

Phase Coherence

For Solo Piano
Written for George Fu

2019 - 2020

Full Score

Performance Notes

Score in C

Duration: c. 5m

There are several 'extreme' chords in the piece, which can be executed by playing as much of the chord as possible, and then jumping to reach the highest notes. The effect of the chord being spread should be masked as much as possible.

Programme Notes

The title of the piece takes its name from the type of clinical study from which this data was extrapolated. Phase Coherence is a framework for measuring similar neural activity in different parts of the brain at the same time.

The music explores conceptually a representation of fMRI data taken from many groups of people. The data was drawn from the PHD Thesis of Maria Celeste Fasano, a neuroscientist working in Denmark.

The initial clusters and chords for the composition were created by comparing bars of equal values in the chart (Fig. 2) with the piano keyboard (Fig. 3).

Fig. 1: contains a list of brain regions, for left and right hemispheres.

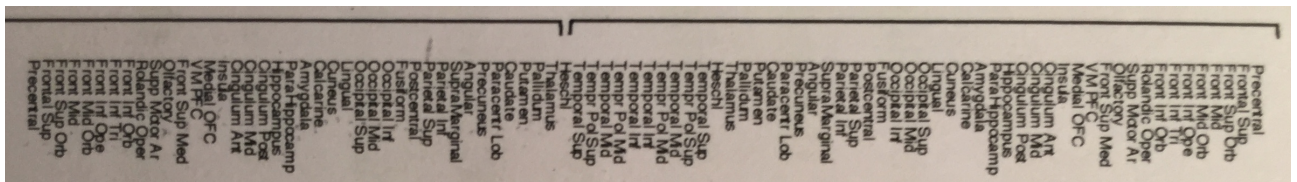


Fig. 2: contains collative data referring to the phase coherence states measured in different research participants.

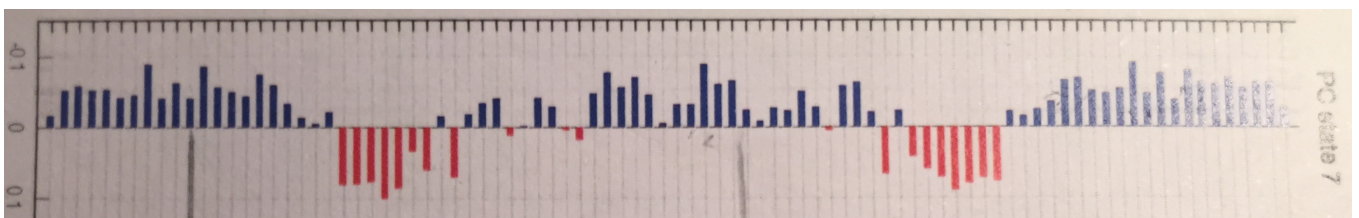
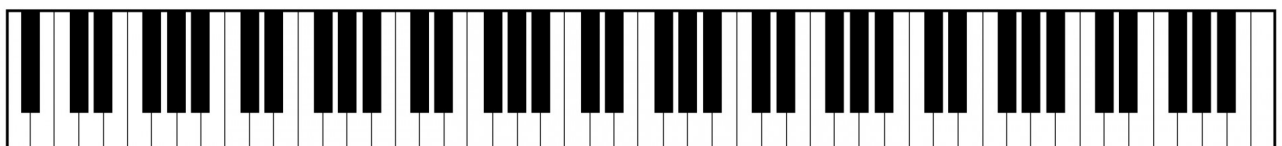


Fig. 3: piano keyboard.



Phase Coherence

Phase I. (Etude in Expansion)

Max Burstyn

2020

♩ = 80

8va

Piano

4 4

ppp *leggiero* *fff* *ppp* *fff* *ppp*

molto accel. molto rit. molto accel. molto rit.

Ped ad lib.

A tempo

8va

Pno.

3 5 5

molto rit.

5

Pno.

5 5 3

mf

♩ = 40

♩ = 80

8va

Pno.

6

p *f*

Pno.

7

p

3

3

Pno.

8

dim.

sostenuto

6

6

Pno.

9

dim.

