EDGE

from TOUCHED BY MACHINE?

for wind quartet (flute, oboe, clarinet in A, bassoon)

Nigel Morgan

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About the piece

Between 1988 and 1991 Nigel Morgan created a sequence of four works, DUO (trombone and percussion), TRIO (violin, clarinet and piano), QUARTET (string quartet) and EDGE (wind quartet). These pieces, forming a CD-length concert called *TOUCHED BY MACHINE?*[1], were part of a sustained project to explore computer-assisted composition using the tools of the MIDI studio.

MIDI systems tend to encourage interaction with real-time processes: recording, improvisation, multi-tracking, complex layering, even sequencing, ordering and editing. However, the major factor of the composition act the composer wished to explore in *TOUCHED BY MACHINE?* was computer support for pre-composition: the considered creation and organization of the discrete elements that make up the basic material composers use to create a musical score. That said, in the composition of EDGE there was a mixture of machine-led improvisation in multiple parts and the off-line manipulation of algorithmic processes of interpolation and transformation of pitch, rhythm, articulation and dynamics.

EDGE uses as its composition environment two plug-in modules of the music sequencing software KCS (Keyboard Controlled Sequencer) created by Dr Emile Tobenfeld in 1985. The first module, responsible for the creation of the first section Improvisation, is called *Fingers*. This is essentially an improvising instrument controlled from the computer keyboard able to control four instrumental parts simultaneously. The second, known as the *Programmable Variations Generator* (PVG), was probably the first menu-driven algorithmic generator and editor commercially available that did not require any specialist knowledge of computer languages. This module was responsible for the second and third sections titled Interpolation and Transformation. PVG enabled the composer to explore quite elaborate 'what-ifs' in a multi-part composition.

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[1] This title comes from an article by Stephen Travis Pope called *Touched by Machine? – Composition and Performance in the Digital Age*. This text presents responses from composers who were asked the following questions: How have new technologies changed the process of composition and performance? What new possibilities are aesthetically and artistically relevant? How do the new tools allow us to use musical material differently?

Computer Music Journal: vol 19. No.3. Cambridge MA. MIT Press.

With PVG whole chains of edits, processes, and transformations could be executed simultaneously, taking in conventional musical devices such as transposition and inversion as well as more novel procedures such as the application of Gaussian distribution and probability curves to musical parameters.

Surrounding the technical aspect of EDGE there were two important elements:

The first was the composer's interest in the artist Bridget Riley, in particular her ability to engage the viewer actively in her monochrome paintings and then later her work with colour stripes. In her paintings it is the viewer's position in, and movement across, the pictorial space that appears to make the image 'move' playfully. The music that makes up the pieces in the *TOUCHED BY MACHINE?* sequence attempts something of the same, only with sound and the listener. It is also something of a journey reflecting Riley's artistic progress from black and white to colour.

The second was peculiar to EDGE itself. The score was commissioned with funds from the Eastern Arts Association for the Woodnotes Wind Quartet, an ensemble of post-graduate students from the Guildhall School of Music in London. This ensemble proposed a piece that might allow for more confrontational aspects of performance than is usual for the wind quartet. The use of unusual playing techniques, along with the use of amplification and electronics was discussed, as was the physical disposition of the players, particularly the dramatic effect of standing rather than sitting to play.

Notes for Performance

One of the prevailing ideas during the composition of this work was to create a very abstract and detached 'surface' of musical interaction between four very different musical instruments. Although a dynamic scheme has been put in place in the score this should be regarded as a starting point for more elaborate schemes devised by the performers: the work offers many possibilities for different perspectives to be opened up by altering the balance of the ensemble in much the same way as moving around a Bridget Riley painting engenders different qualities of experience for the viewer.

There is a simple scenario imagined for EDGE. The music begins with the ensemble seated in a semi-circle as for the performance of a piece of 'classical' music. In the eight or so bars leading up to *Interpolation* the players get up and move to a standing position behind four music stands directly facing the audience, rather in the manner of a rock band. In the section *Transformation* the ensemble become street performers / buskers and are encouraged to devise ensemble theatrical gestures and mime-like movements choreographed in such a way as to anticipate or reflect the changes of material and particularly the many pauses / silences threaded through the music. It will be clear that some element of memorization of this section may be required.

In the central movement of EDGE titled *Interpolation* a drum machine, or pre-recorded CD track is scored into the music. The use of this element is optional in performance but obligatory in rehearsal – to encourage the idea of playing in and against the tension of a fixed 'beat'. In the first performance a tape was triggered from an on-stage beat-box such as used by street dancers. In this revised edition of the score a CD-track, enhanced by samples and electroacoustic effects, has been prepared by Phil Legard and may be downloaded from the composer's website. Ensembles are encouraged to create their own version of this electronic accompaniment if they so wish.

Throughout the second and third sections of the work the ensemble may use rock and jazz articulations, adding grace notes, bends, slides, flutter-tongue and multi-phonics as appropriate. The limited pitch tessitura found in the parts is an invitation to the players to freely change register by transposing passages up or down an octave, even a fourth or a fifth as appropriate. The application of 'ghost' notes (a physical gesture without the sound as found in the scores of George Crumb) is also encouraged. If amplification and electronics are used this should be for the *Interpolation* section only, gradually fading out as the *Transformation* movement progresses.

The Clarinet in A part is written in the score at sounding pitch.

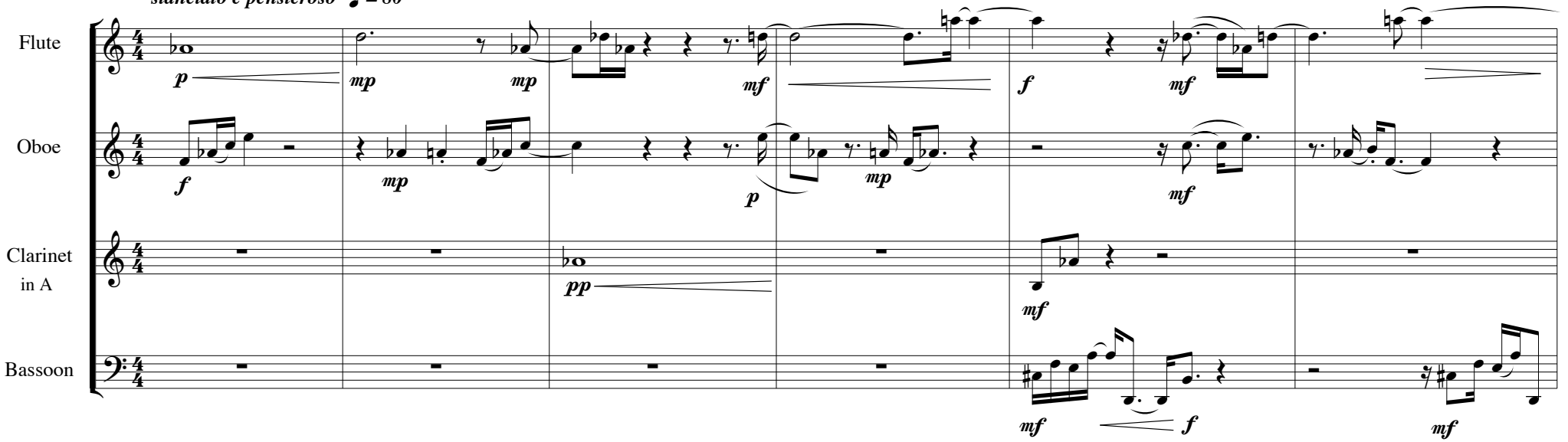
Coda

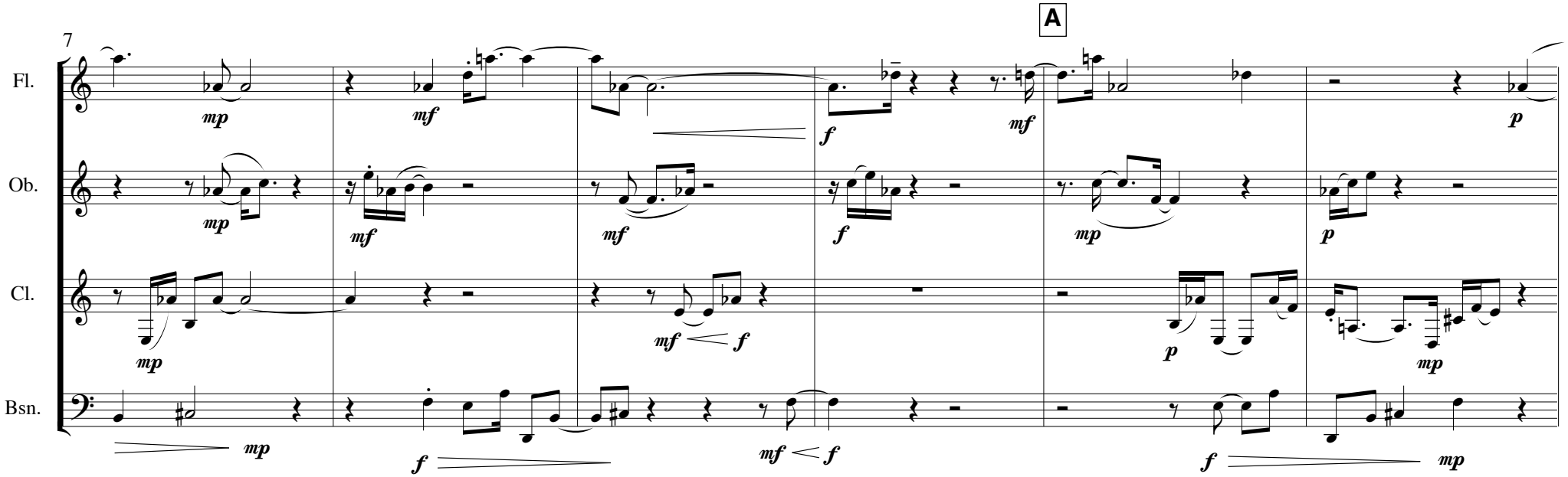
In a radio interview in 1987 Riley described her use of the coloured stripe that characterized her paintings of the early seventies as creating 'edge', a dynamic and vibrant constituent that contains the energy of colour. This quartet is all 'edge'.

