

*So, what is the purpose of music? It is, in my view, to reveal the nature of suffering and to heal.*

—Jonathan Harvey  
(in interview with Arnold Whittall)

**San Francisco Contemporary Music Players  
and  
Stanford Chamber Chorale**

Monday, January 25 2001 • 8 pm  
Campbell Recital Hall, Stanford University

**MUSIC OF  
JONATHAN HARVEY**

*Ricercare una melodia* (1984)  
Charles Metzger, trumpet

*Vers* (2000) – US premiere  
*Tombeau de Messiaen* (1994)  
Thomas Schultz, piano

*Lotuses* (1992) – US premiere  
Members of the  
**San Francisco Contemporary Music Players**  
Barbara Chaffe, flute/piccolo/bass flute  
Roy Malan, violin  
Nancy Ellis, viola  
Stephen Harrison, cello  
Paul Hostetter, guest conductor

— INTERMISSION —

*I Love the Lord* (19 )  
**Stanford Chamber Chorale**  
Stephen Sano, conductor

*Mortuos plango, vivos voco* (1980)

*Come Holy Ghos* (19 )  
**Stanford Chamber Chorale**

## JONATHAN HARVEY (B. 1939)

Program notes  
by Julian Johnson

*Julian Johnson is a composer and Lecturer in music at the University of Sussex, UK. He is the author of Webern and the transformation of nature (Cambridge University Press, 1999).*

In the first of his Ernest Bloch lectures at the University of California, Berkeley in 1995, Jonathan Harvey asked the question, “Who is the Composer?” Asked by himself, of himself, the question takes on a distinctly Buddhist aspect: the more one tries to grasp the composer, the more elusive he becomes. This is not just a question of artistic modesty, although few composers of Harvey’s stature demonstrate that virtue to such a degree. Neither has it to do with artistic anonymity: few composers have such a recognizably individual voice. The rich paradox of Jonathan Harvey’s music—one which is certainly embodied by the composer himself—is that highly characterized identities nevertheless become the vehicle for their own transcendence. His music is always richly detailed and profoundly concerned with the physical aspect of its own sonority. And as the pieces in this program demonstrate, the spiritual aspect of Harvey’s work is neither a stylistic “add-on” nor the result of any vagueness in his musical materials: it arises precisely from profound and detailed exploration of his particular musical sounds.

Contradictions coexist happily within Jonathan Harvey. He seems equally at home in San Francisco, Tokyo, Paris or Darmstadt, while remaining in many ways the quintessential English gentleman. He wears his great learning lightly, happily demurs to less considered opinions and emanates a quality of gentleness that touches all who meet him. His neighbors, in the quiet historic town of Lewes in southern England, might well be surprised to hear his music for the first time. The modest appearance of the man gives little hint of the intensity of the music. At the same time, for all his internationalist leanings in the realms of electro-acoustic music and new musical research, Harvey’s English origins remain a definitive ingredient of his work.

It is common for biographers to dwell on the formative years Harvey spent as a chorister at the choir school of St Michael’s College in Tenbury. At the age of nine, his duties included singing two services every day in the chapel, an experience which not only established his association of music with ritual (which remains central to his work today) but also ensured that some of his earliest musical encounters were with the English choral tradition. One might expect there to be little common ground between that musical world and the avant-garde interests of his later years, and yet Harvey has found a way to allow them to coexist within his work. Most obviously he has produced a number of works for a *cappella* chorus or chorus with organ. Often intended for a liturgical rather than a concert function, these at times employ a relatively simple musical language, yet are by no means “early” works. Many of them come out of the composer’s association with Martin Neary, who served as Director of Music at Winchester Cathedral while Harvey’s son Dominic was a chorister there between 1976 and 1980.

Where the choral writing is more complex and large-scale, in works such as *Ashes Dance Back* (1997), Harvey’s modernist musical vocabulary does not entirely obscure the resonance of that earlier tradition. There exists a specific atmosphere, perhaps one kindred to that suggested by T. S. Eliot in *Little Gidding* (in *Four Quartets*) when the poet points to “timeless moments” experienced “while the light fails/On a winter’s afternoon, in a secluded chapel.” Something of this same atmosphere pervades Harvey’s tape piece, *Mortuos plango, vivos voco* (1980)—most obviously because of its manipulation of the sound of a low bell and the singing of a boy soprano,

but also because of a peculiar sense of space and resonance. It is a wonderful example of how his music, while being rooted in something quite specific and concrete, nevertheless transcends any merely local definition. Again, T.S. Eliot: “Here, the intersection of the timeless moment is England and nowhere/Never and always.”

