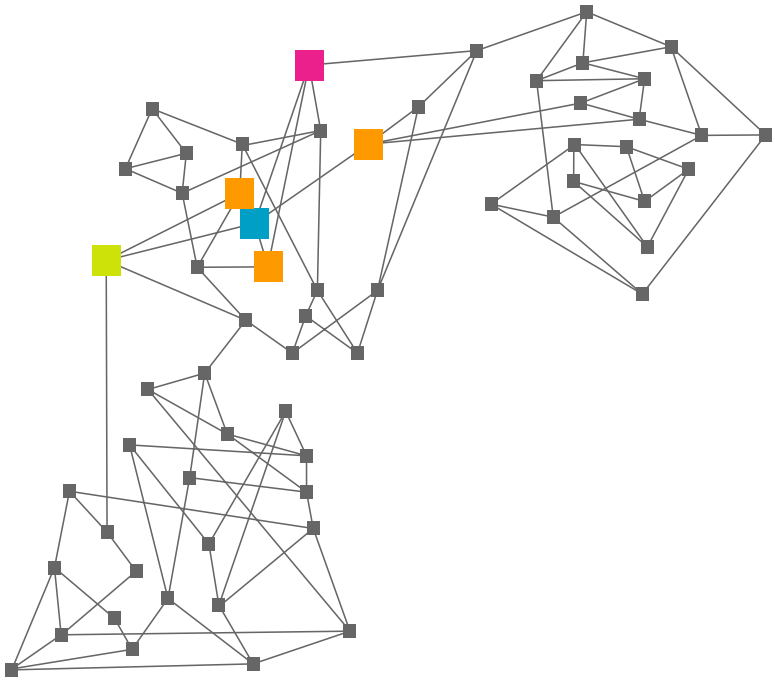


Graph Theory

Jason Freeman

For solo violin or solo cello

Graph Theory

Graph Theory is a 2005 commission of New Radio and Performing Arts, Inc., (aka Ether-Ore) for its Turbulence web site. It was made possible with funding from The Greenwall Foundation. It was created in collaboration with designer Patricia Reed and violinist Maja Cerar.

For more information or to download the most current version of this score, please visit:

http://turbulence.org/Works/graphtheory/

or

http://www.jasonfreeman.net

Graph Theory

About the piece:

Graph Theory seeks to connect composition, listening, and concert performance by coupling an acoustic work for solo violin or solo cello to an interactive web site. On the web site, users navigate among sixty-one short, looping musical fragments to create their own unique path through the composition. From each fragment, users have three or four choices about where to go next.

The navigation choices which users make affect future concert performances of the work. Before each performance, the soloist prints out a new copy of the score from the web site. That score presents her with a fixed path through the piece; the order of the fragments is influenced by the decisions that users have made while using the site.

Presenting Graph Theory in Concert Performance:

No technology is required to perform Graph Theory in concert, just a violin or cello and a copy of this score. But please encourage the audience to access the Graph Theory web site before the concert. At the very least, please include the web site address (http://turbulence.org/Works/freeman) in promotional materials for the concert.

In addition, you may set up one or more computers (equipped with Internet connections and headphones) in the lobby of the concert hall so that audience members may access the site before and after the concert and during intermission.

Print out the Graph Theory score from the web site as close to the performance time as possible. While you should definitely practice Graph Theory before performing it, please do not look at the version of the score you intend to perform until you walk on stage to perform it!

Duration:

The duration of Graph Theory varies with each version of the score but usually runs between 5 and 10 minutes.

Notation:

- The score presents a fixed ordering of one-measure repeating musical fragments.
- Above each fragment is a number (e.g. ~5x) indicating the approximate number of times to repeat the fragment.
- The fragments are printed in three columns per page; play the first column from top to bottom, then the second column from top to bottom, then the third.
- There should never be any space or silence between fragments.
- When specific strings are not notated, use your discretion to decide which string(s) to use.
- Tempo for all fragments is approximately  = 60.
- All harmonics are natural harmonics. They are notated as the sounding note along with the string to use.
- Accidentals apply for the duration of each measure, but only in the octave in which they appear.
- When the first and last notes of a fragment have slurs extending into and out of them, the first and last notes should be slurred together on each repeat.
- When a slur extends over the entire fragment and beyond the last note of the fragment, the slur should continue over as many repeats as possible. When you do need to change bowing, do so as smoothly as possible.
- You may use vibrato (or not) as you see fit.

Additional Notes:

Since I composed these fragments without knowing how they would be ordered in this version of the score, please treat the notation as a starting point, not as a strict document. Use your musical intuition with regards to fingerings, articulations, and expressive markings. Feel free to add rubato and additional expressions. I even encourage you to ignore expressive markings on the score if it will help to convey a musical gesture or give the music more forward momentum. I also encourage you to experiment with larger scale gestures over several repetitions of a fragment (e.g. ritardandos, accelerandos, crescendos, and decrescendos).

Finally, if the score is too long for your performance needs, feel free to reduce the number of repetitions for each fragment. You may even play through each fragment just a single time if you wish.

Most importantly: have fun!

If you have any questions — musical, technical, logistical, or otherwise — please contact me via my web site (http://www.jasonfreeman.net). And if you perform the piece, please drop me an e-mail to let me know.