EDGE

I. Improvisation

sianciato e pensieroso ♩ = 80





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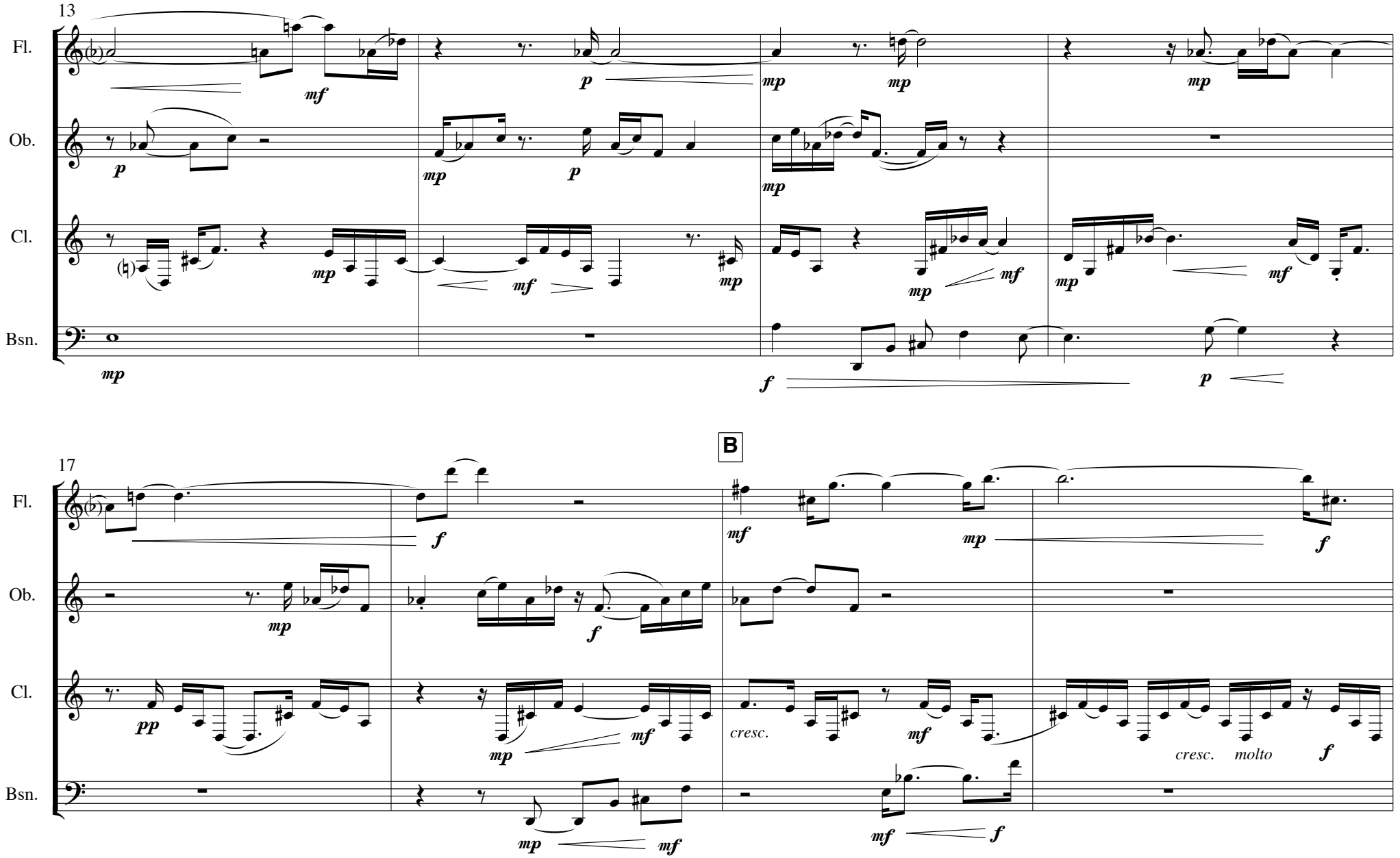
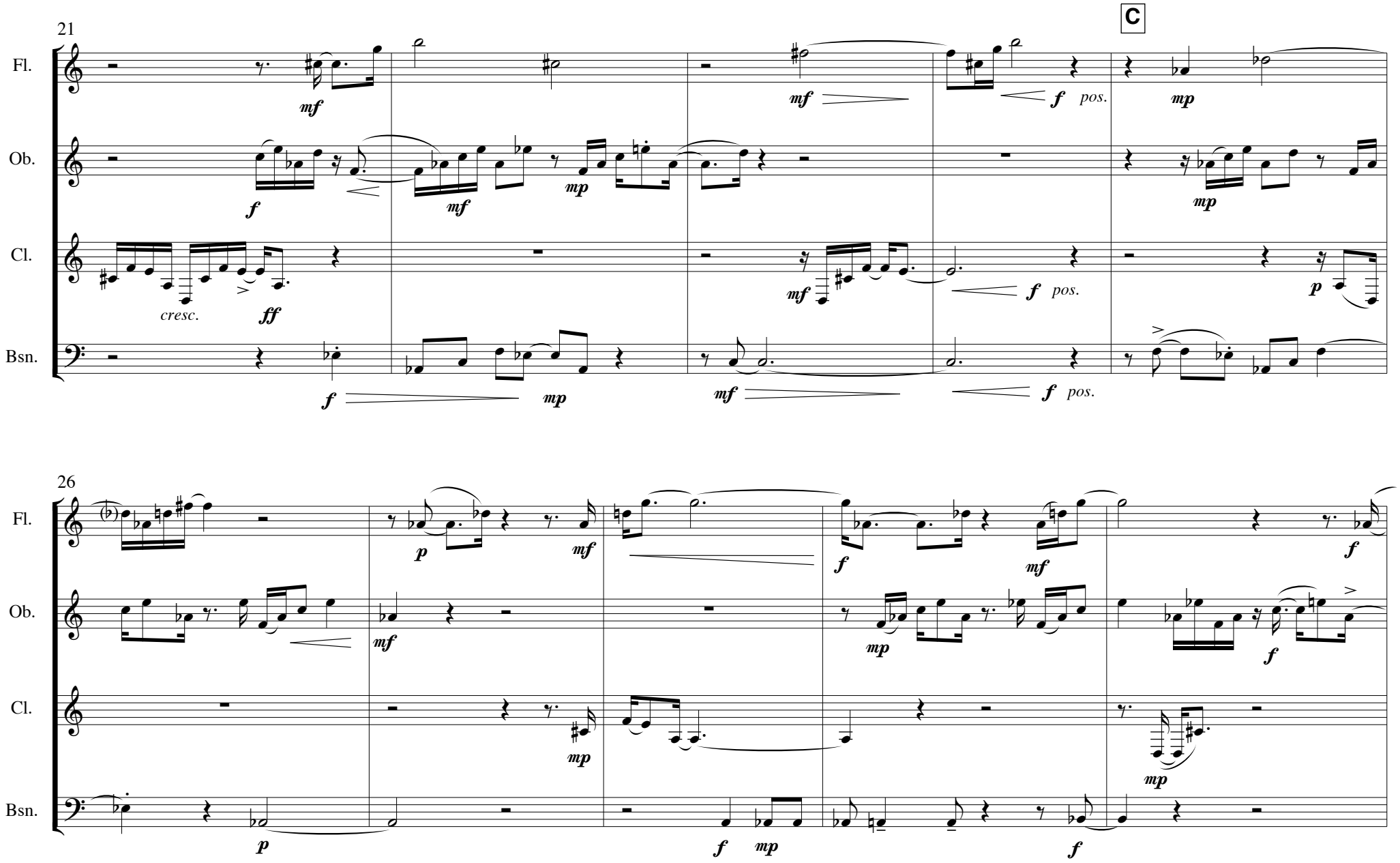