For one drawn to the mystical, the boundaries of artistic expression are often the site of religious encounter. From an early age, it seems, Harvey saw no contradiction between the “otherworldly” language of musical modernism and the numinous realm of religious experience. He relates a fascinating account of being seized by the power of new music while still a boy chorister:

“One moment I can remember particularly is turning the corner, coming out of the service to go into the cloisters but still in the church; the organist improvising, playing extremely loudly, full organ, hitting a chord. I used to love his improvisations because I found them more modern—just a hint of chaos—than anything we ever encountered in our singing. And in this particular improvisation—I can’t remember the chord anymore—there was a moment of great epiphany and I knew that I would always be a composer.”

The intense, bright energy in this story has been abundantly retained in the music of the composer that the chorister would become. Harvey’s musical language, while undoubtedly at the cutting edge of modernity, is more often than not associated with musical explorations of a rapturous luminosity and exquisite tenderness—or what he calls, simply, “bliss.”

Harvey’s path to such a music was a striking one, not least because of its unique blending of the intuitive and the logical, the unconscious and the rational. Leaving choir school to go on to Repton and then to Cambridge University in 1957, Harvey became, in his own words, “an atheist, a scientist, a rationalist, a philosopher.” His compositional development underwent a radical encounter with more systematic and logical thought. The composer Benjamin Britten, whom Harvey had met at Repton, put him in touch with Erwin Stein, an émigré pupil of Schoenberg’s then living in London. Stein’s lessons provided a crucial link to the European tradition of structural thinking as taught by Schoenberg, and Harvey found himself having to wrestle with the logical demands of eight-bar periods and symmetrical phrase structures. When Stein died in 1958, Britten suggested Hans Keller as a new teacher. Keller’s teachings, while also derived from an essentially Viennese tradition, placed much greater emphasis on the logic of the unconscious, and of musical inspiration arising from psychological self-awareness.

This tension between conscious and unconscious, rational process and intuition, was likewise present in two figures who were to become particularly significant to Harvey after leaving Cambridge - Karlheinz Stockhausen and Milton Babbitt. So fascinated was Harvey by Stockhausen, whom he met first at Darmstadt in 1966, that he soon undertook the writing of an entire book, *The Music of Stockhausen* (published in 1975). Ironically, this book was begun in 1969, the same year in which Harvey went to Princeton to study serialism with Babbitt. In typical fashion, Harvey managed to find common ground in the seemingly contrary ideas of these two figures regarding musical time and space, and in general was much enthused by the sense of “structural depth” he found in the music of both. Only later, towards the end of the 1970s, did Harvey find a way to reconcile a truly spatial conception of music with the more concrete, linear thinking he had encountered with Keller. This latter period was singularly important, since in many ways the intersection of linearity and spatiality would become one of the most defining features of Harvey’s music.

One might think of this productive tension in other ways. If Harvey’s concern with structure and abstract musical logic can be said to have a distinctly Germanic provenance, it is significant that

throughout the 1980s and beyond his music has deliberately cultivated a more French direction. Writing of the ensemble and tape piece, *Valley of Aosta* (1988), he intimated that French cultural perspectives suggested to him “a sense of living-in-colour which, at its best, dissolves subject-object duality as idea and colour unite, and thematicism melts into psychic flow.” And in a recent interview, he said of his current music: “What I seek is music that is as fresh as an improvisation and yet has not a sound out of place.” He often speaks of Claude Debussy—above all this composer’s search for a more improvisatory sense of form—in this context. This aspect of Harvey’s approach is particularly manifest in solo pieces, such as those composed for cellist Frances-Marie Uitti, and in small ensemble works written for the Arditti Quartet and others. More recently, he has spoken of the solo piano piece, *Vers*, written to celebrate the 75th birthday of Pierre Boulez, in the same terms.