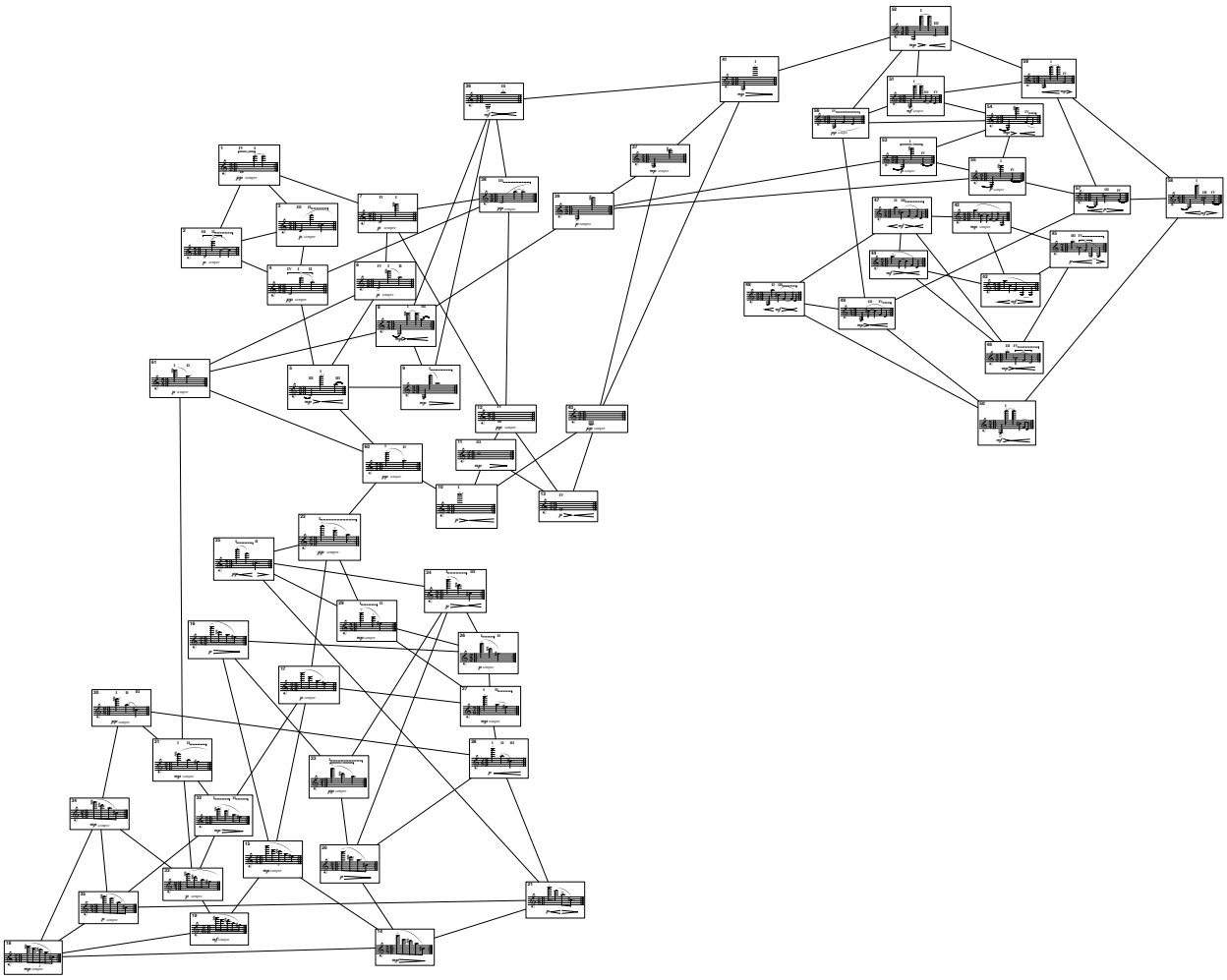
Jason Freeman
May 31, 2006

This version of the score was created from 1000 choices made by 50 different users between 2010-05-11 01:15:46 and 2010-06-01 05:19:41.

