

written for Lynn Chang and The Hemenway Strings

Thick

ANDY VORES
(2005)

♩ = 144c. *hard, relentless, energetic*

Vn.I
mf detached

Vn.II
mf detached

Va.
mf detached

Vc.
mf detached

Musical score for measures 1-6. The score is for a string quartet (Violin I, Violin II, Viola, and Violoncello) in 4/4 time. The tempo is marked as ♩ = 144c. The dynamics are *mf detached*. The music consists of a rhythmic pattern of eighth and sixteenth notes with various accidentals.

7

Vn.I

Vn.II

Va.

Vc.

Musical score for measures 7-12. The score continues the rhythmic pattern from the previous system. The dynamics remain *mf detached*.

13

Vn.I

Vn.II

Va.

Vc.

Musical score for measures 13-18. The score continues the rhythmic pattern from the previous system. The dynamics remain *mf detached*.

19

Vn.I

Vn.II

Va.

Vc.

Musical score for measures 19-24. The score continues the rhythmic pattern from the previous system. The dynamics remain *mf detached*.

25

Vn.I
Vn.II
Va.
Vc.

This system contains measures 25 through 30. It features four staves: Violin I, Violin II, Viola, and Cello. The music is in a minor key with a key signature of two flats. The time signature is 3/4. The Violin parts play a melodic line with eighth and sixteenth notes, while the Viola and Cello provide a steady accompaniment of eighth notes.

31

Vn.I
Vn.II
Va.
Vc.

This system contains measures 31 through 36. The instrumentation remains the same. The melodic lines in the Violin parts continue, with some chromatic movement. The Viola and Cello parts maintain their rhythmic accompaniment.

37

Vn.I
Vn.II
Va.
Vc.

This system contains measures 37 through 42. The music continues with similar melodic and accompanimental patterns. The key signature and time signature are consistent with the previous systems.

43

Vn.I
Vn.II
Va.
Vc.

3/4

This system contains measures 43 through 48. The notation is consistent with the previous systems. At the end of the system, there is a 3/4 time signature change.

1.2 sul pont. 3-4 sul pont.

49

Vn.I *mp* *mp*

Vn.II (*mf*)

Va. (*mf*)

Vc.

Cb. *mf*

1.2 tutti nat. senza vib. 1.2 sul pont. con vib.

53

Vn.I *f* *mp sub.*

Vn.II

Va.

Vc. senza vib. *f*

Cb.

3-4 sul pont. con vib.

57

Vn.I *mp*

Vn.II

Va.

Cb.

1.2 3-4 1.2

60

Vn.I

Vn.II

Va.

Cb.

64

3-4

tutti
nat.
senza vib.

1.2
sul pont.
con vib.

Vn.I

Vn.II

Va.

Vc.
(senza vib.)

Cb.

f

mp sub.

71

3-4
sul pont.
con vib.

1.2

3-4

Vn.I

Vn.II

Va.

Cb.

mp

74

1.2

3-4

1.2

Vn.I

Vn.II

Va.

Cb.

77

3-4

1.2

tutti
nat.
senza vib.

Vn.I

Vn.II

Va.

Vc.

Cb.

f

f
senza vib.

3-4 sul pont. con vib.

1.2 sul pont. con vib.

3-4

82

Vn.I *mp sub.*

Vn.II

Va.

Vc. con vib. *mf*

Cb. con vib. *mf*

1.2

3-4

1.2

85

Vn.I

Vn.II

Va.

Vc.

Cb. senza vib. *f*

3-4

1.2

tutti nat. o \forall *f*

88

Vn.I

Vn.II

Va.

Vc.

Cb.

3-4 sul pont. *mp sub.* 1.2 sul pont. *mp* 3-4

Vn.I
Vn.II
Va.
Vc.
Cb. *con vib.* *mf*

1.2 3-4 1.2

Vn.I
Vn.II
Va.
Vc.
Cb.

3-4 1.2 3-4 **tutti nat. senza vib.** *f*

Vn.I
Vn.II
Va.
Vc.
Cb. *senza vib.* *f*

105 *con vib.*

Vn.I *ff* *mf*

Vn.II *mp*

Va. *mp* *mf*

Cb. *ff*

112

Vn.I

Vn.II *f* *con vib.*

Va. *f*

Vc.