A key stage in the development of Harvey’s technique was the refinement of his idea of the harmonic field—a fixed collection of absolute pitches (much like a single giant “chord”) from which all the notes of a given passage or even an entire work may be drawn. A device employed frequently in his music since the opera, *Passion and Resurrection* (1981), is the field arranging all pitches symmetrically (above and below) about a central pitch axis. While the construction of such fields does suggest a certain kind of long-range structural planning, it also reflects a concern with harmonic detail not evidenced by more abstract, highly-serialised systems. Similarly, Harvey’s growing fascination with melody, culminating in *Ritual Melodies* (1990) and central to his music ever since, brings together both approaches. His interest in “melody chains” and progressive melodic transformations suggests a larger structural thinking, while his concern with melodic detail and line as the “carrier of temporal unfolding” places an emphasis on the musical moment.

It was perhaps Harvey’s association with Pierre Boulez and the Institut de Recherche et Coordination Acoustique/Musique (IRCAM) in Paris that first established him as a genuinely European composer rather than just an English one. In 1980, he made the tape piece *Mortuos plango, vivos voco* there, a work still regarded by many as one of the best things to come out of IRCAM. Exceptionally, Harvey has been invited back to IRCAM five more times. He composed the tape part for the large ensemble work, *Bhakti*, there in 1982 and the tape piece *Ritual Melodies* in 1990. He has worked in numerous electronic studios in Europe and the United States, including the WDR Elektronisches Studio in Cologne, the MIT Media Laboratory, and CCRMA at Stanford University where, during the latter half of the 1990s he served as Professor of Music. (He has also held teaching posts at the University of Southampton, 1964-77, and the University of Sussex, 1977-93.)

Harvey’s involvement with electronics, then, is a vital element of his music of the last twenty years. On the other hand, as with that pioneer of the genre, Edgard Varèse, this medium has provided Harvey primarily with a means to realise more fully tendencies already present in his purely acoustic music. And, crucially, he is not fundamentally a “studio” composer. To date, he has made only three pure “tape” pieces, and much of his music continues to be for purely acoustic forces. His preference, and the medium of his most definitive work, is the interaction of live, acoustic performance and the electronic manipulation of sound, either realized “live” or pre-recorded on tape or CD. Harvey’s first exploration of this relationship was *Inner Light 2* (1977), scored for vocal soloists, ensemble and tape. Since then, this interaction has become central to many of his most important and ground-breaking works, including *Bhakti* (1982), *Madonna of Winter and Spring* (1986), *Valley of Aosta* (1988), *One Evening* (1993-94), *Advaya* (1994), *Soleil Noir/Chitra* (1994-95), *Ashes Dance Back* (1997) and *Mothers shall not cry* (2000).

The dialogue between live and electronic (yet again the concept of two disparate “worlds”)

dramatically illustrates how the musical material at times may exceed the boundaries of the instruments and performers creating it. At times, Harvey’s music pursues extreme virtuosity, at other times a fascination with timbral subtleties and structure, and often both. Harvey’s three String Quartets—indeed his string writing generally—exemplify his extraordinary ability to move between the “natural” sounds of the instruments and ungraspable, disembodied sounds that exist in his imagination. When this way of treating an acoustic instrument is combined with electronics, as in *Advaya* (1994) for solo cello and tape, the resulting effect is one rich in sonic ambiguities. In *Advaya*, the electronic sounds are all derived from the cello, so that as the live cello develops its own material, it is met by material that is already a transformed version of itself.

Like many composers involved in electronics, a new world of compositional possibilities was opened up for Harvey by exploring the “inner” nature of a sound, that is, analysing the unique spectrum of partials (overtones) of which every sound is made. Just as the voice of the boy sings “within” the resonance of the bell in *Mortuos plango, vivos voco*, so the live cello in *Advaya* literally plays within the harmonic space opened up by the composer’s “spectral analysis” of the cello’s own A string. Harvey has described his recent music as being shaped by “an aesthetic of spectral hide-and-seek” in which material presented linearly, as melody, is then revealed as contained within a vertically disposed harmonic spectrum (again the sense of two “worlds”).

For Harvey, such concerns are not abstract or “merely” scientific, but are immediate and concrete matters having to do with the raw stuff of musical composition. It is precisely through these techniques that Harvey finds the musical means for his enduring expressive needs. In his major work of the early 1990s, the opera *Inquest of Love*, he explores literary themes of love, death and forgiveness by staging a story set, for the most part, after the death of its principal characters. Musically, his capacity to move between an embodied, corporeal music and a disembodied, spiritual one is absolutely essential, and here comes into its own. Such a dialogue is equally present in purely instrumental works such as the Cello Concerto (1992), written at about the same time.