13
Fl.
Ob.
Cl.
Bsn.
17
B
cresc.
cresc. molto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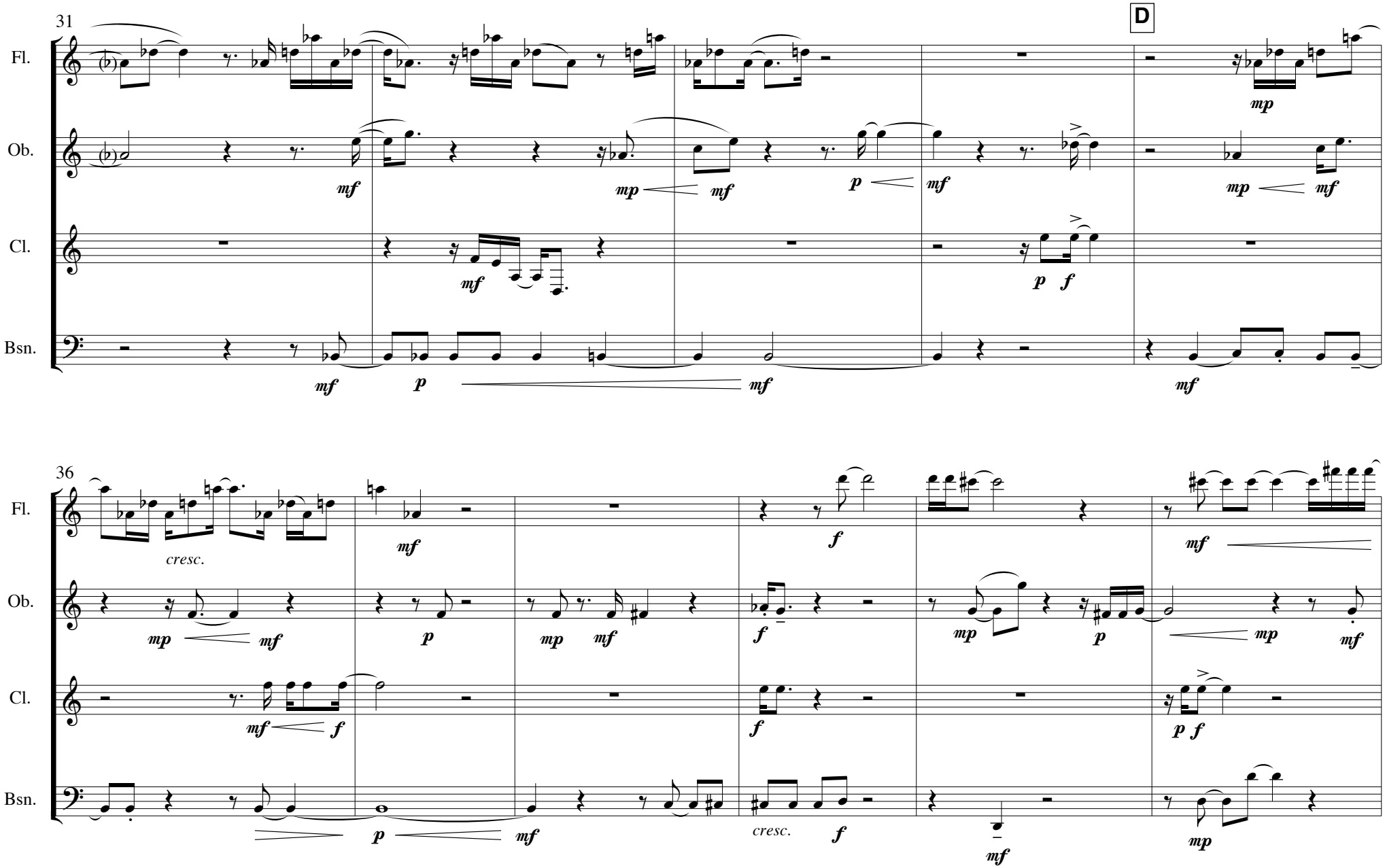
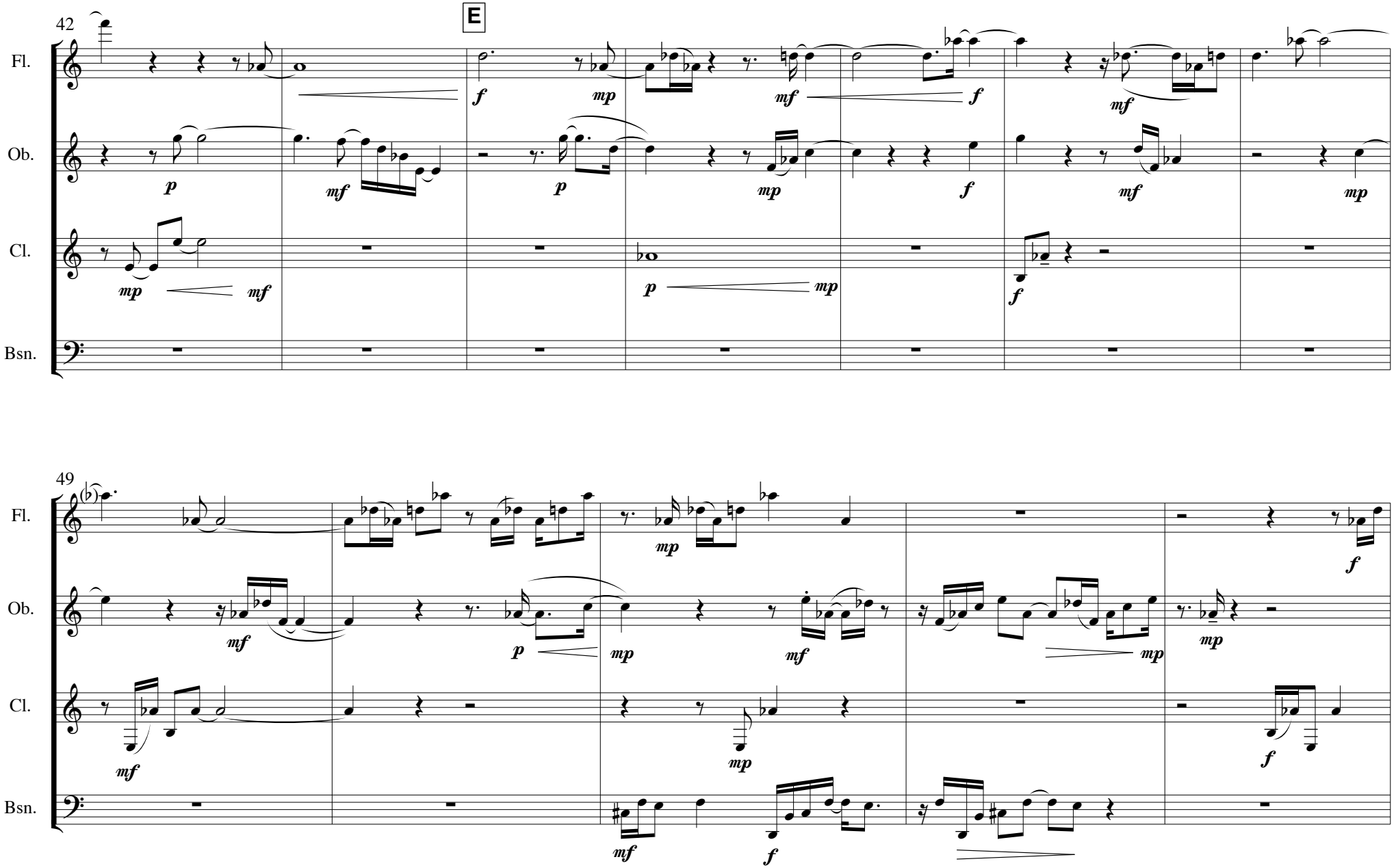
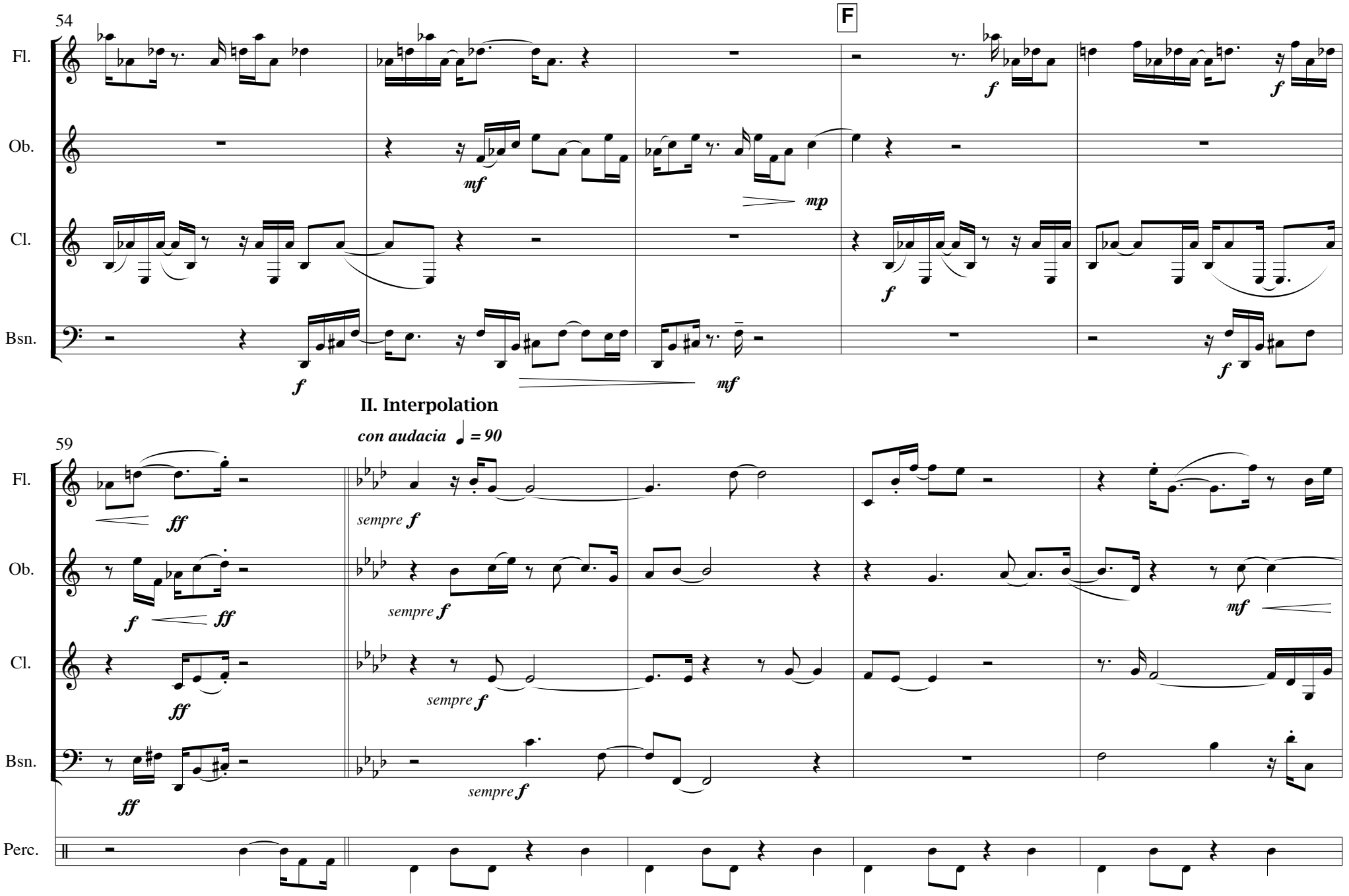
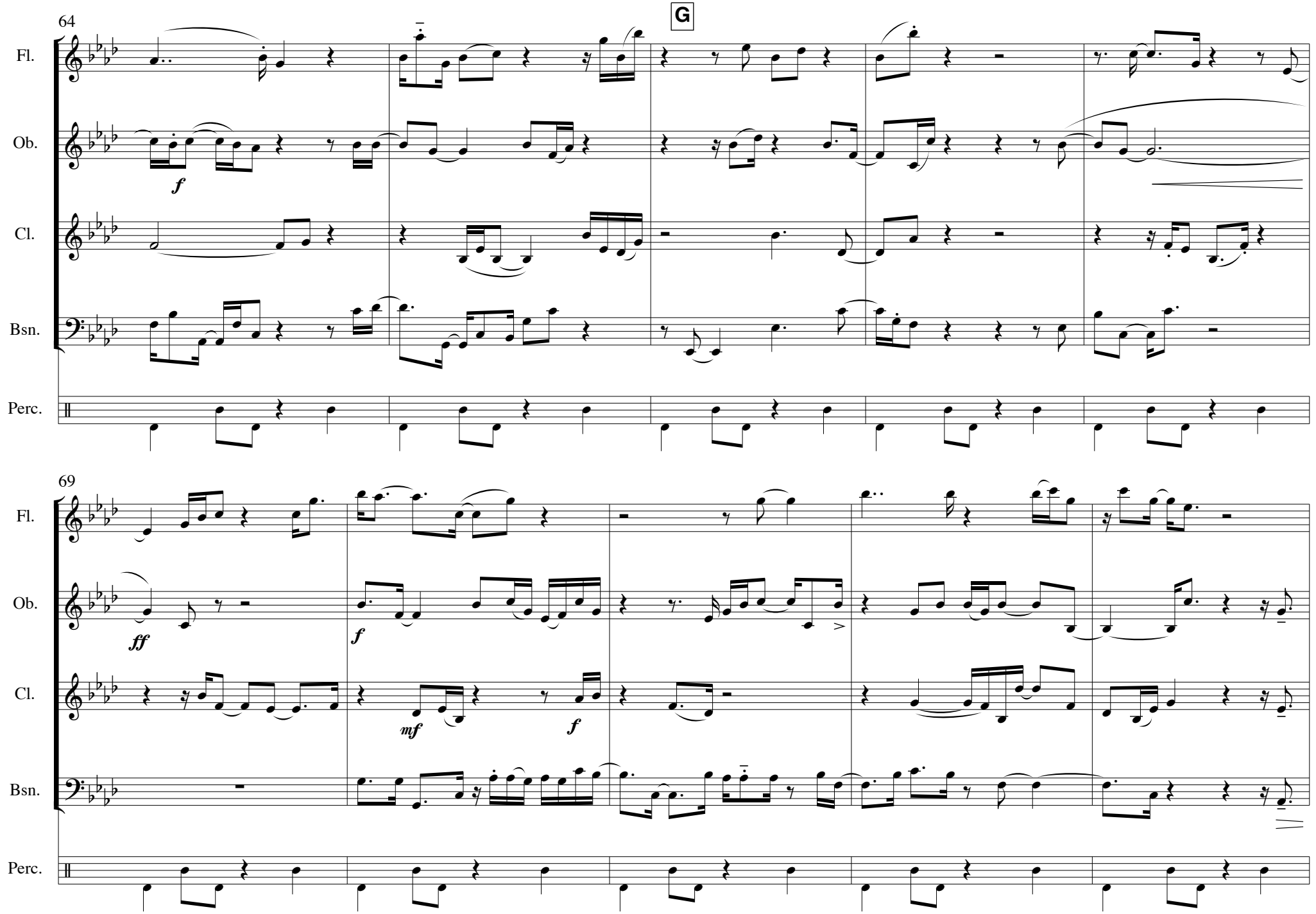
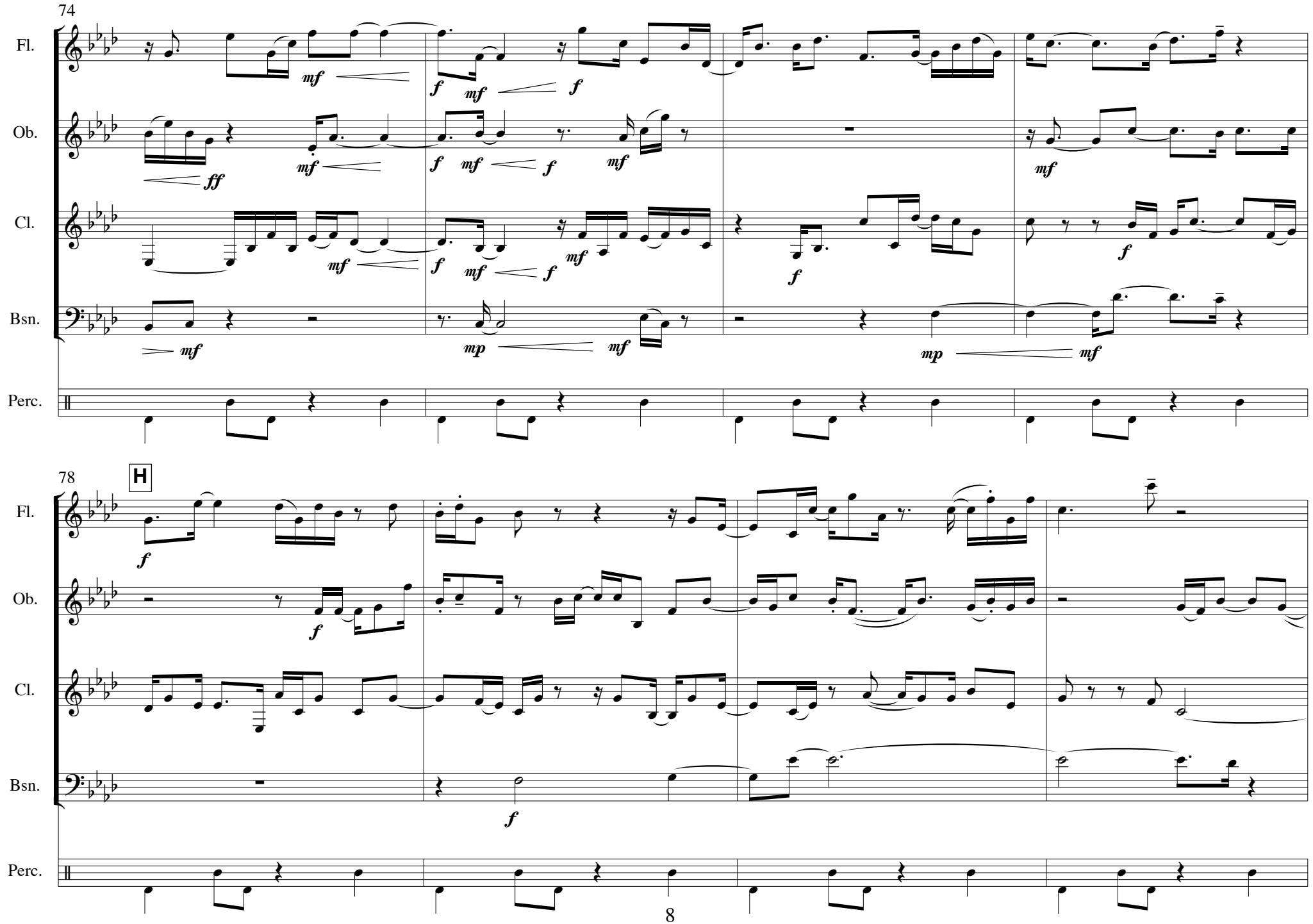
C
Fl.
Ob.
Cl.
Bsn.
mf
f
pos.
mp
cresc.
ff
p
26