Cb. *f* *con vib.*

118

Vn.I 1-2 *mf*

Vn.I 3-4 *mf*

Vn.II

Va.

Vc. *mf*

Cb. *mf*

124

Vn.I 1.2 3.4

Vn.II

Va. 1.2 3.4

Vc.

Cb.

130

Vn.I 1.2 3.4

Vn.II

Va. 1.2 3.4

Vc.

Cb.

poco dim.

poco dim.

poco dim.

poco dim.

136

3-4

Vn.I 1.2 3.4

Vn.II 1.2 3.4

Va. 1.2 3.4

Vc.

Cb.

mp

142 3-4

Vn.II

1.2

Va.

3-4

Vc.

Cb.

mp

148

Vn.I

1.2

Va.

3-4

Vc.

Cb.

p detached

154

Vn.I

Vc.

Cb.

158

Vn.I

162

1

2

3

4

Vn.I

p detached

165

168

p detached

p detached

p detached

p detached

171

174

Vn.I

Vn.II

This block contains the musical score for measures 174 to 176. It features eight staves, divided into four for the first violin (Vn.I) and four for the second violin (Vn.II). The music is written in treble clef with a key signature of one flat (B-flat). The tempo and meter are not explicitly shown but appear to be a steady eighth-note pattern. The notation includes various accidentals and dynamic markings.

177

Vn.I

Vn.II

pochiss.

pp

pochiss.

pochiss.

pochiss.

pochiss.

pochiss.

pochiss.

pochiss.

pochiss.

This block contains the musical score for measures 177 to 179. It features eight staves, divided into four for the first violin (Vn.I) and four for the second violin (Vn.II). The music continues with eighth-note patterns. In measure 179, the first violin part has a dynamic marking of *pp* (pianissimo) and a slur over the final notes. The second violin part has a dynamic marking of *pochiss.* (pochissimo) in measures 177 and 178. The notation includes various accidentals and dynamic markings.

180

1
2
3
4
Vn. I

1
2
3
4
Vn. II

pp

pp

pp

pp

pp

pp

pp

pp

pp

183

1
2
3
4
Vn. I

1
2
3
4
Vn. II

186

1 G.P. *pp*

2 G.P. *pp*

3 G.P. *pp*

4 G.P.

1 G.P.

2 G.P.

3 G.P.

4 G.P.

190

1 *pp*

2 *pp*

3 *pp*

4 *pp*

1 *pp*

2 *pp*

3 *pp*

4 *pp*

pp

193

Vn. I
1
2
3
4

Vn. II
1
2
3
4

196

Vn. I
1
2
3
4

Vn. II
1
2
3
4

Vc.
Cb.

pp
p
pp
p
p
mp
mp

200

1 *mp* *pp sub.*

2 *mp* *pp sub.*

3 *mp* *pp sub.*

4 *mp* *pp sub.*

1 *mp* *pp sub.*

2 *p* *mp* *pp sub.*

3 *p* *mp* *pp sub.*

4 *pp*

Vc. *poco mf*

Cb. *poco mf*

203

1 *mp* *pp sub.*

2 *mp* *pp sub.*

3 *mp* *pp sub.*

4 *mp* *pp sub.*

1 *mp* *pp sub.*

2 *mp* *pp sub.*

3 *mp* *pp sub.*

4 *mp* *pp sub.*

Vc. *poco mf*

Cb. *poco mf*

206

1
2
3
4
1
2
3
4
Vn.I
Vn.II
Vc.
Cb.

mf
mfp
pp
mf
mfp
pp
mf
mfp
pp
mf
mfp
pp

209

3
4
Cb.

mf
mf

214

Cb.

219

Cb.

224

div.

ff

div.

ff

div.

ff

div.

ff

233

242

248

Vn.I
Vn.II
Va.
Vc.
Cb.

This system contains measures 248 to 251. It features five staves: Violin I, Violin II, Viola, Violoncello, and Contrabasso. The music is in 6/4 time and consists of dense, rhythmic patterns with many slurs and accents. The key signature has one sharp (F#).

252

Vn.I
Vn.II
Va.
Vc.
Cb.

This system contains measures 252 to 255. Measures 252-254 continue the rhythmic patterns from the previous system. In measure 255, the strings play sustained notes with a *gl.* (glissando) marking. The Viola part has a *unis.* (unison) marking. The key signature changes to natural (F).