On one level, given its often complex world of computer technology and advanced compositional techniques, Harvey’s music seems little concerned with the everyday or prosaic. But, by the same token, his music derives from archaic roots—from a concern with the mythic, magical properties of musical sound and its potential to mediate our sense of self and other, of individual and whole. The music is seldom abstract (in a formalist sense), and almost always derives its impetus from dramatic origins, from the working out of character and individual particularity. It often concerns itself with the idea of a journey, yet also manages to present the unfolding of such journeys in terms of a dialogue with a “timeless” space in which their lines unfold.

### ***Ricercare una melodia (1984)***

*For solo trumpet and electronic delay*

In *Ricercare una melodia*, a five-part canonic texture is derived from a single trumpet player by means of two four-track tape recorders and a reverberation unit. (At least, such were the tools available in 1984; tonight’s performance is realized using digital delay.) The basic idea is a simple one: as the trumpet plays through the material, it is recorded and played back four times at delays of 3, 6, 9 and 12 seconds. Separate equidistantly spaced speakers maintain the sense of four “invisible” trumpets following the lead of the live trumpet.

The first section is patterned by building complex contrapuntal textures, then simplifying them,

then restarting the process anew with different materials—aptly reflecting the sense of “seeking” contained in the word “Ricerare.” The melody sought in this opening section is eventually “found,” and begins to be outlined by the live trumpet alone. As the tape delay is reactivated, it is successively slowed down so that each entry of a new canonic voice occurs at half the speed and thus an octave lower than the preceding one. The trumpet is thus extended far below its natural register to sound long slow lines, at first like a trombone but eventually like some fantastical contrabass tuba. In this way, what began as simple repetitions of the live trumpet’s melodic phrases become a richly layered harmonic space.

***Vers (2000)***  
*For solo piano*

This short piece for solo piano was one of thirteen similar commissions given to composers from eight countries to celebrate the 75th birthday of French composer, Pierre Boulez. Harvey’s large work for ensemble and electronics, *Bhakti* (1982), was commissioned by Boulez and, in recognition of that debt, *Vers* contains a brief quotation from the earlier work. As Harvey explains, however, this piece also leads “vers” (towards) the ideal of a more improvisatory form—a guiding concern in much of his recent work. If one seeks overlaps with Boulez’s own music in *Vers*, they are perhaps to be found in the essential unpredictability of its form, rather than in any overt stylistic references. To be sure, there are a few quixotic gestures which recall some of Boulez’s early piano music. But the larger part of *Vers* dwells in a restricted upper register, deploying material that plays with subtle shades of metrical regularity and freedom, and, only near the end, recovers its bass register with allusive open-fifth sonorities.

***Tombeau de Messiaen (1994)***  
*for solo piano and electronic tape*

This piece for piano and tape dates from the same year as *Advaya* for solo cello and electronics. The title of the latter work, the composer explains, translates as “not two.” These few syllables stand for a crucial concept in much of Harvey’s music: two things entwine in such a way that their boundaries are blurred and one is no longer sure whether two separate things overlap, or rather one thing enlarges itself into different voices. This is certainly the concern of *Tombeau*, written in homage to the French composer, Olivier Messiaen.

There are several obvious musical “debts” to Messiaen here, including long strands of modally-derived chords in even note-values. But what Harvey honors most here is Messiaen’s role as a forerunner of French spectralism. *Tombeau* presents a dual-voiced music in which the live piano often plays in “unison” with an electronically generated piano, but the match is never precise because the latter is tuned utilizing a “natural” harmonic series (involving perfect whole-number ratios: 1:2:3:4:5:6 etc.), while the live piano is in equal temperament (a “compromised” tuning system invented in the early 18th century to facilitate Western tonal motions). This blend can be disconcerting at first—the tape piano seems “out of tune”—but gradually what emerges is a subtle play between two voices seeking unison and “in tuneness” with one another, while nevertheless preserving the tensions of their distance. Only at the end, in a grand Messiaen-like affirmation, is there a sense of arrival—although even this is dissipated by the final bars, in which the piano (extending the idea of falling implied by the word “tombeau”) is heard “flinging itself into a downwards vortex to the abyss.” (Harvey)

