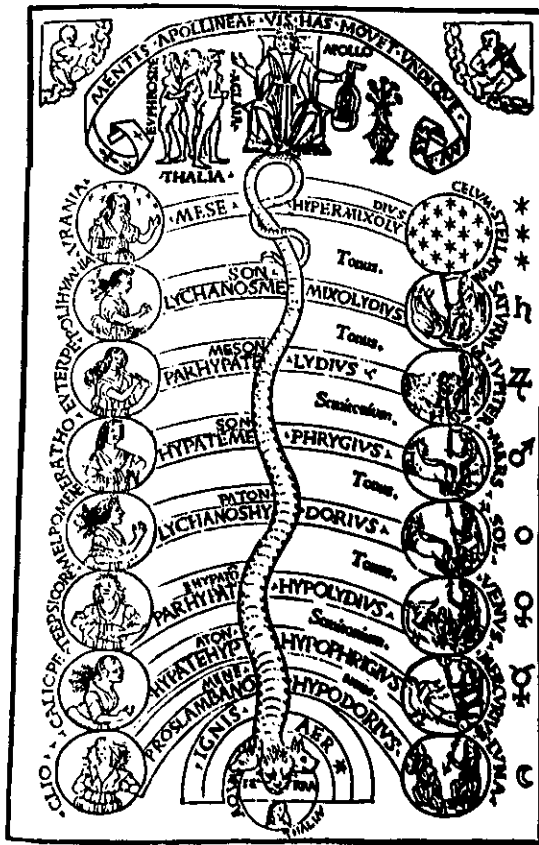


OBERLIN COLLEGE CONSERVATORY OF MUSIC

THE COLLEGIUM MUSICUM
FIFTEENTH-YEAR ANNIVERSARY CONCERT
Music of the Spheres



The Music of the Spheres, from Gafurius's Practica musica, 1496

FAIRCHILD CHAPEL

1981

4:30 P.M.

SATURDAY, MAY 2

SUNDAY, MAY 3

Music of the Spheres

I. ANIMA MUNDI: PYTHAGOREAN RATIOS IN THE COSMOS

The material of the World-Soul was mixed and given mathematical structure (cf. Plato, *Timeaus*, 35):

Soul of the world

Henry Purcell
(c. 1659-1695)

Soul of the world, inspired by thee, the jarring seeds of matter did agree . . .
which by thy *laws of true proportion* joined . . .

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"The links produced intervals of 4:3 and 9:8 [perfect fourth and whole tone] and all the intervals of 4:3 were filled with the 9:8." (Plato, *Timeaus*, 36):

Ratios of Planetary Distances in the Geocentric Universe

Moon, Sun, Saturn, Mercury, Mars, Jupiter, Venus. Harmony of the Spheres!

CHORUS

"The earth, the ninth sphere, remains motionless, but the eight revolving spheres make seven distinct tones with measured intervals in between." (Cicero, *Republic*, "Dream of Scipio"):

Est planetarum similis concordia vocem

11th-Century Hymn

The ratios of the planets are similar to those of the tones [scale]. From Earth to heaven rises the divine order. Cicero has the order rising from the lowest to the highest: Moon, Mercury, Venus, and Sun, Mars, Jupiter, and Saturn. *One must modulate the tones in a similar order.*

CHORUS

Musical ratios form the basis of everything, the heavens, the four elements, the soul and body of man. Arithmetic, geometry, architecture depend upon musical harmony. (cf. Zarlino, *Le istituzioni harmoniche*, prima parte):

Soul of the world (completed)

Purcell

. . . Thou didst the scatter'd atoms bind, which by thy *laws of true proportion* joined. Made up of various parts, *one perfect harmony*.

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Isorhythmic motet: *Pictagore per dogmata*

Chantilly MS
(c. 1375)

By his teachings Pythagoras declared [the number] Seven a sacred virgin, looked upon days and climes and what they wrought on that great star, first above all: on Jupiter; on other works, on Mars, the third in line, birthed by the Sun; after sweet, gentle Venus (who first set foot on Kythera); followed by Mercury (born on Kyllene), on whom the Moon, fair Cynthia, bestowed the prize. He thought upon the wondrous feat of Neptune, who took Aeneas in his care and nurtured him; and beheld the highest realm. Whoever reads, will grasp whatever is told in words and numbers, will have a place in Latium, will put an end to the diseases of the soul, for he will bring the golden age, the third to link [the centuries] together.