261

Vn.I
Vn.II
Va.
Vc.
Cb.

This system contains measures 261 to 268. Measures 261-264 are mostly rests for the strings. In measure 265, the Viola part begins with a *sul tasto* marking and a *p* (piano) dynamic. The Violoncello part has a *unis.* marking. The key signature changes to two sharps (F# and C#).

269

Vn.I
Vn.II 1.2
Vn.II 3.4
Va.

This system contains measures 269 to 272. The Violin I part has rests. The Violin II parts (1.2 and 3.4) play a rhythmic pattern with *sul tasto* and *p* markings. The Viola part continues with a *p* dynamic. The key signature changes to one sharp (F#).

275

1.2 Vn.I
3-4
1.2 Vn.II
3-4
Va.

Detailed description: This system contains measures 275 through 280. It features three staves: Violin I (Vn.I), Violin II (Vn.II), and Viola (Va.). The Violin I and II parts are in treble clef with a 3/4 time signature. The Viola part is in bass clef. The music consists of rhythmic patterns of eighth and sixteenth notes, often beamed together, with some rests. The Viola part has a more melodic line with some accidentals.

280

1 Vn.I
2
3
4
1 Vn.II
2
3
4
1 Va.
3-4
1.2 Vc.
3-4

sul tasto
p
sul tasto
p

p

Detailed description: This system contains measures 280 through 285. It features four staves: Violin I (Vn.I), Violin II (Vn.II), Viola (Va.), and Violoncello (Vc.). The Violin I and II parts are in treble clef. The Viola and Violoncello parts are in bass clef. The Violoncello part includes the instruction "sul tasto" and a dynamic marking of "p". The music continues with rhythmic patterns and rests, similar to the previous system.

285

The image shows a page of a musical score, page 20, starting at measure 285. The score is for a string quartet (Vn.I, Vn.II, Va., Vc., Cb.) and woodwinds (Flute 1, Flute 2). The music is in 4/4 time, with a key signature of one sharp (F#). The score is divided into four measures. The first three measures are in 4/4 time, and the fourth measure is in 4/4 time. The woodwinds enter in the fourth measure with a natural (nat.) and fortissimo (ff) dynamic. The strings play a rhythmic pattern of eighth notes and quarter notes. The woodwinds play a melodic line with a natural (nat.) and fortissimo (ff) dynamic. The score is written for Vn.I (Violin I), Vn.II (Violin II), Va. (Viola), Vc. (Violoncello), and Cb. (Contrabasso). The woodwinds are Flute 1 and Flute 2. The score is written in a standard musical notation with a treble clef for the strings and a bass clef for the woodwinds. The page number 20 is in the top left corner. The measure number 285 is in the top left corner. The woodwinds enter in the fourth measure with a natural (nat.) and fortissimo (ff) dynamic. The strings play a rhythmic pattern of eighth notes and quarter notes. The woodwinds play a melodic line with a natural (nat.) and fortissimo (ff) dynamic. The score is written for Vn.I, Vn.II, Va., Vc., and Cb. The woodwinds are Flute 1 and Flute 2. The score is written in a standard musical notation with a treble clef for the strings and a bass clef for the woodwinds.

1 nat.
ff
nat.

2 *ff*
nat.

3 *ff*
nat.

4 *ff*
nat.

1 *ff*
nat.

2 *ff*
nat.

3 *ff*
nat.

4 *ff*

1.2 nat.
ff
nat.

3-4 *ff*

1.2 nat.
ff
nat.

3-4 *ff*

Cb. *ff*

290

1.2
Vn.I

3-4

1.2
Vn.II

3-4

1.2
Va.

3-4

1.2
Vc.

3-4

Cb.

Detailed description: This page of a musical score covers measures 290 through 296. It features a full orchestral arrangement with parts for Violins I and II (1.2 and 3-4), Violas (1.2 and 3-4), Cellos (1.2 and 3-4), and Contrabasses (Cb.). The music is written in a key with one sharp (F#) and a common time signature. The score is characterized by dense, block-like textures, with many notes beamed together in chords. The strings play a steady, rhythmic accompaniment, while the woodwinds and brass provide harmonic support and melodic fragments. The notation includes various articulations such as accents and slurs, and dynamic markings like *p* (piano) and *f* (forte).