***Lotuses (1992)***  
*for flute, violin, viola, and cello*

In Harvey’s music, aesthetic and religious ideas are not separable from questions of musical technique. Where his works seek to express extra-musical ideas, they do so not through vague, subjective “associations” on the part of composer or listener, but rather by means of concrete musical processes. When Harvey mentions, in reference to *Lotuses*, that in Buddhist teaching the lotus is a “symbol of the rich individuality of forms of being,” he is also saying something about musical technique. His music cultivates the individuality of line and gesture and tone. Character is everything. The transcendent quality of his music is not arrived at *in spite* of his individual materials, but precisely through entering more profoundly into their particularity.

In the opening of *Lotuses*, each fragment is shaped by its underlying breath patterns, but is unique in the detail of its tone, phrasing and contour. The sustained use of unison between instruments (often tinged with subtle pitch inflections) suggests a multiply-voiced unity, a rich identity that thrives on ambiguity as separate melodic lines overlap and combine with one another. Throughout the piece, this lyrical, subjective voice is heard alternating with more ritualistic dance music. At one point, near the end, the three stringed instruments sound for all the world like an Indian tabla accompanying the solo flute. At others, they transform their characteristic tone into something more reminiscent of electronic music: a shifting of timbral boundaries, which the flute player complements both through a variety of extended techniques such as multiphonics, and by changing instruments between flute, piccolo and bass flute.

***I Love the Lord (19 )***  
*for a cappella chorus*

***Mortuos plango, vivos voco (1980)***  
*for electronic tape (remixed 1999)*

Between the years 1976 and 1980, Harvey’s son Dominic was a chorister at Winchester cathedral. The composer describes how his idea for *Mortuos Plango, vivos voco* arose from hearing the choir rehearse in the resonant space of the cathedral, mingled with the tolling of bells up above. Although this piece is for tape alone, its sounds derive entirely from two recordings, one of Dominic’s voice, the other the largest of the cathedral’s bells. This bell bears the Latin inscription, “Horas volantes numero, mortuos plango, vivos ad preces voco” (I count the fleeting hours, I lament the dead, I call the living to prayer).

Composed in 1980, *Mortuos Plango* remains one of the most successful pieces to have emerged from IRCAM, the Paris center established by Pierre Boulez for research in electro-acoustic music. The piece is emblematic of Harvey’s music in its capacity to move seamlessly from one musical world to another: the boy’s natural voice and the simple tolling of the bell are here miraculously transformed and united, as the partials of the bell are enlarged to create some vast acoustic space, inside which (as the composer says) “the boy ‘flies’ around like a free spirit.”

***Come Holy Ghost (19 )***  
*for a cappella chorus*

### **Where to Find It**

Four of the works in tonight's program have been commercially recorded. *Mortuos plango, vivos voco* and *Tombeau de Messiaen* (performed by Philip Mead) are both available on a CD from Sargasso, where they are coupled with the *Four Images after Yeats* and *Ritual Melodies*. The flute quartet *Lotuses* has been recorded by members of the Arditti Quartet (with Felix Renggli, flutes) on a CD titled "Jonathan Harvey 1" from Auvidis, which also includes the *String Quartets nos. 1 and 2* and *Scena* for violin and ensemble. *Ricercare una melodia* has been recorded by trumpeter Jonathan Impett on a CD from Attacca (Babel). A newly-released Nimbus CD features Harvey's Percussion Concerto with soloist Peter Prommel and the Netherlands Radio Philharmonic, and *Song Offerings* with soprano Penelope Walmsley-Clark and the London Sinfonietta conducted by George Benjamin.

In addition to numerous journal articles, Harvey has recently published two books offering fascinating insights into his creative world. *Music and Inspiration* (1999) is published by Faber and Faber. *In Quest of Spirit* (1999), a rewriting of his 1995 Bloch lectures at U.C. Berkeley, is published by the University of California Press. A short study of the composer and his music, *Jonathan Harvey*, by Arnold Whittall, was published by Faber and Faber in 1999.