Graph Theory

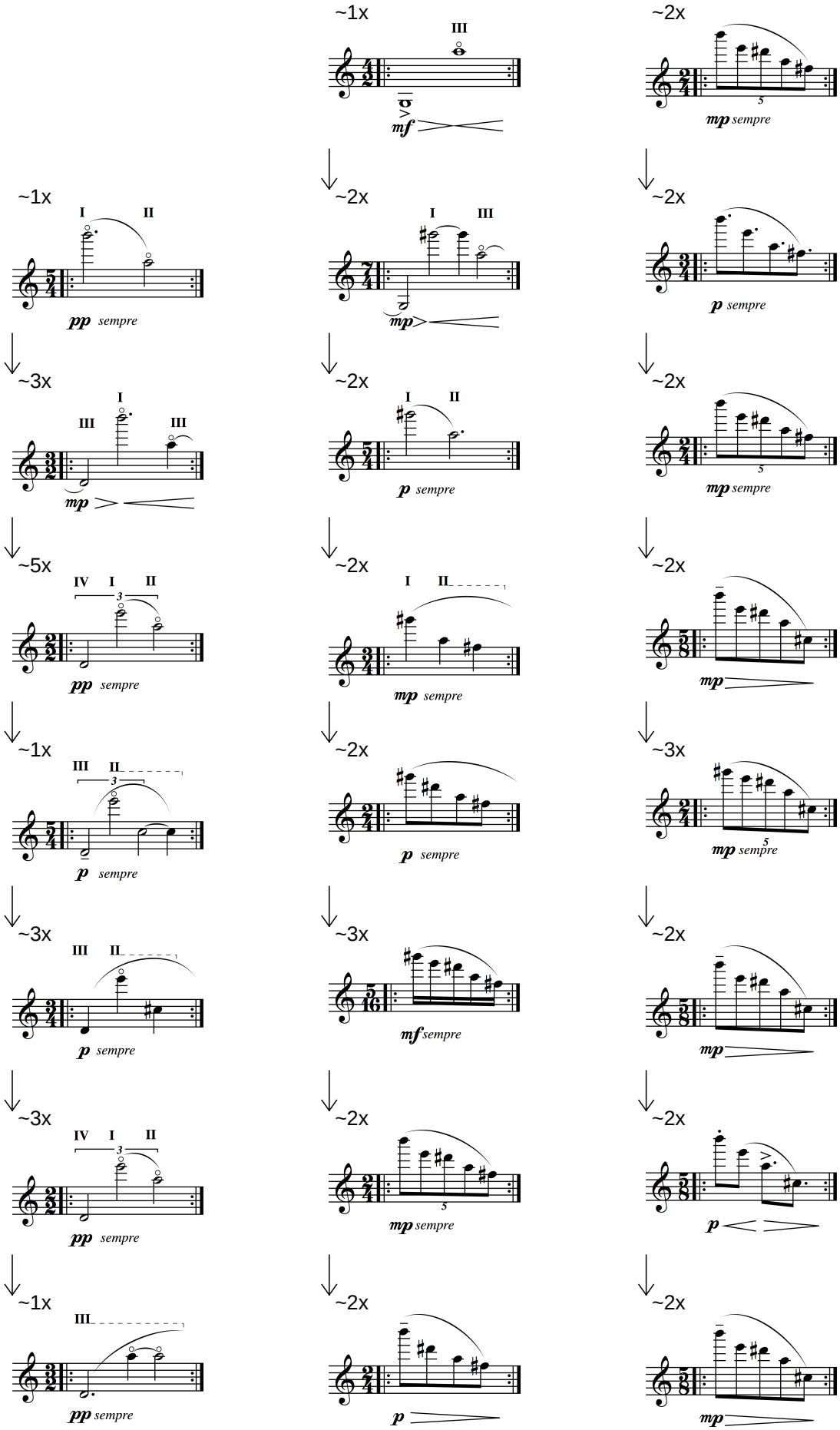
The Graph:

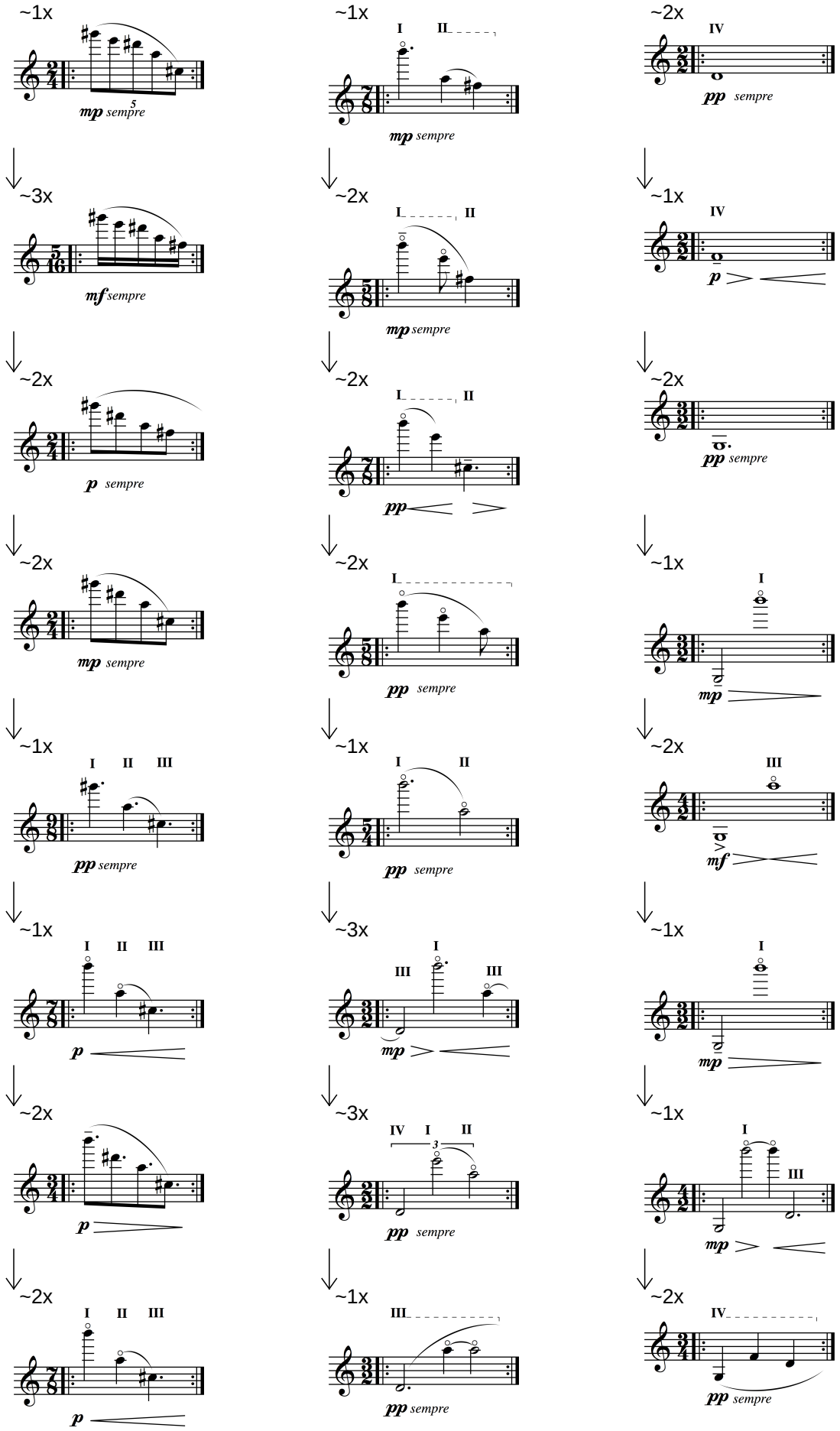
This graph shows all of the musical fragments and all of the possible connections between them. Do not perform from this graph; it is just to illustrate how the web site was constructed. Instead, use the score that begins on the following page.