Barbara Borden, *soprano*
INSTRUMENTAL ENSEMBLE

II. MUSICA INSTRUMENTALIS: JARRING CONFLICTS IN EARTHLY MUSIC

The battle between the divine and the profane:

To his sweet lute Apollo sung

Thomas Campion
(1567-1620)

To his *sweet lute* Apollo sung *the motions of the Spheres*;
The wondrous order of the Stars, whose course divides the years:
And all the Mysteries above;
But none of this could Midas move,
Which purchast him his Asses cares.

Then Pan with his *rude Pipe* began the Country-wealth t'advance;
To boast of Cattle, flockes of Sheepe, and Goates, on hills that dance,
With much more of this *churlish kinde*;
That quite transported Midas minde,
And held him *rapt as in a trance*.

This wrong the God of Musicke scorned from such a sortish Judge,
And bent his angry bow at Pan, which made the Piper trudge:
Then Midas head he so did trim,
That ev'ry age yet talkes of him
And Phoebus right revenged grudge.
(Cf. Ovid, *Metamorphoses*, XI)

Lisa Helmelt, *soprano*
Joel Rosenbaum, *lute*

"The devil uses music as his vehicle by which he slideth into the minds of men." (Johann Alstedt, *Templum musicum*):

Music some think no music is

Thomas Bateson
(c. 1570-1630)

Music some think no music is unless she sing of clip and kiss,
And bring to *wanton tunes*, "Fie, fie, fie," or "ti-ha, ta-ha," or "I'll cry":
But let such rhymes no more *disgrace music sprung of heavenly race*.

Molly Pyle, Elizabeth Knowles, Claire Fontijn, *sopranos*
Jeffrey Mead, *tenor* Daniel McCabe, *baritone*
Peter Gibeau, *bass*

In vain the am'rous Flute

Purcell

In vain the *am'rous Flute* and soft *Guitar* labour to inspire *wanton heat* and
loose desire:
While thy *chaste airs* do gently move *seraphick flames* and *heav'nly love*.

Lisa Helmelt, Mary Kate Ballard, *sopranos*

INSTRUMENTAL ENSEMBLE

To hear men sing

Thomas East
(c. 1540-c. 1608)

To hear men sing I care not, by them I fear not leasing, hear women sing I
dare not, their voices are so pleasing. *For she that better singeth, the greater*
danger bringeth.

Charlotte Bacon, Clara Shaw, *sopranos*
Alison Bleick, *alto* Daniel McCabe, *baritone*
Peter Gibeau, *bass*

". . . those *harsh chromatick jarres* of sin that all our music marres & in our lives & in our song . . ."
(Milton, *At a Solemn Musick*, early draft):

O let Chromatique tunes

John Danyel
(d. 1630)

O let *Chromaticque tunes*, *harsh* without ground, bee *sullaine Musique* for a
tunelesse hart; *chromatique tunes* most like my passions sound, as if combinde
to beare their falling part.

Alison Bleick, *alto*
INSTRUMENTAL ENSEMBLE

In darknesse let mee dwell

John Dowland
(1562-1626)

In darknesse let mee dwell, the ground shall sorrow be, the rooffe Dispaire to barre all cheerful light from mee, the wals of marble blacke that moistned still shall weepe, *my musicke bellish jarring sounds* to banish friendly sleepe. Thus wedded to my woes, and bedded to my Tombe, O let me living die, till death doe come.

Daniel McCabe, *baritone*
Richard Earle, *lute*

III. MUSICA HUMANA: TUNING AND TEMPERING TO THE SPHERES

"Human music is . . . that which unites the reason with the body . . . *a mutual adaptation and tempering* of low and high sounds into a *single consonance*. What else joins the part of the soul itself? (Boethius, *De institutione musica*, I, 3):

Music divine

Thomas Tomkins
(1573-1656)

Music divine proceeding from above, whose sacred subject oftentimes is love, In this appears her *heavenly Harmony*, where *tuneful concords sweetly do agree*, And yet in this her slander is unjust, to call that love which is indeed but lust.