297

1.2
Vn.I

3-4

1.2
Vn.II

3-4

1.2
Va.

3-4

1.2
Vc.

3-4

Cb.

Detailed description: This page of a musical score covers measures 297 through 303. It continues the orchestral arrangement from the previous page. The instrumentation remains the same: Violins I and II (1.2 and 3-4), Violas (1.2 and 3-4), Cellos (1.2 and 3-4), and Contrabasses (Cb.). The key signature and time signature are consistent. The musical texture is dense and complex, with frequent use of beamed notes and chords. The score includes various musical notations such as slurs, accents, and dynamic markings like *p* and *f*. The overall style is that of a late 19th or early 20th-century symphonic work.

304

1.2
3.4
Vn.I

1.2
3.4
Vn.II

1.2
3.4
Va.

1.2
3.4
Vc.

1.2
3.4
Cb.

Detailed description: This system of musical notation covers measures 304 through 309. It features a grand staff with six parts: Violin I (Vn.I), Violin II (Vn.II), Viola (Va.), Violoncello (Vc.), and Contrabasso (Cb.). Each instrument part is represented by two staves, labeled 1.2 and 3.4. The music is written in treble clef for the upper strings and bass clef for the lower strings. The key signature has one sharp (F#). The score includes various rhythmic values, including eighth and sixteenth notes, and rests. Dynamic markings such as *mf* and *f* are present throughout the passage.

310

1.2
3.4
Vn.I

1.2
3.4
Vn.II

1.2
3.4
Va.

1.2
3.4
Vc.

1.2
3.4
Cb.

Detailed description: This system of musical notation covers measures 310 through 315. It continues the orchestral arrangement with the same six parts: Violin I (Vn.I), Violin II (Vn.II), Viola (Va.), Violoncello (Vc.), and Contrabasso (Cb.). Each instrument part is represented by two staves, labeled 1.2 and 3.4. The music is written in treble clef for the upper strings and bass clef for the lower strings. The key signature has one sharp (F#). The score includes various rhythmic values, including eighth and sixteenth notes, and rests. Dynamic markings such as *mf* and *f* are present throughout the passage.

315

Vn.I
1.2
3-4

Vn.II
1.2
3-4

Va.
1.2
3-4

Vc.
1.2
3-4

Cb.

320

1
2

3-4

Vn.II
3-4

Va.
1

Vc.
1

Cb.
1

gl.

gl.

gl.

gl.

gl.

gl.

gl.

gl.

unis.

unis.

G.P.

pp

pp

G.P.

G.P.

G.P.

G.P.

G.P.

G.P.

329

Vn.I
1
2
3
4
pp
pp

Vn.II
1
2
3
4
pp
pp

332

Vn.I
1
2
3
4

Vn.II
1
2
3
4

Va.
mp

335

1
2
3
4
1
2
3
4
Va.

poco *pp* *pp*

338

1.2
3
4
1
2
3
4
Va.

mp *pp* *pp*

348 unis.

Vn.I
Vn.II
Va.
Vc.

mp
f
f

366

Vn.I
Vn.II
Va.
Vc.

384 G.P.

Vn.I
Vn.II
Va.
Vc.

G.P.
G.P.
G.P.
G.P.

396

Vn.I
Vn.II
Va.
Vc.

406

Vn.I *ff mf sub.*

Vn.II *ff mf sub.*

Va. *ff mf sub.*

Vc. *ff mf sub.*

413

Vn.I

Vn.II

Va.

Vc.

419

Vn.I *p*

Vn.II *p*

Va. *p*

Vc. *p*

422

Vn.I 1.2 G.P. *pp*

Vn.I 3.4 G.P. *pp*

Vn.II G.P.

Va. 1.2 G.P. *pp*

Va. 3.4 G.P. *pp*

Vc. G.P.

426

1.2 Vn.I
3-4
1.2 Va.
3-4

Detailed description: This system contains measures 426, 427, and 428. It features four staves: Violin I (1.2 and 3-4 parts) and Viola (1.2 and 3-4 parts). All parts play a continuous eighth-note pattern with various accidentals (sharps, flats, naturals) across the measures.