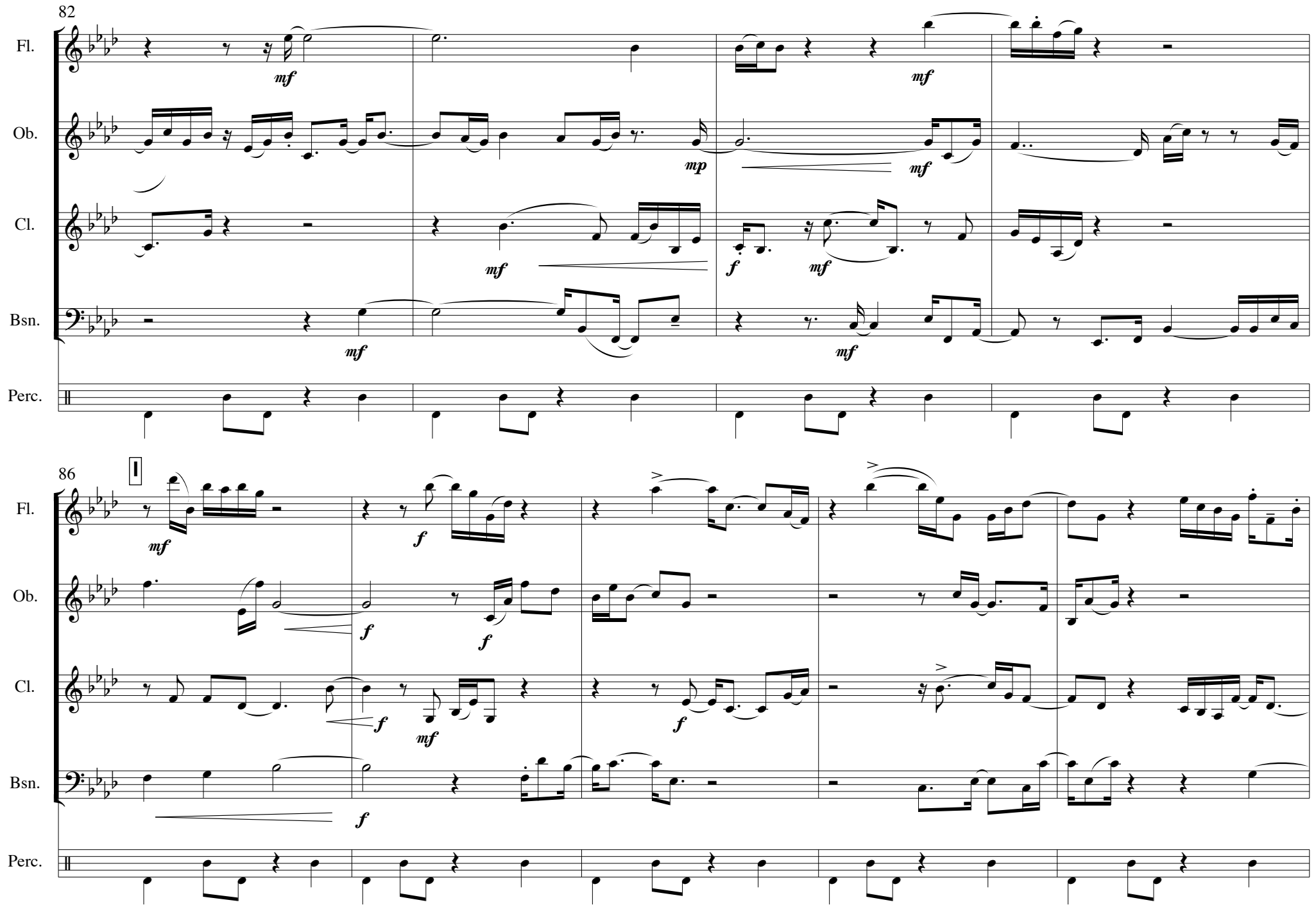

31
D
Fl.
Ob.
Cl.
Bsn.
36
cresc.
cresc.

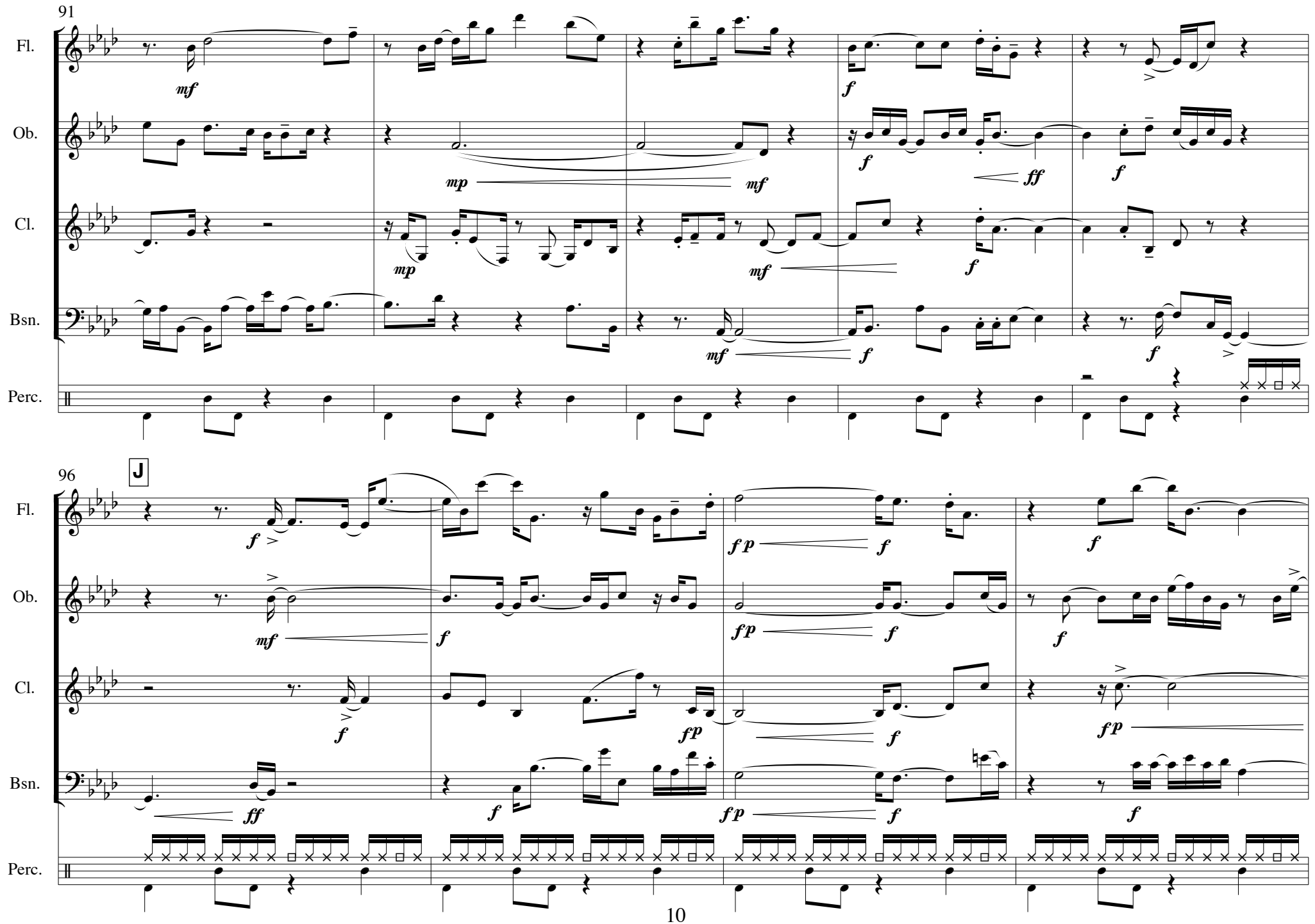

42
E
Fl.
Ob.
Cl.
Bsn.
49
Fl.
Ob.
Cl.
Bsn.

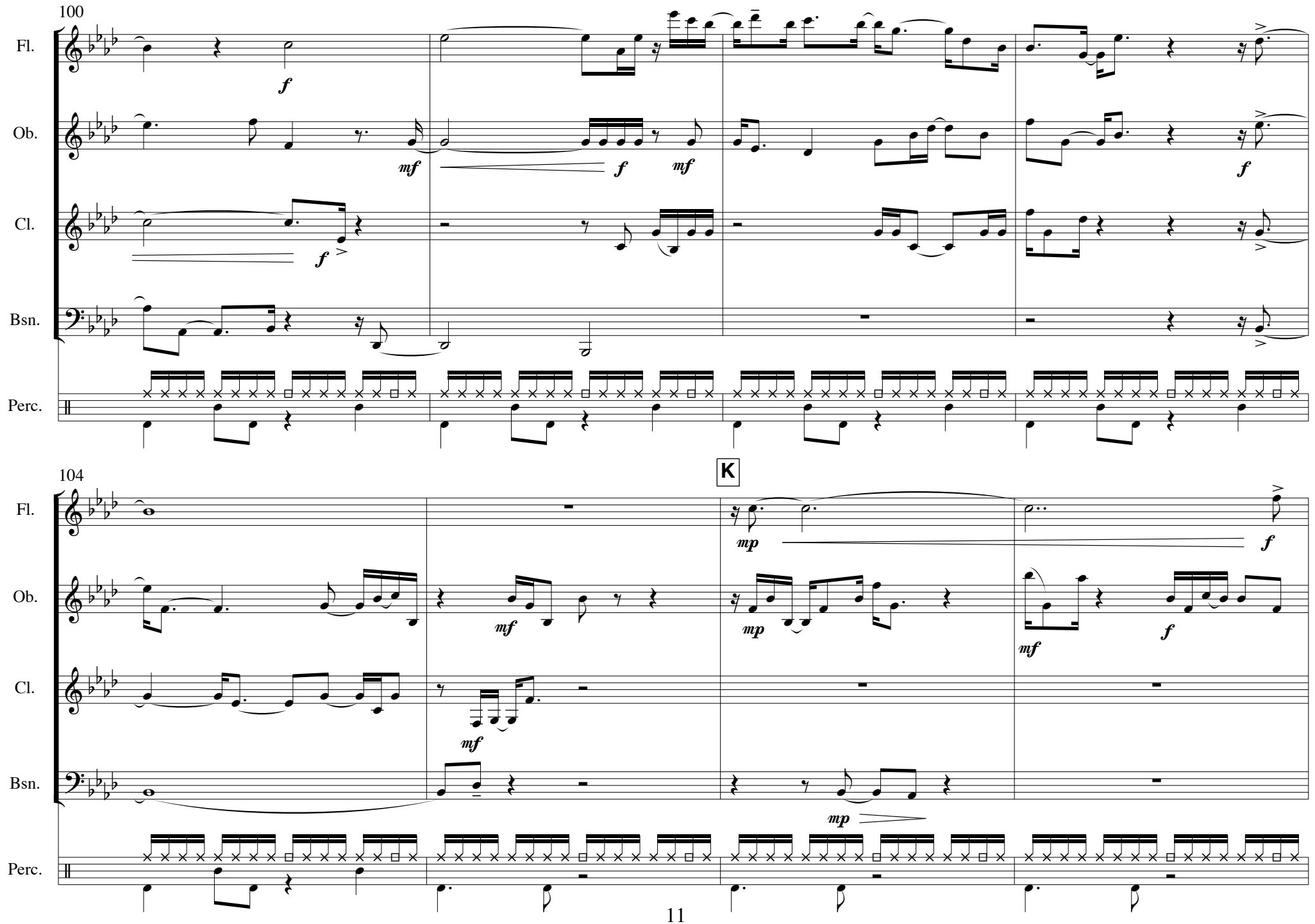

54
F
Fl.
Ob.
Cl.
Bsn.
f
mf
mp
f
f
mf
f
II. Interpolation
con audacia ♩ = 90
59
Fl.
Ob.
Cl.
Bsn.
Perc.
ff
sempre f
f
ff
mf
ff
sempre f
sempre f
ff
sempre f