CHORUS

Thou tun'st this World

Purcell

Thou *tun'st this World, the Sphears above*
Who in the Heav'nly round to their own Musick move.

Charlotte Bacon, *soprano*
INSTRUMENTAL ENSEMBLE

"Sweet Echo . . . Daughter of the Sphear, So maist thou be transplanted to the skyes & hold a Counterpoint to all Heav'ns Harmonies." (Milton, *Comus*):

May the God of Wit

Purcell

May the God of Wit inspire The Sacred Nine to bear a part; And the Blessed heav'nly quire Shew the utmost of their art. *While Echo shall in sounds re-mote, Repeat each note.*

Elizabeth Knowles, Clara Shaw, *sopranos*
INSTRUMENTAL ENSEMBLE

Echo

INSTRUMENTAL ENSEMBLE

Purcell

IV. MUSICA HUMANA: ETHOS AND POWERS OF MAGIC

"Orpheus with is lute made trees, And the mountain tops that freeze, Bow themselves, when he did sing." (Shakespeare, *Henry VIII*, III, i):

Musica, Dei donum optimi

Orlando di Lasso
(c. 1532-1594)

Music, gift of the most benevolent God, captivates men and gods. Music mollifies fierce spirits and raises up sad minds. *Music moves even the trees themselves and horrid beasts.*

CHORUS

"In natural magic, nothing is more efficacious than the Hymns of Orpheus, if there be applied to them suitable music, and disposition of soul, and the other circumstances known to the wise." (Pico della Mirandola, *Conclusiones Orphicae*):

Incantations to the Sun: *In sole posuit tabernaculum*

Psalm XVIII, 6
(First Tone)

In the Sun he has set his tabernacle and which is as a bridegroom coming out of his chamber. He rejoiceth as a strong man to run a race. His going forth is from the end of heaven.

Daniel McCabe, *baritone*
Larry Keith, *lute*

The Sixt Tune, It bewayleth: it weepeth full sore

Thomas Tallis
(c. 1505-1585)

The wondrous works of God appear by every day's success, the nights likewise their race run, the selfsame express. There is no language, tongue, nor speech where their sound is not heard. In all the earth and coasts thereof their knowledge is conferred. In them *the Lord made for the Sun a place of great renown*. Who like a bridegroom ready trimmed doth from his chamber come.

CHORUS
INSTRUMENTAL ENSEMBLE

"Thys Orpheus by the swetnesse of hys harpe that ys it say bestly men and savage broght into the rule of reson." (Boethius' *De consolacione*, translated by John Walton):

Come woeful Orpheus

William Byrd
(1542-1623)

Come woeful Orpheus with thy charming Lyre, and *tune my voice* unto thy skilful wire.
Some *strange Chromatic Notes* do you devise, that best with *mournful accents sympathize*,
Of *sourest Sharps*, and *uncouth Flats* make choice, and I'll thereto *compassionate* my voice.

CHORUS

"Man is prisoner of heavenly bodies . . . pierced as with arrows by the rays of the 12 constellations, his body divided into segments each of which belongs to a given planet or star." (Seznec, *Survival of the Pagan Gods*):

Le ray au soleil (canon a 3)

Johannes Ciconia
(c. 1335-1411)

[The radiance of the sun which right up high enfolds the gentle dove with its warm glow, and which refreshes and renews the journeyman, well seems to have the right to hold complete reign over all.]

INSTRUMENTAL ENSEMBLE

Celestial response by a consort of legendary musicians with magical powers:

Me thinks I hear Amphion's warbling strings

Thomas Weelkes
(d. 1623)

Me thinks I hear *Amphion's warbling strings*, *Arion's harp* distilling silv'ring sound, *Orpheus' mean lute* with all in order brings, and with soul pleasing Music doth abound, whilst that old Phemius softly plays the ground, O sweet consort, great may your comfort be, and greater still, *to ease my misery*.