### **Performers**

**Charles Metzger** is principal trumpet player of the San Francisco Ballet Orchestra, which he joined in 1975. He played principal trumpet for the San Francisco run of *Phantom of the Opera*, and has also worked extensively as a studio musician, appearing on several movie soundtracks including *Mars Attacks*, *The Faculty*, *Inspector Gadget*, *Elmo in Grouchland*, *Mimic*, *Judgment Night*, *Ricochet*, *Soapdish* and *Predator 2*. Mr. Metzger has been a member of the San Francisco Contemporary Music Players since 1977. He is a graduate of Carnegie Mellon University and also did graduate studies at the San Francisco Conservatory of Music.

**Thomas Schultz**, pianist, has established a reputation both as an interpreter of music from the classical tradition and as a champion of twentieth-century music. Recent solo appearances include a program pairing Bach's Goldberg Variations with recent works by Rzewski and Takahashi (1997-98), and a recital combining works by Schubert with music by Asian and American composers performed in New York, San Francisco and Kyoto (1998-99). He has worked closely with eminent composers such as Cage, Rzewski and Carter—the latter in performances of the *Double Concerto* at the Colorado Music Festival and at Alice Tully Hall in New York City. Also active as a chamber musician, Mr. Schultz has been a pianist with the San Francisco Contemporary Music Players since 1994, and has played with the Da Camera Society of Houston and Robert Craft's Twentieth-Century Classics Ensemble. His recordings include music of Stravinsky (Music Masters), Earle Brown (Newport Classics), and Hyo-shin Na (Seoul Records). Mr. Schultz is currently on the faculty of Stanford University.

### **Guest Conductor (SFCMP)**

**Paul Hostetter** is Music Director of the Lyric Orchestra of New York and Principal Guest Conductor for the Daylesford Sinfonia in Bermuda. He is also Conductor and Music Advisor for the Sequitur Ensemble, the Washington Square Chamber Music Society, and the League of ISCM Composers. He has been the Music Director for the Kean Symphony Community Orchestra (New Jersey) and has guest conducted groups such as the Prism Chamber Orchestra, Ensemble 21, Music Mobile, and Philip Glass's Music at the Anthology. He has premiered over twenty works by composers including David Del Tredici, Tania Leon, Anne LeBaron, and Scott Wheeler. On Broadway, he has been Associate Conductor for Leonard Bernstein's *Candide* and *The Gershwins' Fascinating Rhythm*. In the recording studio, he has collaborated with Jim Hall, Pat Metheny, and Joe Lovano with strings from the orchestra of St. Luke's in a recording for Telarc. He also appears on the CRI and Zadick labels.

An avid percussionist, Mr. Hostetter has performed with such groups as the Perspectives Ensemble at Columbia University, the Orpheus Chamber Orchestra, the New York Philharmonic, the Little Orchestra Society, the American Symphony Orchestra, and the NYC Premiere Ensemble. He has premiered over fifty works by composers such as Martin Matalon, Aaron Kernis, Eric Moe, Ellen Taffe-Zwillich, and Gerald Levinson, and has recorded for numerous labels. As an educator, Mr. Hostetter is currently serving as a consultant to Carnegie Hall's educational division. He helped to found the Music Advancement Program for minority students at the Juilliard School (featured on the show "60 Minutes"). He has served as a conductor and adjunct professor at New York University, and has presented master classes at many colleges and conservatories. He holds degrees in performance from Florida State University and the Juilliard School.

*Ensemble (SFCMP)*

**The San Francisco Contemporary Music Players**, now in its thirtieth year, is a leader among ensembles in the United States dedicated to contemporary chamber music. A six-time winner of the prestigious national ASCAP/Chamber Music America Award for Adventurous Programming of Contemporary Music, SFCMP has performed over 950 new works, including 130 U.S. and world premieres, and has brought fifty-seven new pieces into the repertoire through its active commissioning efforts. The instrumentalists who make up the San Francisco Contemporary Music Players are recognized virtuosi in new music performance. Each season the ensemble performs a six-concert series at the Yerba Buena Center for the Arts. SFCMP has also toured widely throughout California, with performances on such concert series as San Francisco Performances, Cal Performances, the Stern Grove Festival, the Other Minds Festival, Los Angeles' Monday Evening Concerts, and the Festival of New American Music in Sacramento. SFCMP made its European debut at the Cheltenham Festival of Music in 1986 and was featured in 1990 at the Ojai Festival. The ensemble has recorded seven albums of its own and contributed recordings to eight others.