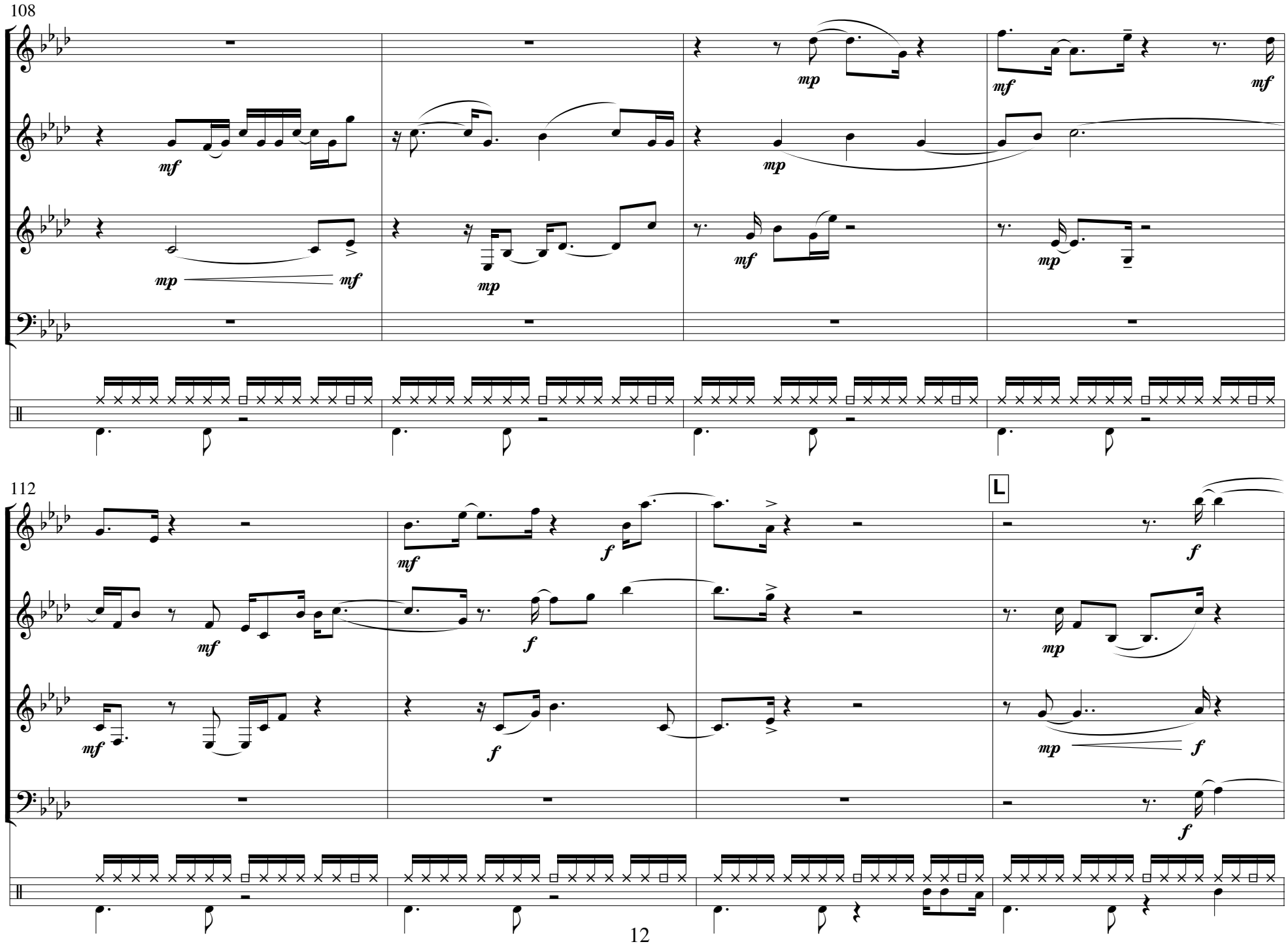

64
G
Fl.
Ob.
Cl.
Bsn.
Perc.
f
69
ff
f
mf
f

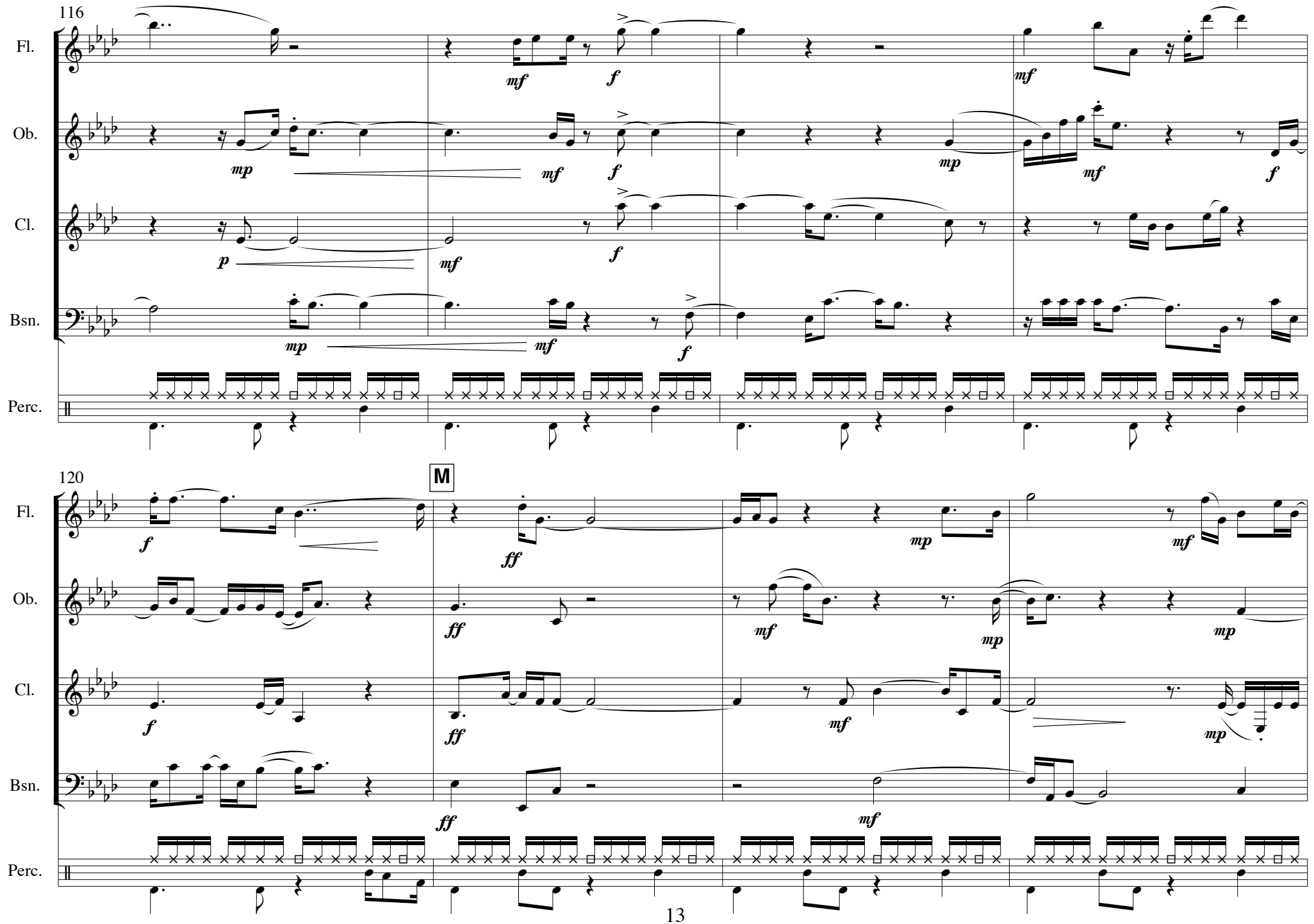

74
Fl.
Ob.
Cl.
Bsn.
Perc.
78
H

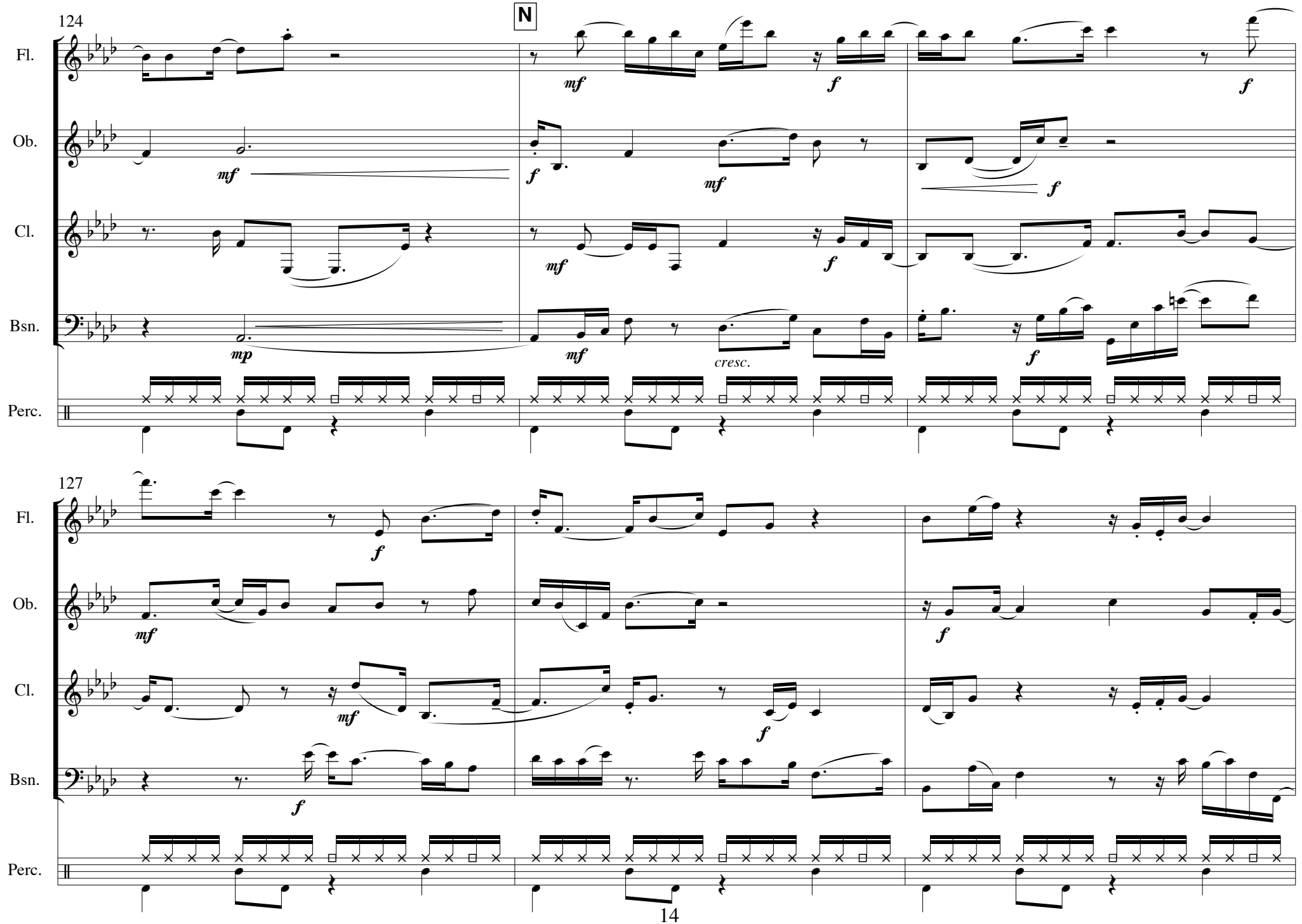

82
Fl.
Ob.
Cl.
Bsn.
Perc.
mf
mp
f
86
I


91
Fl.
Ob.
Cl.
Bsn.
Perc.
mf
mp
f
ff
96
J
fp


100
Fl.
Ob.
Cl.
Bsn.
Perc.