CHORUS

V. MUSICA MUNDANA FROM THE PLANETARY SPHERES:
MUSES AND GRACES

" . . . on the upper surface of each sphere is a siren [Muse?] who goes round with them, hymning a single tone." (Plato, *Republic*, X, 617):

Ye sacred Muses (elegy for Thomas Tallis)

William Byrd

Ye sacred Muses, *race of Jove* where Music's lore delighteth, come down *from crystal heavens above* to earth where sorrow dwelleth in mourning weeds with tears in eyes. Tallis is dead and Music dies.

Barbara Borden, *soprano*
INSTRUMENTAL ENSEMBLE

Hark, hear you not?

Bateson

Hark, hear you not a *heavenly harmony*? Is't Jove, think you, that *plays upon the Spheres*? Heavens, is not this heavenly melody? Where Jove himself a part in Music bears.

Charlotte Bacon, Clara Shaw, *sopranos*
Alison Bleick, *alto* Daniel McCabe, *baritone*
Peter Gibeau, *bass*

Celestial Music: *Response de la voute dorée*

Balet Comique de la Roynce
(1581)

INSTRUMENTAL ENSEMBLE

"There are three universal and singular colors of the world, green, gold, and blue, dedicated to the Three Graces of heaven, which are Venus, Sol, and Jupiter." (Ficino, *Libri de vita*, cf. also Petrarch, *Africa*, III, 216-218):

I heard three virgins sweetly singing

East

I heard three Virgins sweetly singing, and for *the Muses* them reputed, such sweetness from their lips was springing, but straight their number that confuted. Then looking better on their faces, I found they were *the lovely Graces*.

Barbara Borden, Charlotte Bacon, *sopranos*
Alison Bleick, *alto*

Response de la voute dorée

INSTRUMENTAL ENSEMBLE

Musical realization of ratios within and between planetary orbits of the heliocentric universe:

Harmonias universales omnium sec planetarum

Johannes Kepler
Harmonices mundi
libri V, 5 (1619)

In order of entrances:

Saturn melody: sackbut
Jupiter melody: bass gamba
Mercury melody: organ
Earth melody: *Miseria, fames*, altos
Venus melody: sopranos
Mars melody: *Ut, re, mi, fa, sol, fa, mi, re, ut*, basses and tenors

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omnia (infinita in potentia) permeantes actu: id quod aliter à me non potuit exprimi, quam per continuam seriem Notarum intermedia-



THE MUSIC OF THE SPHERES. Two diagrams from Kepler's *De Harmonices Mundi*, showing the melody "sung" by each heavenly body.

VI. MUSIC IN THE CRYSTALLINE SPHERE: THE ANGELIC CIRCLES

"Thus the circling melody impressed itself, and all the other lights made sound the name of Mary."
(Dante, *Paradiso*, Canto XXIII, 109-111):

Assumpta est Maria

Antiphon

Vespers, Feast of the Assumption

Mary has been taken up into heaven. The Angels are rejoicing. Praising, they
bless the Lord. Glory be to the Father and Son and Holy Spirit. As it was in
the beginning, is now, and ever shall be, world without end. Amen.

Daniel McCabe, *baritone*

MEN'S CHORUS

"Then they stayed there within my sight, singing *O Queen of Heaven* so sweetly that never hath
parted from me the delight." (Dante, *Paradiso*, Canto XXIII, 127-129):

Angeli, Archangeli, Virtutes

Angels, Archangels, Virtues, Dominions, Powers, Principalities, Thrones,
Cherubim, and Seraphim are praising:

Salve Regina (by Angelic hierarchy)

Robert Wylkynson
(fl. 1500)

"Hail, Queen of Mercy, our life, joy and hope, hail! To you we cry, banished
children of Eve. To you do we sigh, groaning and weeping in this vale of tears.
Turn, then, you our advocate, those merciful eyes of yours toward us; and to
Jesus, the blessed fruit of your womb, after this our exile, show us."

Lisa Helmel, Elizabeth Knowles, *sopranos*

Jeffrey Bennett, Daniel McCabe, *baritones*

Jeffrey Mead, *tenor* Peter Gibeau, *bass*

CHORUS

INSTRUMENTAL ENSEMBLE

"As soon as I was silent, a strain of sweetest song resounded through the heavens, and my Lady
sang with the rest 'Holy, holy, holy!'" (Dante, *Paradiso*, XXVI, 67-69):

Preface for Easter Day: *Et ideo cum Angelis*

Therefore it is that with Angels and Archangels, with Thrones and Dominions,
and with all the warriors of the heavenly array, we sing a hymn to your glory.
Without ending we say:

Daniel McCabe, *baritone*

Sanctus from *Missa Saeculorum Amen*

Francisco Guerrero
(1528-1599)

"Holy, holy, holy is the Lord God of hosts! The heavens and earth are filled
with your glory. Hosanna in the highest! Blessed is He who comes in the name
of the Lord. Hosanna in the highest!"