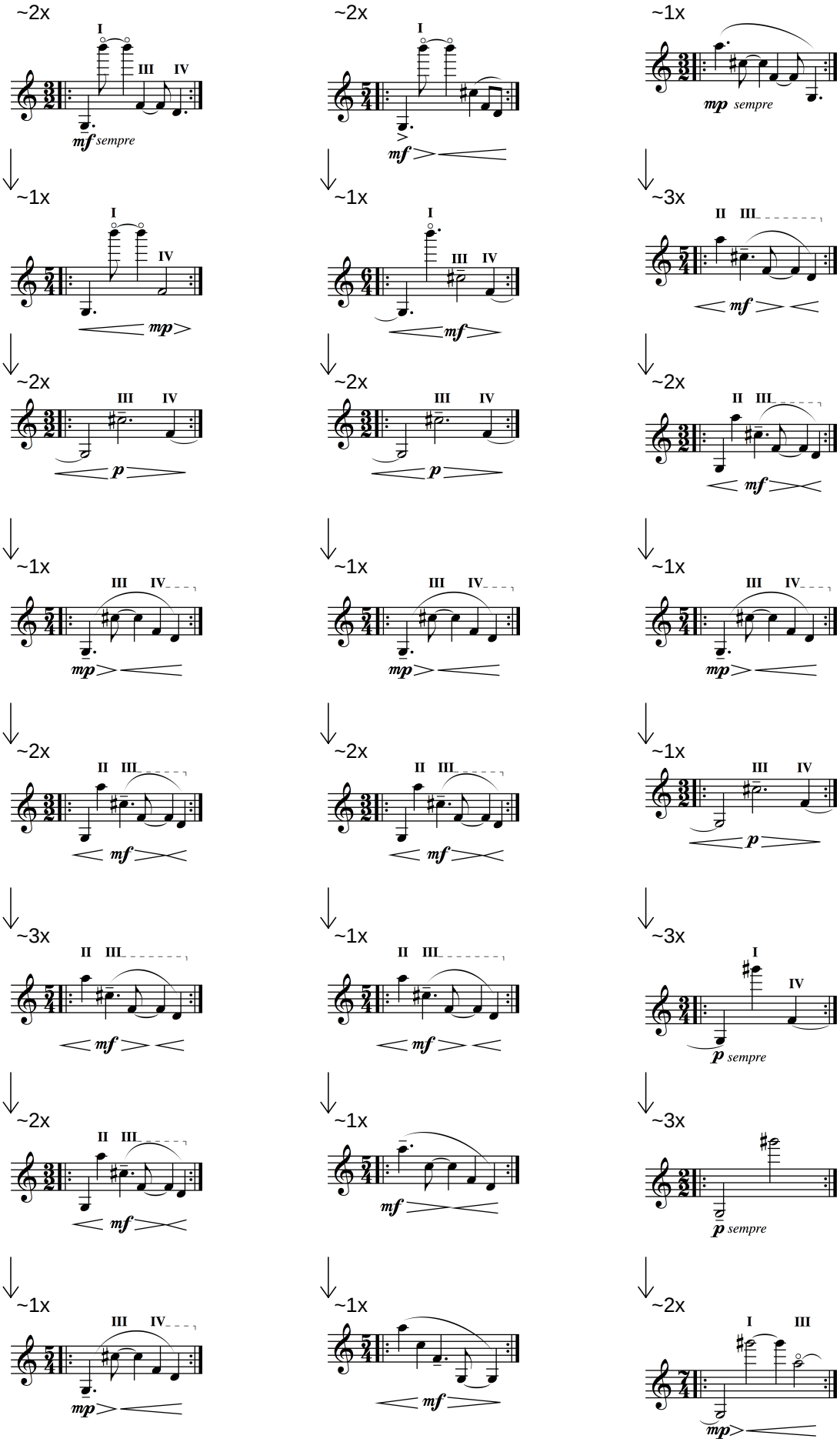


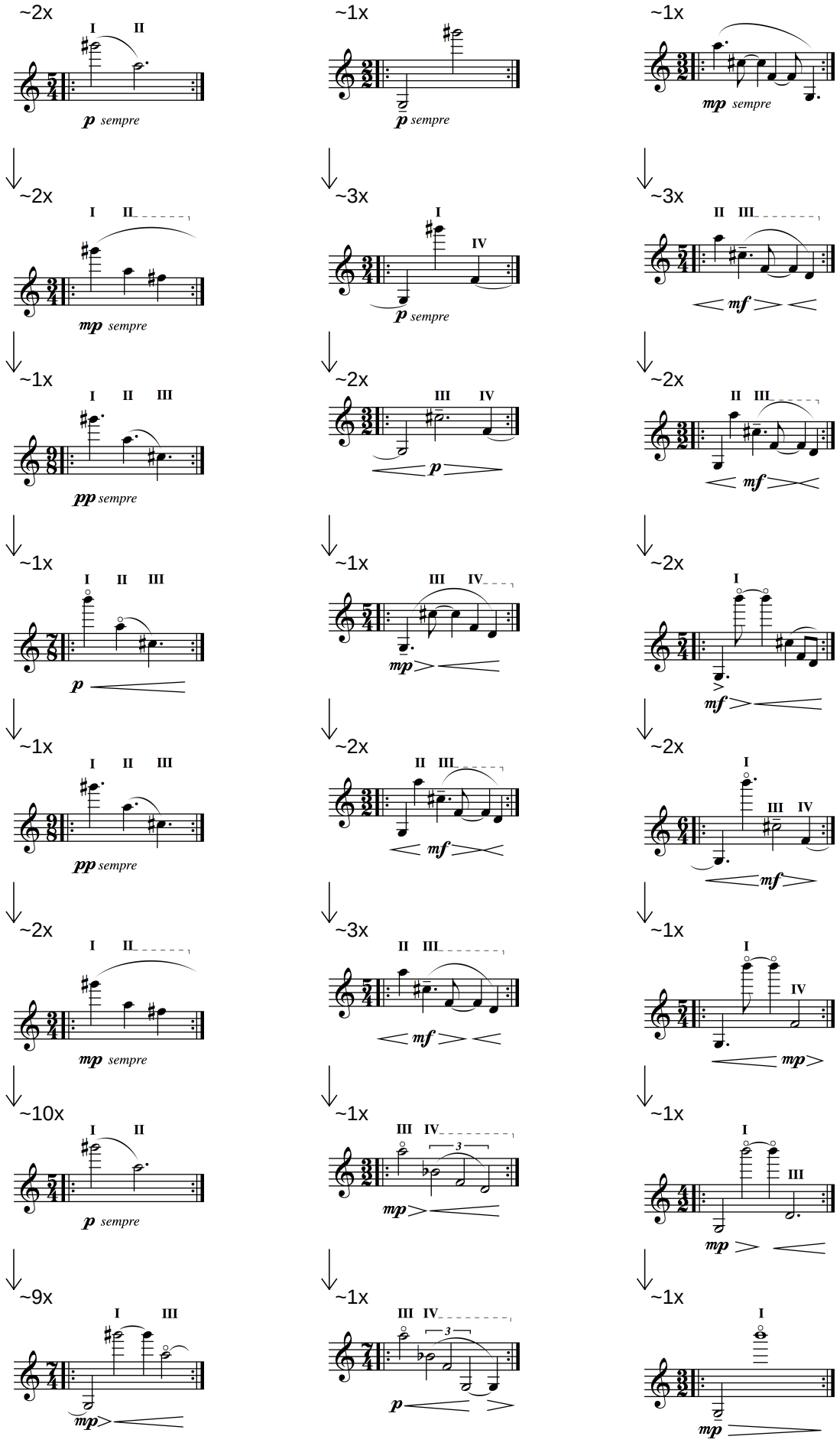
The Score:

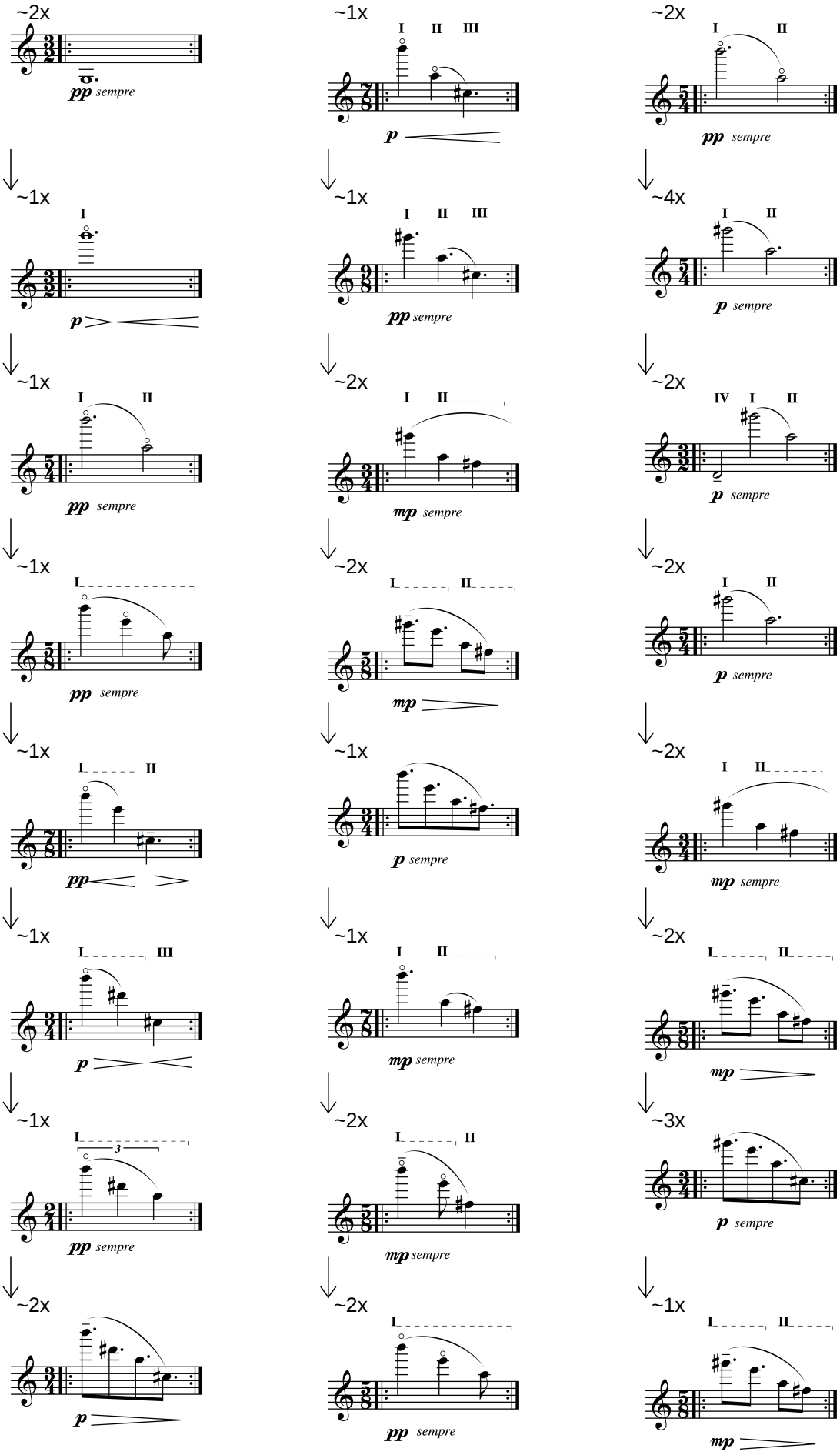
Generated on June 1, 2010

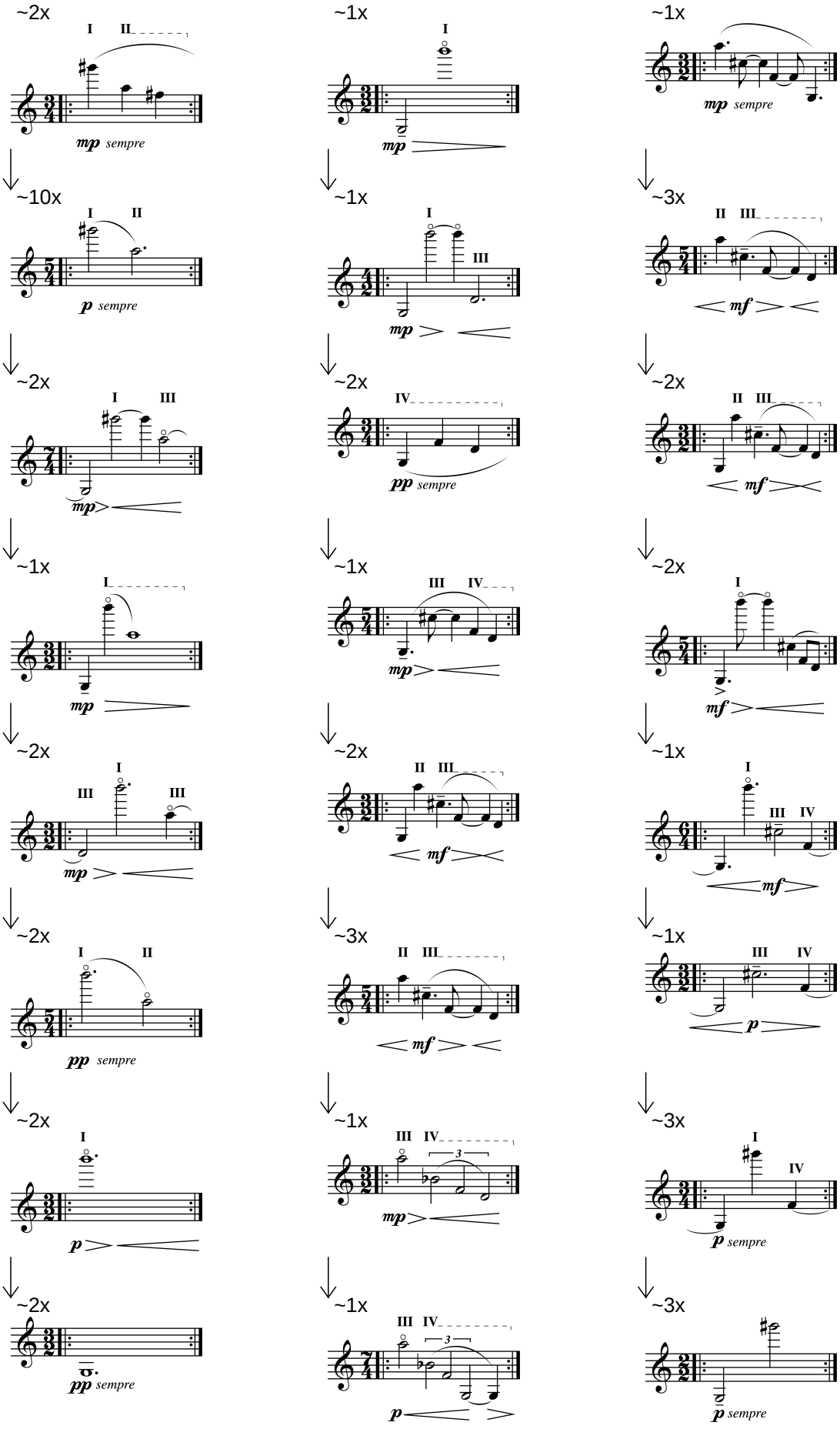


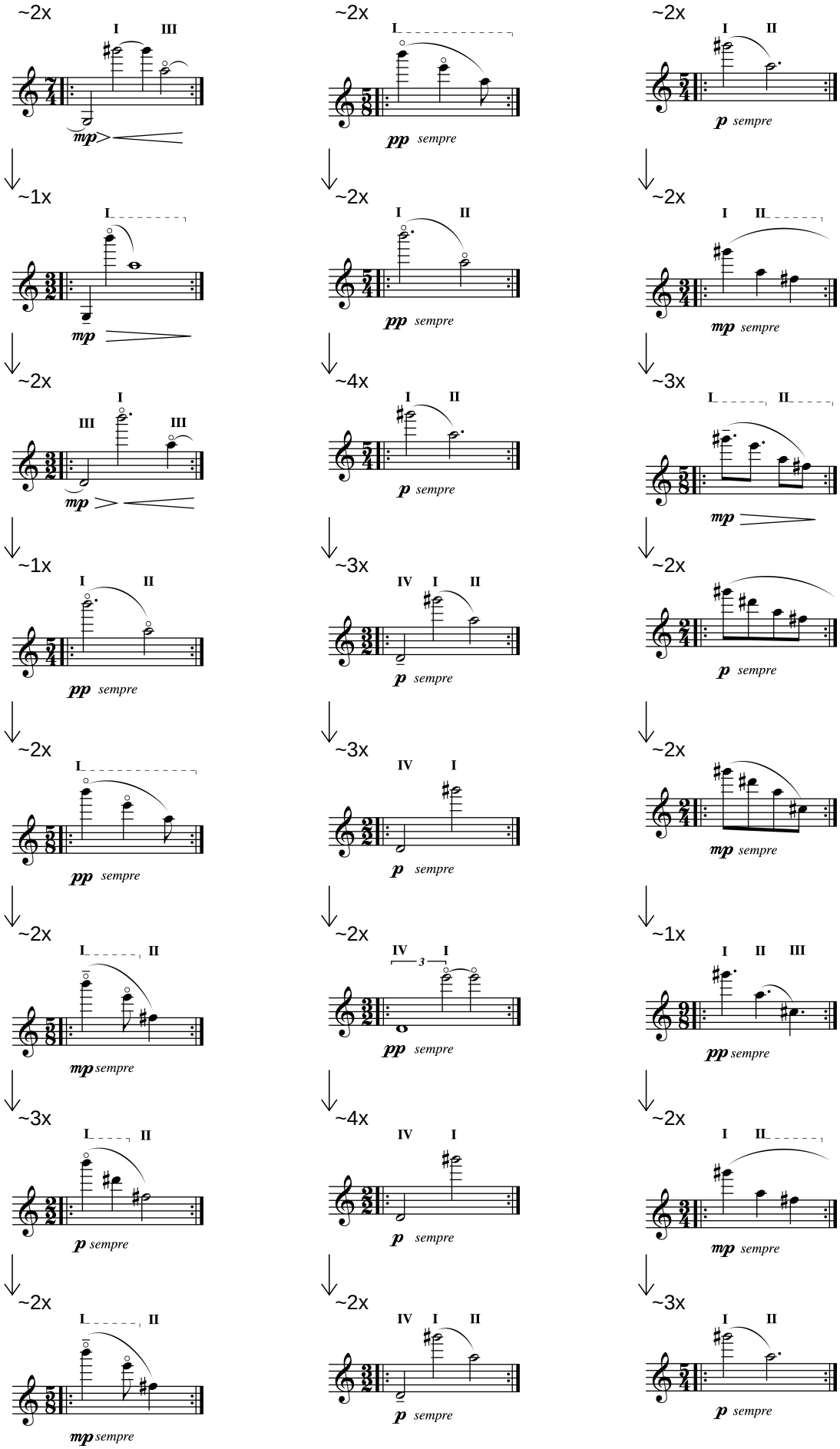

~1x
mp sempre
~3x
mf sempre
~2x
p sempre
~2x
mp sempre
~1x
pp sempre
~1x
p
~2x
p
~2x
p
~1x
mp sempre
~2x
mp sempre
~2x
pp sempre
~2x
pp sempre
~1x
pp sempre
~3x
mp
~3x
pp sempre
~1x
pp sempre
~2x
pp sempre
~1x
mp sempre
~2x
mf
~1x
mp
~1x
mp
~1x
mp
~2x
pp sempre