429

1.2 Vn.I
3-4
1.2 Va.
3-4
1 Vc.
2
3
4

pp

Detailed description: This system contains measures 429, 430, and 431. It features four staves for Violin I (1.2 and 3-4 parts) and four staves for Violoncello (1, 2, 3, and 4 parts). Measures 429 and 430 show the Violin I parts playing eighth notes while the Violoncello parts are silent. In measure 431, all parts play eighth notes. The Violoncello parts are marked with *pp* (pianissimo).

432

1 Vc.
2
3
4

Detailed description: This system contains measures 432, 433, and 434. It features four staves for Violoncello (1, 2, 3, and 4 parts). All parts play a complex eighth-note pattern with many accidentals throughout the system.

435

1 Vc.
2
3
4

Detailed description: This system contains measures 435, 436, and 437. It features four staves for Violoncello (1, 2, 3, and 4 parts). All parts continue with the complex eighth-note pattern and accidentals from the previous system.

438

1
2
3
4

Vc.

Detailed description: This system contains measures 438, 439, and 440. It features four staves for Violoncello (Vc.), numbered 1 through 4. The music is written in bass clef. Measure 438 has a whole rest on staff 1, followed by eighth-note patterns on staves 2, 3, and 4. Measures 439 and 440 continue with similar rhythmic patterns across all four staves.

441

1
2
3
4

Va.

1
2
3
4

Vc.

pp

Detailed description: This system contains measures 441, 442, and 443. It features four staves for Violini (Va.), numbered 1 through 4, and four staves for Violoncello (Vc.), numbered 1 through 4. The Violini staves are in alto clef and play a melodic line starting in measure 441, marked *pp*. The Violoncello staves continue with their rhythmic accompaniment from the previous system.

444

1
2
3
4

Va.

1
2
3
4

Vc.

Detailed description: This system contains measures 444, 445, and 446. It features four staves for Violini (Va.), numbered 1 through 4, and four staves for Violoncello (Vc.), numbered 1 through 4. The Violini staves continue their melodic line, and the Violoncello staves continue their accompaniment. The system concludes with a double bar line and repeat dots in the final measure of the Vc. 1 staff.

447

1
2
3
4
Va.

1
2
3
4
Vc.

Detailed description: This block contains the musical notation for measures 447 through 449. It features two main sections: Violins (Va.) and Cellos (Vc.). The Violin section consists of four staves (1-4) in treble clef, 3/4 time. The Cello section consists of four staves (1-4) in bass clef, 3/4 time. The music is characterized by a steady eighth-note accompaniment in the lower parts and more melodic lines in the upper parts. Measure 449 ends with a double bar line.

450

unis.

Vn.I

Vn.II

1
2
3
4
Va.

1
2
3
4
Vc.

pp

pp

Detailed description: This block contains the musical notation for measures 450 through 452. It features Violins (Vn.I, Vn.II) and Cellos (Vc.). The Violin section has two staves (Vn.I, Vn.II) in treble clef, 3/4 time. The Cello section has four staves (1-4) in bass clef, 3/4 time. The music continues with the eighth-note accompaniment. In measure 450, the Violin I and II parts have rests. In measure 451, they enter with a melodic line. In measure 452, they play a unison note (indicated by 'unis.') with a piano (*pp*) dynamic. The Cello section continues with its accompaniment throughout.

453

Vn.I
Vn.II
1
2
Va.
3
4
1
2
Vc.
3
4

456

Vn.I
Vn.II
1
2
Va.
3
4
1
2
Vc.
3
4

mf
mf
pp
pp
pp
pp

459

The musical score consists of the following parts and staves:

- Vn.I:** Four staves (1-4) in treble clef with a key signature of one flat. Measures 1-2 contain whole notes. Measure 3 contains eighth-note patterns.
- Vn.II:** Four staves (1-4) in treble clef with a key signature of one flat. Measures 1-2 contain eighth-note patterns. Measure 3 contains eighth-note patterns.
- Va.:** Four staves (1-4) in alto clef with a key signature of one flat. Measures 1-2 contain eighth-note patterns. Measure 3 contains eighth-note patterns.
- Cb.:** One staff in bass clef with a key signature of one flat. Measures 1-2 are silent. Measure 3 contains two half notes.

Dynamic markings include *pp* (pianissimo) for the strings and *p* (piano) for the double bass in measure 3.