Barbara Borden, *soprano* Alison Bleick, *alto*

Daniel McCabe, *baritone*

CHORUS

"The high and holy court resounded through the spheres with *Te Deum laudamus*, the melody
that is sung there above." (Dante, *Paradiso*, XXIV, 112-114):

Angeli, Archangeli

Antiphon for Dedication
of the Church of St. Michael

Angels, Archangels, Thrones, Dominions, Principalities and Powers, Virtues
of heaven praise the Lord of heaven. Alleluia.

Wendy Deputy, Jennie McAvoy, Nancy May, *sopranos*

Te Deum laudamus

Francisco Guerrero

We praise You, O God: we acclaim You Lord. Everlasting father, all the world bows down before You. All the Angels sing Your praise, the hosts of heaven and all the angelic powers. All the Cherubim and Seraphim call out to You in unending chorus: "Holy, holy, holy is the Lord God of Angel hosts! The heavens and earth are filled, Lord, with Your majesty and glory!"

CHORUS

VII. THE EMPYREAN: THE HOLY TRINITY

"Ring out ye Crystall sphears,/Once bless our human ears,/(If ye have the power to touch our senses so)/And let your silver chime/Move in melodious time; And let the Base of Heav'ns deep Organ blow,/And with *your ninefold harmony*/Make up *full consort to th'Angelike symphony*." (Milton, "Hymn" in *Nativity Ode*):

Laudent Deum cythara

Di Lasso

Praising the Lord are cithara, the voices of choirs, trumpets, strings, horns, organs, alleluia! (Cf. Psalm CL)

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Charitas pater

Sebastian de Vivanco
(c. 1550-1622)

The Father is Love, the Son is Grace, the Holy Spirit is imparting. O blessed Trinity!
Father, Son, and Holy Spirit are one substance. O blessed Trinity!
To You be praise, to You be glory, to You be thanksgiving for endless ages.
O blessed Trinity!

- I. Charlotte Bacon, Clara Shaw, *sopranos*; Daniel McCabe, *baritone*
- II. Molly Pyle, *soprano*; Jeffrey Mead, *tenor*; Peter Gibeau, *bass*
- III. Lisa Helmelt, Elizabeth Knowles, *sopranos*; Jeffrey Bennett, *baritone*

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RECESSIONAL: *Sinfonia*

Luca Marenzio
(c. 1560-1599)

Soul of the world

Purcell

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SYNOPSIS

* * *

This program, cast in seven sections to conform with the sacred inviolability of the Pythagorean number seven, endeavors to outline various aspects of the Medieval and Renaissance belief in the music of the spheres. We hope the choice of inter-related examples from literature and music will permit the program to unfold without extensive explanation.

ANIMA MUNDI

The Pythagorean doctrine that espoused the underlying musical harmony of all things in the universe reached Medieval Europe principally through the story of creation in Plato's *Timeaus* and the "Dream of Scipio" in Cicero's *Republic*. Relative planetary distances from the earth, the fixed and immobile point in the geocentric universe, were believed to correspond to the ratios of the seven steps of the Hypodorian scale tuned to Pythagorean intervals, which were based on fractions involving powers of 2 and 3.

MUSICA INSTRUMENTALIS, MUSICA HUMANA, MUSICA MUNDANA

The categories of music established by Boethius (6th century) correspond to three levels of existence: terrestrial, the human body and soul, and celestial. *Musica instrumentalis* is actual, audible, earthly music performed with instruments or voices. Such music, depending upon the intent of the performer, can either be in harmony with music of the spheres, i.e. *musica mundana*, or with demonic forces of evil. *Musica humana* entails the Platonic relationship of the soul to the body in man—who is the microcosm—to the soul of the universe—the macrocosm. If the human soul is properly tempered and tuned to *musica mundana*, it should resonate in sympathy with that of the macrocosm.