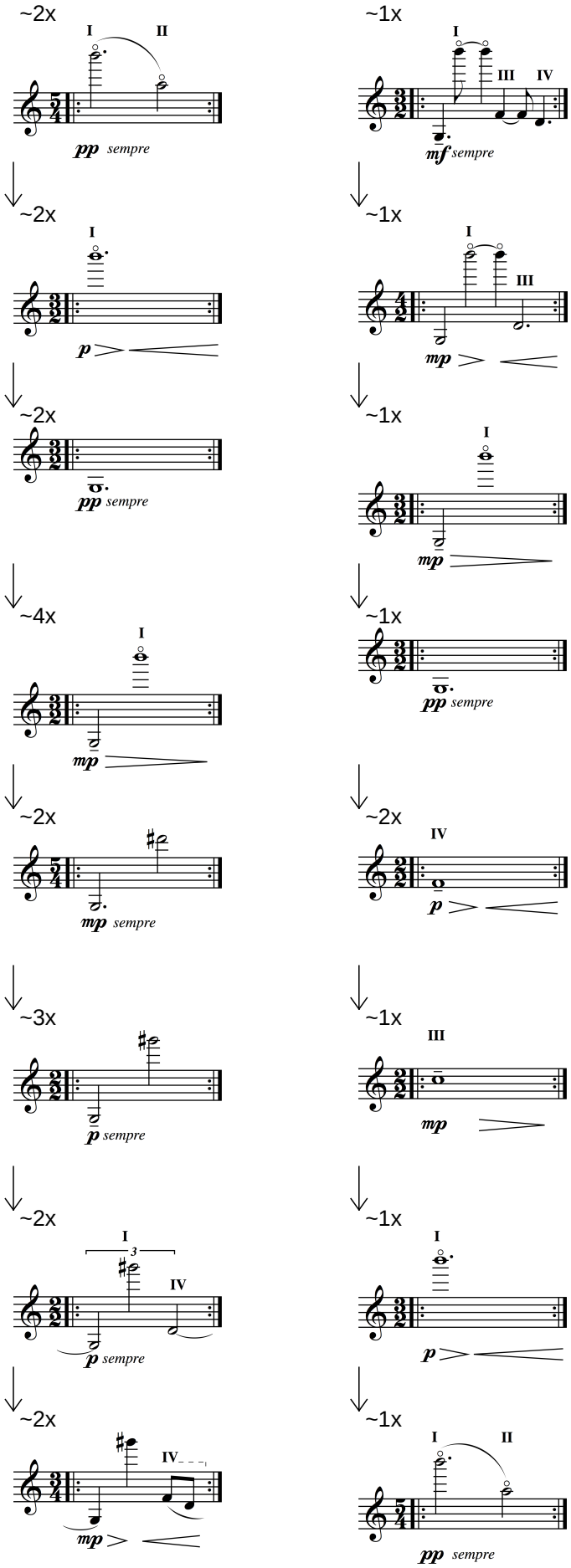

~2x
I
III
IV
mf sempre
~2x
I
mf
~1x
mp sempre
~1x
I
IV
mp
~1x
I
III
IV
mf
~3x
II
III
mf
~2x
III
IV
p
~2x
III
IV
p
~2x
II
III
mf
~1x
III
IV
mp
~1x
III
IV
mp
~1x
III
IV
mp
~2x
II
III
mf
~2x
II
III
mf
~1x
III
IV
p
~3x
II
III
mf
~1x
II
III
mf
~3x
I
IV
p sempre
~2x
II
III
mf
~1x
mf
~3x
p sempre
~1x
III
IV
mp
~1x
mf
~2x
I
III
mp


~2x
I II
p sempre
~1x
p sempre
~1x
mp sempre
~2x
I II
mp sempre
~3x
I IV
p sempre
~3x
II III
mf
~1x
I II III
pp sempre
~2x
III IV
p
~2x
II III
mf
~1x
I II III
p
~1x
III IV
mp
~2x
I
mf
~1x
I II III
pp sempre
~2x
II III
mf
~2x
I
III IV
mf
~2x
I II
mp sempre
~3x
II III
mf
~1x
I
IV
mp
~10x
I II
p sempre
~1x
III IV
3
mp
~1x
I
III
mp
~9x
I III
mp
~1x
III IV
3
p
~1x
I
mp


~2x
pp sempre
~1x
I II III
p
~2x
I II
pp sempre
~1x
I
p
~1x
I II III
pp sempre
~4x
I II
p sempre
~1x
I II
pp sempre
~2x
I II
mp sempre
~2x
IV I II
p sempre
~1x
I
pp sempre
~2x
I II
mp sempre
~2x
I II
p sempre
~1x
I II
pp
~1x
I II
p sempre
~2x
I II
mp sempre
~1x
I III
p
~1x
I II
mp sempre
~2x
I II
mp
~1x
I
3
pp sempre
~2x
I II
mp sempre
~3x
p sempre
~2x
p
~2x
I
pp sempre
~1x
I II
mp


~2x
I II
mp sempre
~10x
I II
p sempre
~2x
I III
mp
~1x
I
mp
~2x
III I III
mp
~2x
I II
pp sempre
~2x
I
p
~2x
pp sempre
~1x
I
mp
~1x
I
III
mp
~2x
IV
pp sempre
~1x
III IV
mp
~2x
II III
mf
~3x
II III
mf
~1x
III IV
mp
~1x
III IV
3
mp
~1x
III IV
3
p
~2x
II III
mf
~2x
II III
mf
~3x
II III
mf
~1x
III IV
p
~3x
I
IV
p sempre
~3x
p sempre


~2x
I III
mp
~1x
I
mp
~2x
III I III
mp
~1x
I II
pp sempre
~2x
I
pp sempre
~2x
I II
mp sempre
~3x
I II
mp
~2x
p sempre
~2x
mp sempre
~1x
I II III
pp sempre
~2x
I II
mp sempre
~3x
I II
p sempre
~2x
I II
mp sempre
~3x
I II
mp sempre
~2x
I II
pp sempre
~2x
I
pp sempre
~2x
I II
pp sempre
~4x
I II
p sempre
~3x
IV I II
p sempre
~3x
IV I
p sempre
~2x
IV 3 I
pp sempre
~4x
IV I
p sempre
~2x
IV I II
p sempre
~2x
I II
p sempre
~2x
I II
mp sempre
~3x
I II
p sempre


~2x
I
II
pp sempre
~2x
I
p
~2x
pp sempre
~4x
I
mp
~2x
mp sempre
~3x
p sempre
~2x
I
3
IV
p sempre
~2x
IV
mp
~1x
I
III
IV
mf sempre
~1x
I
III
mp
~1x
I
mp
~1x
pp sempre
~2x
IV
p
~1x
III
mp
~1x
I
p
~1x
I
II
pp sempre