104
K
Fl.
Ob.
Cl.
Bsn.
Perc.


108
Fl.
Ob.
Cl.
Bsn.
Perc.
112
L


116
Fl.
Ob.
Cl.
Bsn.
Perc.
120
M


124
N
Fl.
Ob.
Cl.
Bsn.
Perc.
mf
f
mp
cresc.
127

III. Transformation

declamando ♩ = 100

130

Fl.

Ob.

Cl.

Bsn.

Perc.

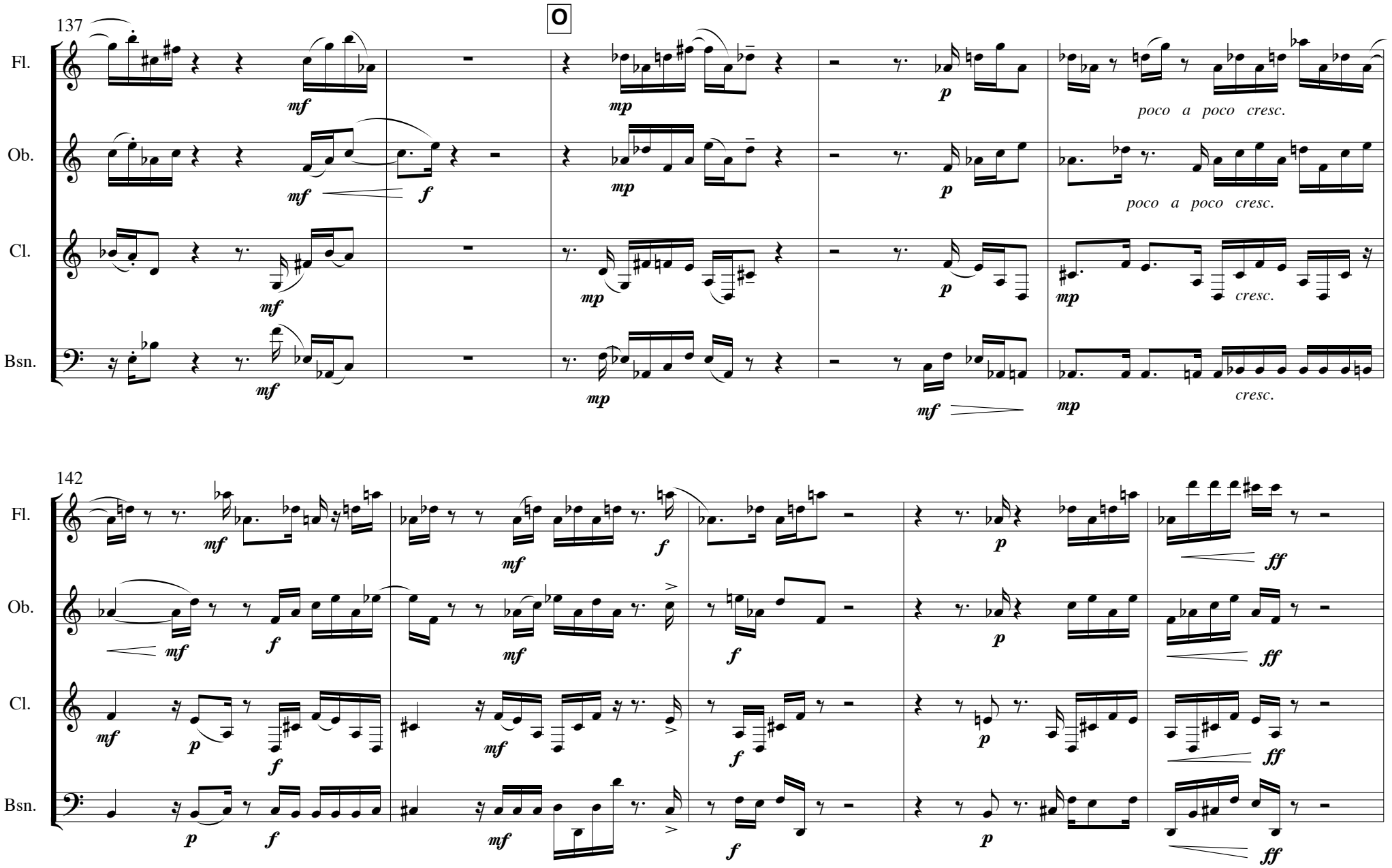
134

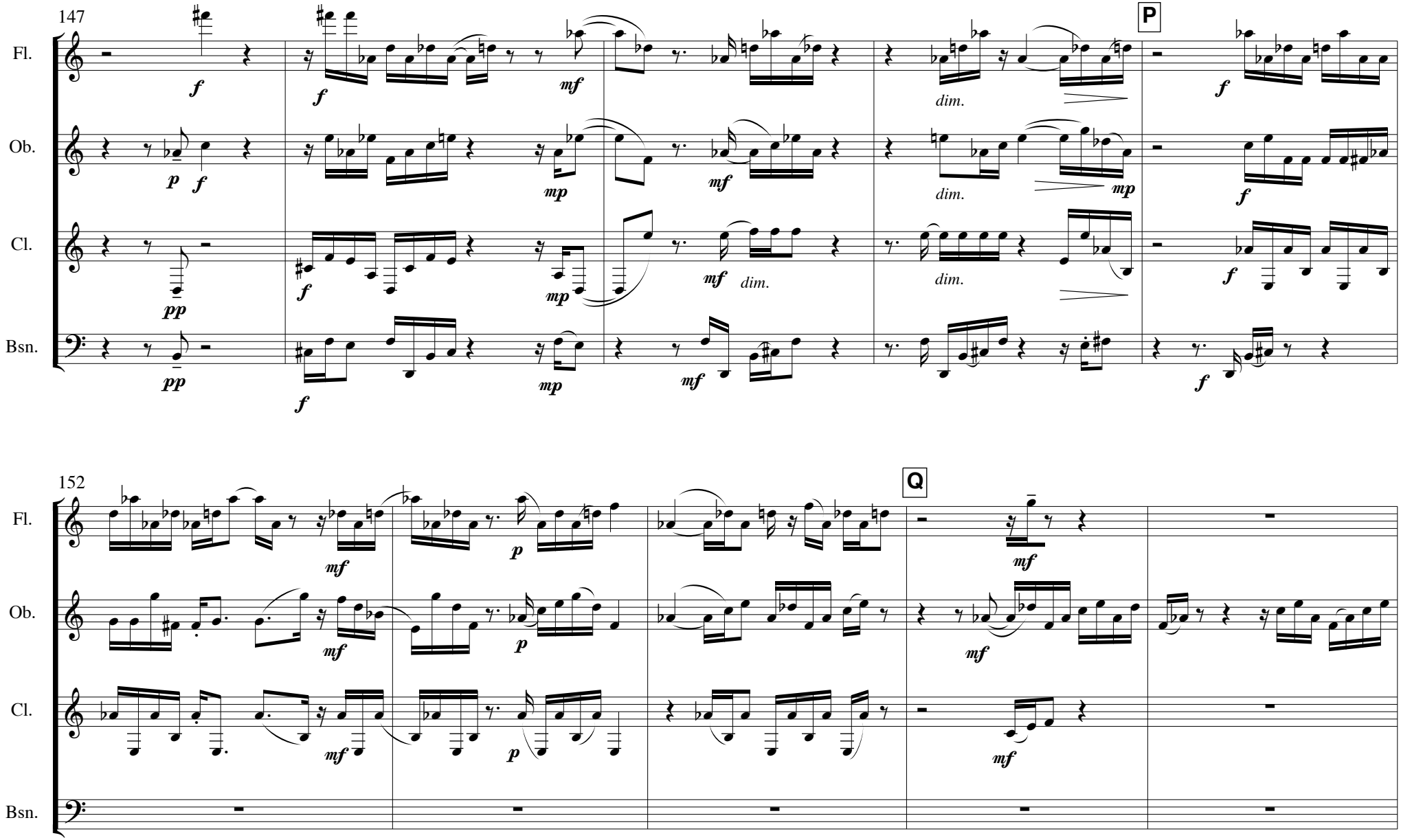
Fl.

