stage of four
 remaining engines.

⁸Text from Charles S. Peirce, *Logic of Events* (1898), adapted by Libby Larsen.

Chorus: 55:50:12, 55:50:31	Speaker One: Swigert:	Speaker Two: “Oh-kay, real fine. Oh-kay, I’m going to maneuver to zero six zero, zero nine zero, and zero.”
55:51:36	Swigert:	“Oh-kay, Jack. The battery charge has been terminated on the battery B.”
55:51:38	Swigert:	“...we’d like to know if that is two point zero precisely or if it’s two point one or one point nine.”
55:51:54	Swigert:	“No. It’s a minus two point zero precisely.”
55:52:58	Command:	“Thirteen, we’ve got one more item for you when you get a chance. We’d like you to stir up your cryo tanks.”
55:53:12	Swigert:	“Oh-kay. Stand by.”
55:55:55 . . .	Swigert: 55:55:28 This is Houston, say again please. 55:56:10 Haise:	“Oh-kay, Houston, we’ve had a problem.” “We had a pretty large bang associated with the caution and warning there—that jolt must have rocked the sensor on zero to the second degree quantity two.”

PART FOUR: *AD ASTRA PER ASPERO*

Baritone:

And new philosophy calls all in doubt, the
 element of fire is quite put out; the sun is
 lost, and the earth, and no man’s wit can well
 direct him where to look for it—‘tis all in
 pieces, all coherence gone; all just supply,
 and all relation: prince, subject, father,
 son are things forgot.⁹

Speaker One:
Haise:

Speaker Two:
“Right now Jack, I am looking out the right window and it’s pretty dark, but there are about a thousand false stars out here, it’s hard to discern what is real and not real.”

Baritone:

The world of appearances may be real
 or not real.

Speaker Two:
Lovell:

Speaker One:
“We’re just not able to see the stars at all.”

⁹John Donne, *An Anatomy of the World*.

Baritone:

The world of appearances may be real
or not real.

Chorus:

Terra non est centra mundi.¹⁰
Ad astra per aspero.¹¹

Baritone:

The world of appearances may be real
and not real.

Chorus:

Terra non est centra mundi.
Ad astra per aspero.

Speaker One:

CapCom:

01 Alpheratz
03 Navi
05 Polaris
07 Menkar
11 Aldebaran
13 Capella
15 Sirius
17 Regor
21 Alphard
23 Denebola
25 Acrux
27 Alkaid
31 Arcturus
33 Antares
35 Rasalhague
37 Nunki
41 Dabih
43 Deneb
45 Fomalhaut
47 Earth

Speaker Two:

“Jim when you can see some stars, if you can
recognize constellations, please let us know.”

02 Diphda
04 Achernar
06 Acamar
10 Mirfak
12 Rigel
14 Canopus
16 Procyon
20 Dnoces
22 Regulus
24 Gienah
26 Spica
30 Menkent
32 Alphecca
34 Atria
36 Vega
40 Altair
42 Peacock
44 Enif
46 Sun
50 Moon

Christopher Kraft:

“Well I guess we should start out by saying
we have a serious problem in the command
and service module. We appear to have some
kind of accident.”

Sig Sjoberg:

“The first milestone, more or less the
survival now is to go to the backside of the
moon to come back.”

Christopher Kraft:

“I would say that this is as serious a situation
as we’ve ever had in manned space flight.”

Chorus and Baritone:

How long, O Lord, shall I complain,
Like one that seeks his God in vain?
Canst thou thy face for ever hide,
And I still pray, and be denied?

¹⁰Translation: “The Earth is not the center of the world.”

¹¹Translation: “A rough road leads to the stars.”

Speaker One:

Flight:

Guidance:

Flight:

Control:

Telmu:

Speaker Two:

“Guidance. Okay.?”

“We’re good, Flight.”

“Control. Okay?”

“We’re okay, Flight.”

“We’re go, Flight.”

Chorus and Baritone:

Shall I forever be forgot,
As one whom thou regardest not
Still shall my soul thine absence mourn,
And still despair of thy return?

Speaker One:

CapCom:

Speaker Two:

“Hey, guys, this is Deke. Just wanted to let you know we’re gonna get you back. Everything’s looking good. We think you guys are in good shape all the way around. Why don’t you quit worrying and get some sleep?”

Chorus and Baritone:

How long shall my poor troubled breast
Be with these anxious thoughts oppressed?
And Satan, my malicious foe,
Rejoice to see me sunk so low?

Speaker One:

Lovell:

CapCom:

Lovell:

CapCom:

Lovell:

Lovell:

Speaker Two:

“Houston, Aquarius.”

“Go ahead Aquarius.”

“Ah, Vance, we got to realize we got to establish a work-rest cycle up here... we got to get some people to sleep.”

“We should be ready to go in about five minutes. That’s all I can say.”

“Okay.”

“I’d say we’ve gone a hell of a long time without any sleep. We got to start thinking about getting the crew back to sleep again because, a ...I...I didn’t get any sleep last night at all.”

Chorus and Baritone:

Hear, Lord, and grant me quick relief,
Before my death conclude my grief:
If thou withhold thy heav’nly light,
I sleep in everlasting night.

Speaker Two:

What we want, then, is the distance from the observer to the moon. If the position of the observer from the earth is given by the vector O , and the position of the moon from the earth is given by the vector M , then the displacement of the moon from the observer is given by the vector $D = M - O$. From this, the distance from the observer to the moon can be calculated as the Euclidean norm of the vector D¹²

Baritone:

But I have trusted in thy grace,
And shall again behold thy face.
Whate'er my fears or foes suggest,
Thou art my hope, my joy, my rest;
My heart shall feel thy love, and raise
My voice to songs of praise.¹³

Chorus:

Theta, Theca,
Teca, Sipos,
Sipocelentis,
Sifra, Sifr,
Nihil, Null,
Nihte, Nulla figura
Sûnya, Kha,
Akasa, Zefiro,
Zefiro, Zero,
Zypher, Ziffer,
Aught, Naught

Speaker One:

Sky.
Atmosphere.
Space.
Void.

Speaker Two:

Zero.
Zero.
Zero.
Zero.
Zero.

Chorus:

*Luna. Deus et omnium.
One minus one plus one.*

Child:

“I know that I am mortal and a creature of the day; but when I search out the massed wheeling circles of the stars, my feet no longer touch the earth but are side by side with Zeus himself, I take my fill of ambrosia, the food of the gods.”¹⁴

END

¹²Courtesy M. M. Forbes and A. E. Ismail.

¹³Psalm 13, metrical version by Isaac Watts.

¹⁴Text by Claudius Ptolemaeus (Ptolemy).