462

1 *poco cresc.*

2 *poco cresc.*

Vn.I

3 *poco cresc.*

4 *poco cresc.*

1 *poco cresc.*

2 *poco cresc.*

Vn.II

3 *poco cresc.*

4 *poco cresc.*

1 *poco cresc.*

2 *poco cresc.*

Va.

3 *poco cresc.*

4 *poco cresc.*

1 *pp* *poco cresc.*

2 *pp* *poco cresc.*

Vc.

3 *pp* *poco cresc.*

4 *pp* *poco cresc.*

Cb. *poco cresc.*

465

This musical score page, numbered 34, covers measures 465 to 485. It features a full orchestral string section (Violins I and II, Violas, Cellos, and Double Basses) and a woodwind section (Clarinets and Bassoons). The score is written in a key signature of two flats (B-flat major or D-flat minor) and a 4/4 time signature. The dynamics are consistently marked as *mp* (mezzo-piano). The string parts consist of rhythmic patterns of eighth and sixteenth notes, often with slurs. The woodwind parts feature more melodic lines with some grace notes and slurs. The page number 465 is located at the top left of the first staff.

1 *mp*

2 *mp*

Vn.I 3 *mp*

4 *mp*

1 *mp*

Vn.II 2 *mp*

3 *mp*

4 *mp*

1 *mp*

Va. 2 *mp*

3 *mp*

4 *mp*

1 *mp*

Vc. 2 *mp*

3 *mp*

4 *mp*

Cb. *mp*

468

1 *pp*

2 *pp*

3 *pp*

4 *pp*

Vn.I

1 *pp*

2 *pp*

3 *pp*

4 *pp*

Vn.II

1 *pp*

2 *pp*

3 *pp*

4 *pp*

Va.

1 *pp*

2 *pp*

3 *pp*

4 *pp*

Vc.

1 *pp*

2 *pp*

3 *pp*

4 *pp*

Cb. *pp*

471

The image shows a page of a musical score for strings and woodwinds, starting at measure 471. The score is organized into several systems. The first system contains four staves for Violin I (Vn. I), numbered 1 through 4. Each staff has a treble clef and a key signature of one sharp (F#). The first two measures of this system feature a continuous sixteenth-note pattern with a slur over the notes. The third measure of this system is marked with the instruction "detached". The second system contains four staves for Violin II (Vn. II), numbered 1 through 4. The first two measures are mostly rests, with some notes appearing in the second and third measures. The third measure of this system is marked with the instruction "mf". The third system contains four staves for Viola (Va.), numbered 1 through 4. Each staff has an alto clef and a key signature of one sharp. The first two measures feature a continuous sixteenth-note pattern with a slur. The fourth system contains four staves for Violoncello (Vc.), numbered 1 through 4. Each staff has a bass clef and a key signature of one sharp. The first two measures feature a continuous sixteenth-note pattern with a slur. The fifth system contains one staff for Contrabass (Cb.) with a bass clef and a key signature of one sharp, which is mostly a rest. At the bottom right of the page, there is a long horizontal line with the instruction "mf" below it.

Vn. I

Vn. II

Va.

Vc.

Cb.

detached

mf

mf

mf

mf

mf

474

Vn.I
1
2
3
4

Vn.II
1
2
3
4

Va.
1
2
3
4

Vc.
1
2
3
4

Cb.

pp

detached

p

Detailed description: This page of a musical score covers measures 474, 475, and 476. It features five main instrumental sections: Violin I (Vn.I), Violin II (Vn.II), Viola (Va.), Violoncello (Vc.), and Contrabass (Cb.). The Vn.I section consists of four staves (1-4) with a melodic line of eighth notes. The Vn.II section also has four staves (1-4), with the first three playing a rhythmic pattern of eighth notes and the fourth playing a similar pattern. The Va. section has four staves (1-4) playing a steady eighth-note accompaniment, marked 'detached'. The Vc. section has four staves (1-4) playing a similar eighth-note accompaniment. The Cb. part is a single staff at the bottom, mostly silent with a few notes. Dynamics include 'pp' (pianissimo) for the violins and 'p' (piano) for the cellos and contrabass. The score is written in treble clef for violins and violas, and bass clef for cellos and contrabass.

477

Vn.I
2
3
4

Vn.II
1
2
3
4

Va.
1
2
3
4

Vc.
1
2
3
4

Cb.

mf *pp* *p*