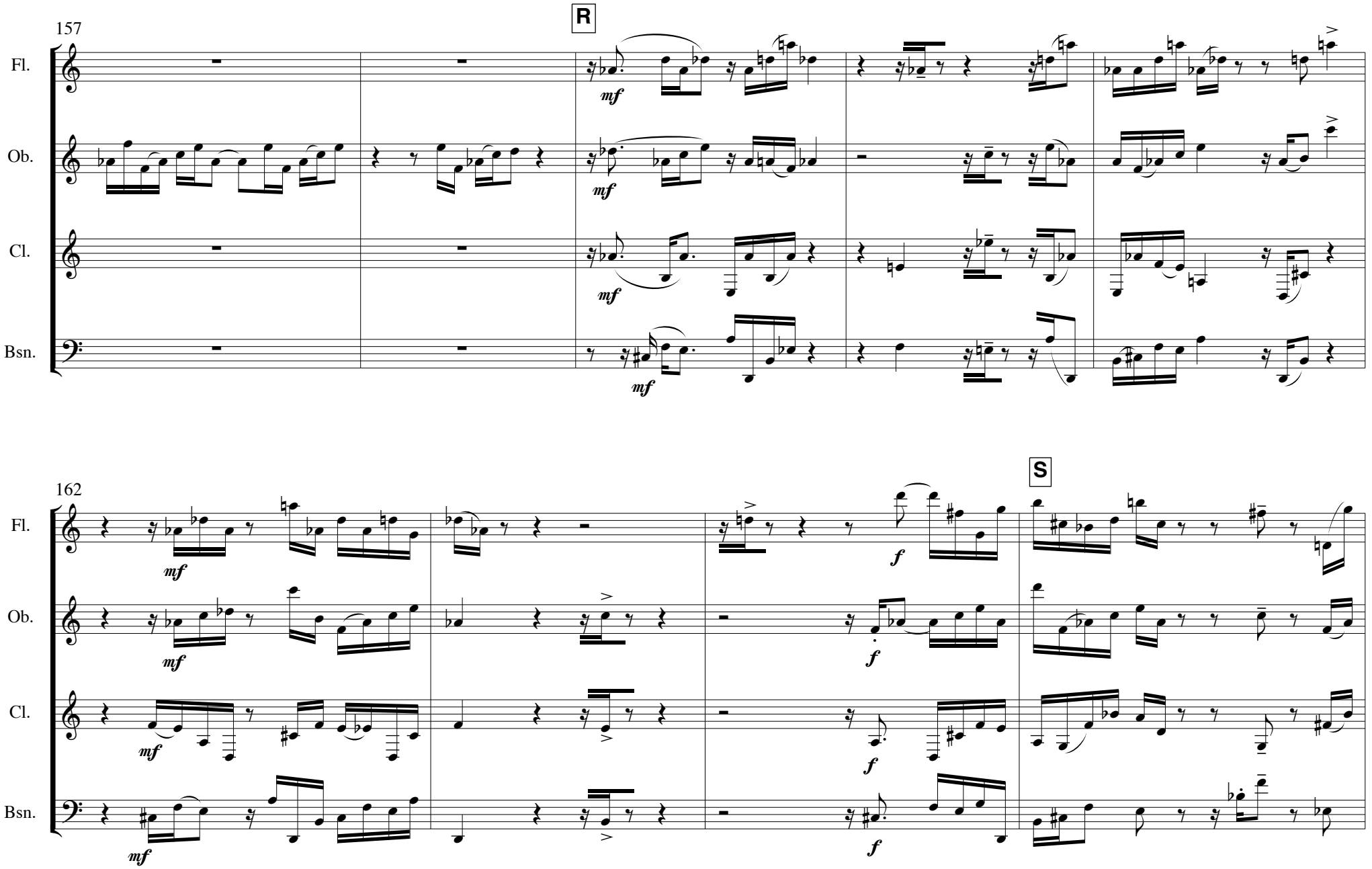
Ob.

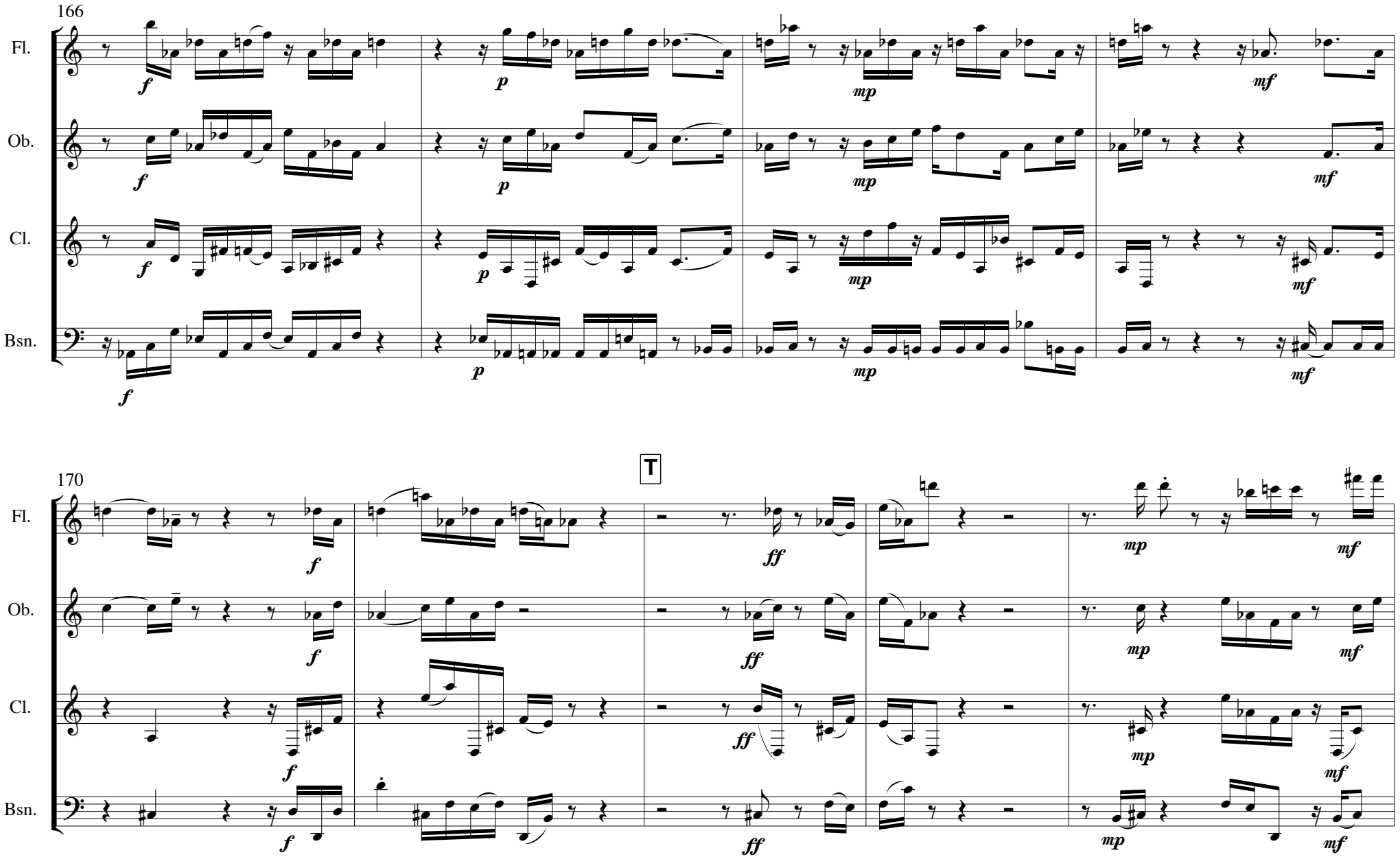
Cl.

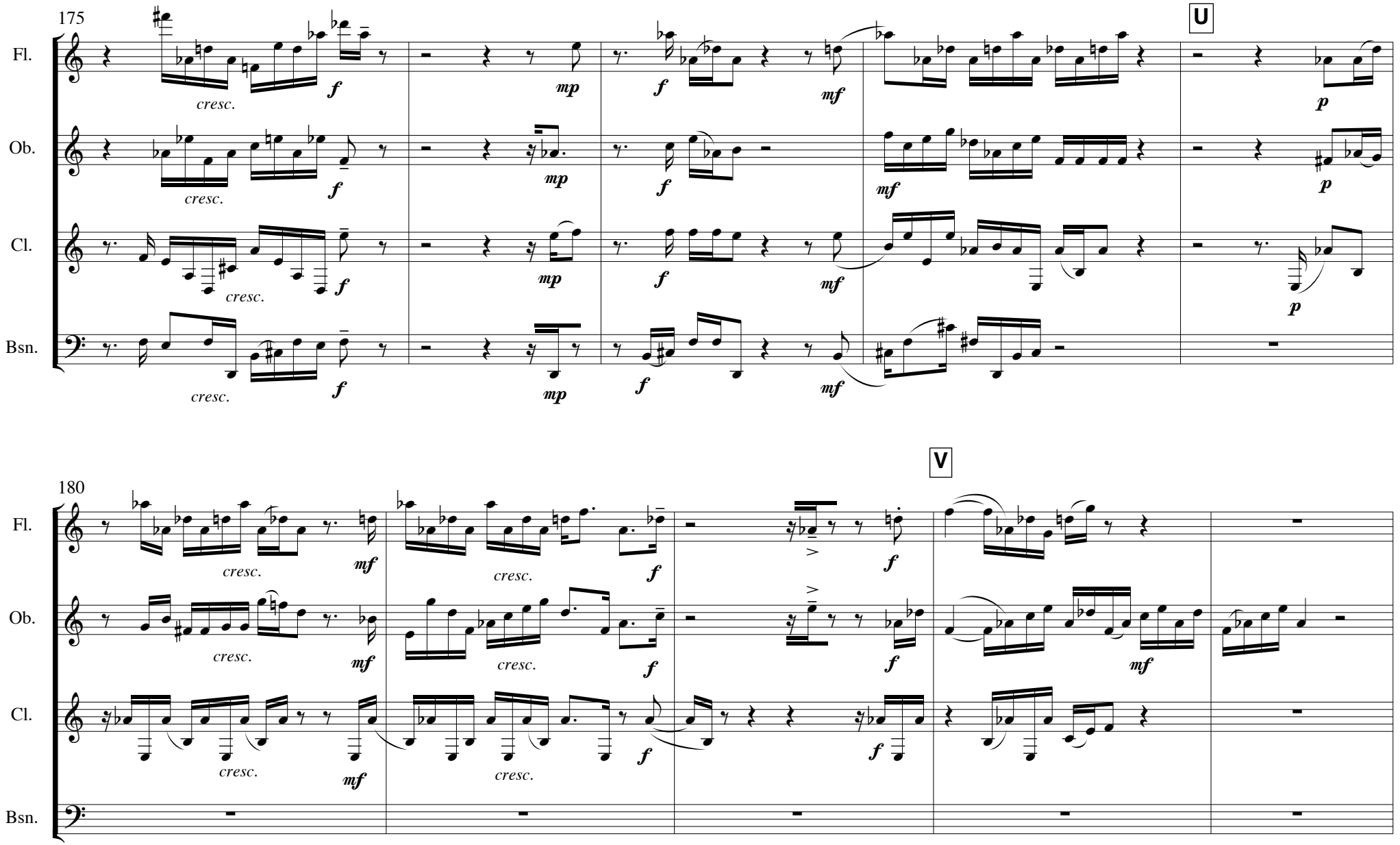
Bsn.