ETHOS AND POWERS OF MAGIC

In the doctrine of *ethos*, music was thought to stimulate the mind in three ways: it could strengthen, or conversely undermine, the will; it could move man to action; it could raise man to a state of ecstasy wherein his soul and world-soul would be in mutual harmony. The legends of the singing of Orpheus, wherein even trees, stones, animals, and furies could be moved by music, symbolized the epitome of these powers. Renewed interest in the ancient cult of Orphism during the Renaissance prompted some Neoplatonists to believe that celestial powers and influences could be attracted from the cosmos by appropriate incantations to the sun or the various planets. The incantations would stress the particular attributes, colors, and musical mode appropriate to the celestial body chosen. Psalm XVIII with its reference to the tabernacle of the sun was one text known to be used in these incantations.

Kepler's preoccupation with music of the planets, based upon a heliocentric system, resulted in his third law of motion which provided Newton the basis for his discovery of the law of universal gravitation. Kepler noted that ratios of orbital distances and velocities of planets when nearest and farthest from the sun could be represented by musical intervals which might then be filled in to produce melodies for each planet. He believed these melodies combined in eternally varying six-voice celestial counterpoint of consonant and dissonant sounds. We have taken the melodies and plotted them in respect to their individual orbits for five earth years, then combined them in an effort to approximate the counterpoint Kepler suggested. Our musical time interval of one second is equivalent to one month of the earth's orbital time.

THE CRYSTALLINE SPHERE

Our imaginary ascent from the Pagan or Planetary Spheres to that of the Christian Crystalline Sphere is patterned mainly after descriptions found in Dante's *Paradiso*. Each of the nine circles comprising the Angelic hierarchy governs one of the spheres in the lower celestial region and is responsible for its movement. *Hosannas*, *Te Deums*, and hymns in praise of the Virgin Queen resound throughout the firmament. Wylkynson's *Salve Regina* is based upon the melody of the antiphon *Assumpsit est Maria*. The composer assigned each of the nine voice parts in the MS to one of the Angelic orders.

THE EMPYREAN

Dante's tenth and highest heaven is ablaze with light and movement. Although the psalms originally associated musical instruments solely with praise of God in the tabernacle, painters after Dante transferred them to angelic orchestras in paradise where they provided unending music to the glory of Mary and the Trinity. Vivanco's *Charitas Pater* was written for nine voice parts, clearly conforming to the Angelic Circles. This work was transcribed from a personal photograph made in 1975 from a then unique print of the work. The print has since been lost, and it is likely that ours is the only copy of this work that remains in the world today.

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ACKNOWLEDGEMENTS

Special thanks to Mrs. Ursula Stechow and Professor John Kane for their assistance in translations. Very special thanks to Mr. and Mrs. John Haviland for their help in reading proof for these programs over the years.

* * *

COLLEGIUM MUSICUM

L. D. Nuernberger, *director*
Marilyn Carlson, *instrumental director*

SINGERS

Charlotte Bacon
Mary Kate Ballard
Jeffrey Bennett
Alison Bleick
Barbara Borden
Jeffrey Caldwell
Daniel Cohen
Wendy Deputy
Joseph Elliot
Claire Fontijn
Peter Gibeau
Lisa Helmelt
Christopher Hunt

Artis Klavins
Nathaniel Knight
Elizabeth Knowles
Nancy May
Jennie McAvoy
Daniel McCabe
Jeffrey Mead
Paul Patanella
Molly Pyle
Charles Reynolds
Stacey Schinas
Clara Shaw
Margaret Spencer

INSTRUMENTALISTS

Richard Earle, *lute*
Peter Gibeau, *organ*
Avery Gosfield, *recorders*
Anne Harrington, *viols*
Larry Keith, *lute*
Alexis Jacobsohn, *cornetto*
Erik Johnson, *sackbut*

Fumiko Matsui, *viols*
Elizabeth Motter, *Gothic harp*
David Porter, *cornetto*
Charles Reynolds, *organ*
Joel Rosenbaum, *lute*
Jennifer Scott, *recorders*
Jed Wentz, *flute, portative*