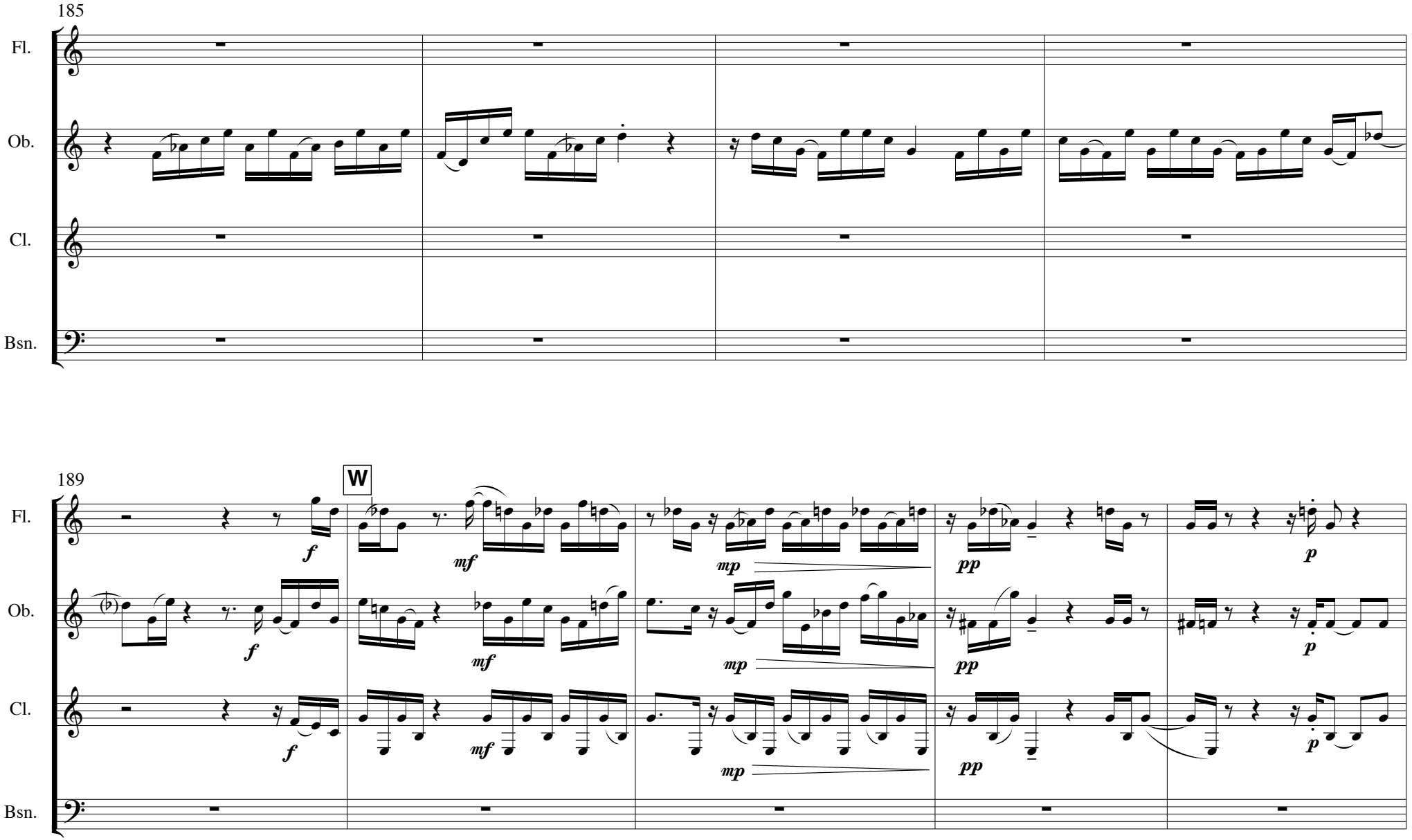

137
O
Fl.
Ob.
Cl.
Bsn.
poco a poco cresc.
poco a poco cresc.
cresc.
cresc.
142
Fl.
Ob.
Cl.
Bsn.

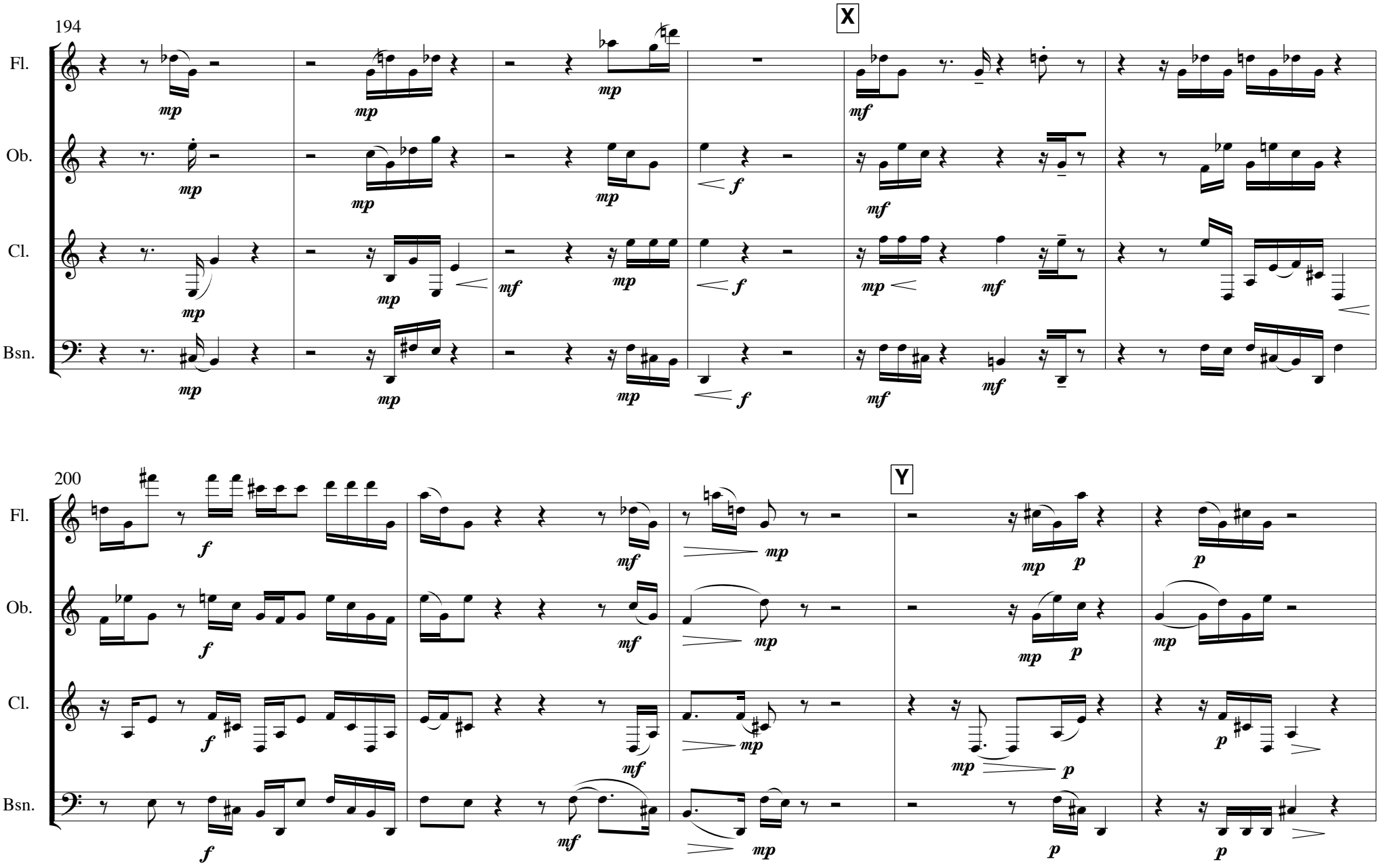

147
P
Fl.
Ob.
Cl.
Bsn.
dim.
152
Q

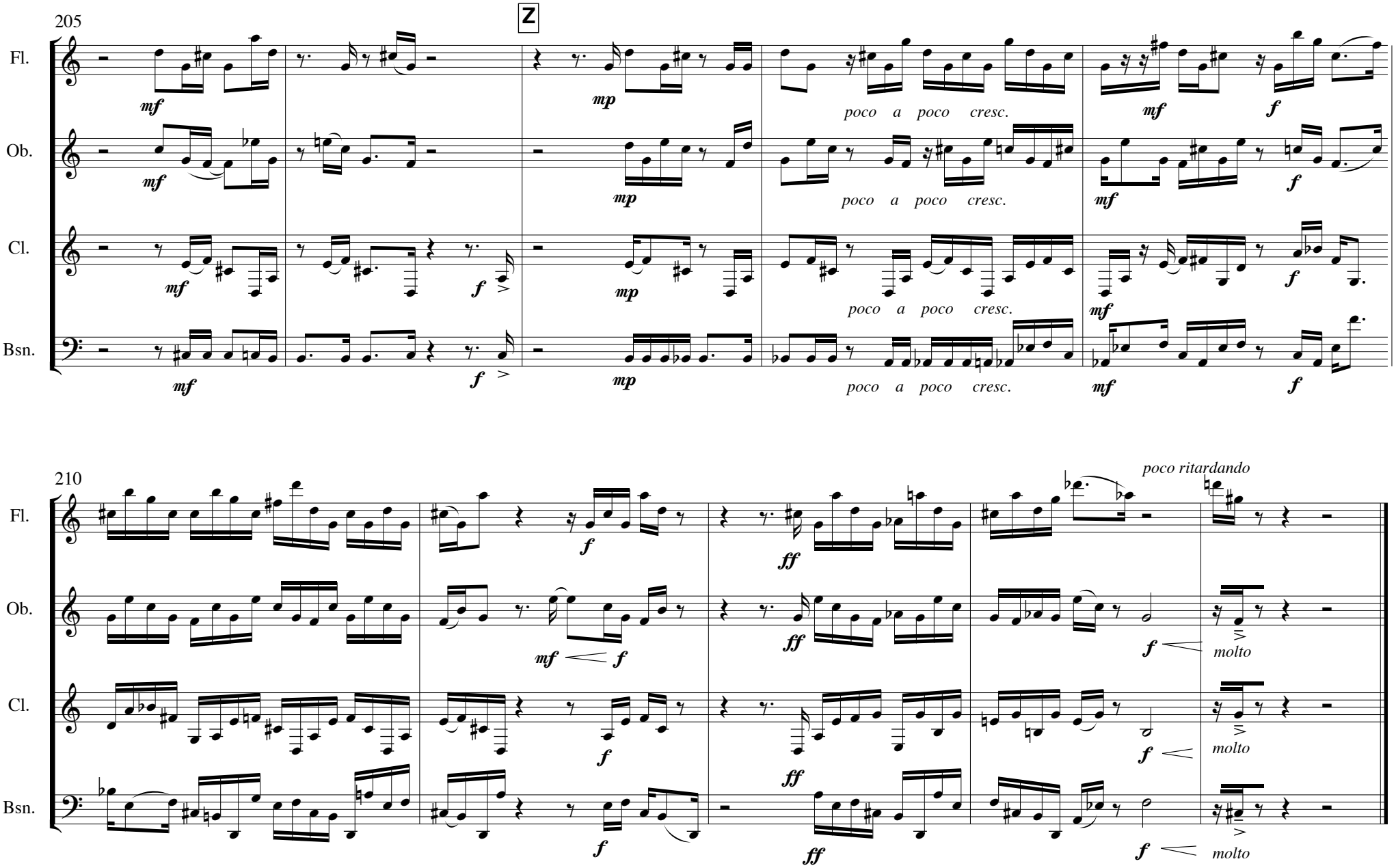

157
R
Fl.
Ob.
Cl.
Bsn.
mf
162
S
f


166
Fl.
Ob.
Cl.
Bsn.
f
p
mp
mf
170
T
ff


175
U
Fl.
Ob.
Cl.
Bsn.
cresc.
f
mp
mf
p
180
V


185
Fl.
Ob.
Cl.
Bsn.
189
W
Fl.
Ob.
Cl.
Bsn.
f
mf
mp
pp
p


194
X
Fl.
Ob.
Cl.
Bsn.
200
Y


205
Z
Fl.
Ob.
Cl.
Bsn.
mf
mp
f
poco a poco cresc.
210
poco ritardando
ff
molto