6

6

6

6

Pno.

10

poco rit.

dim.

6

6

6

6

$\text{♩} = 60$

Pno.

11

ppp *riposare un momento* *< p* *sim.* *< mp* *sim.* *f*

♩ = 80 *leggero*

12 *pp* *trem. sempre* *f* *ppp* *ff* 3

Pno.

14 *p* *mf* *ppp* *fff*

Pno.

poco a poco allungata

16 9 9 9 9

Pno.

18 9 9 9 9

Pno.

20 3 3

Pno.

22 ♩ = 72

Pno. *ppppp* *dolcissimo* *ppp* *molto agitato ma delicato* *pp*

24

Pno. *dolce* *p* *sub. mf* *pp* *sf*

(Bb) *very free*
senza tempo
molto rubato

26

Pno. *p* *mp* *p* *mp* *p* *mf* *sub. ppp* *mp*

27 A tempo (♩ = 72)

Pno. *mf* *pesante* *ten.* *f* *martellato* *p*

Pno.

29

f

ff *maestoso* *p*

5

(A)

Pno.

31

con moto *p* *ff* *p*

p *ff* *p*

5

6 *6*

6 *6*

*2 3 1 3 4

Pno.

33

p *ff* *p*

brillante *rit. . .*

molto dim. *ppp* *fff*

*accel*2 1*

*optional

* r.h. l.h.

Pno.

35

A tempo *accel...* *rit...*

mf *misterioso* *pppp*

(C#)

Phase II.

6

37 ♩ = 72 poco a poco accel e cresc.

Pno. *pp*

Measures 37-38 of the piano part. Measure 37 features a treble clef with a half note G4, a half note A4, and a half note B4, all beamed together. The bass clef has a half note G3, a half note A3, and a half note B3, also beamed together. Measure 38 continues with a treble clef containing a half note C5, a half note D5, and a half note E5, beamed together. The bass clef has a half note G3, a half note A3, and a half note B3, beamed together. Both measures are marked with a '6' and a sharp sign (#).

Pno.

Measures 38-39 of the piano part. Measure 38 features a treble clef with a half note G4, a half note A4, and a half note B4, beamed together. The bass clef has a half note G3, a half note A3, and a half note B3, beamed together. Measure 39 continues with a treble clef containing a half note C5, a half note D5, and a half note E5, beamed together. The bass clef has a half note G3, a half note A3, and a half note B3, beamed together. Both measures are marked with a '6' and a sharp sign (#). The notation includes fingerings (*2, 1, *LH, *RH) and a '6'.

Pno. *p*

Measures 39-40 of the piano part. Measure 39 features a treble clef with a half note G4, a half note A4, and a half note B4, beamed together. The bass clef has a half note G3, a half note A3, and a half note B3, beamed together. Measure 40 continues with a treble clef containing a half note C5, a half note D5, and a half note E5, beamed together. The bass clef has a half note G3, a half note A3, and a half note B3, beamed together. Both measures are marked with a '6' and a sharp sign (#). The notation includes fingerings (*2, 1, *LH, *RH) and a '6'.

Pno. *mp*

Measures 40-41 of the piano part. Measure 40 features a treble clef with a half note G4, a half note A4, and a half note B4, beamed together. The bass clef has a half note G3, a half note A3, and a half note B3, beamed together. Measure 41 continues with a treble clef containing a half note C5, a half note D5, and a half note E5, beamed together. The bass clef has a half note G3, a half note A3, and a half note B3, beamed together. Both measures are marked with a '6' and a sharp sign (#). The notation includes fingerings (*2, 1, *LH, *RH) and a '6'.

Pno. *mf*

Measures 41-42 of the piano part. Measure 41 features a treble clef with a half note G4, a half note A4, and a half note B4, beamed together. The bass clef has a half note G3, a half note A3, and a half note B3, beamed together. Measure 42 continues with a treble clef containing a half note C5, a half note D5, and a half note E5, beamed together. The bass clef has a half note G3, a half note A3, and a half note B3, beamed together. Both measures are marked with a '6' and a sharp sign (#). The notation includes fingerings (*2, 1, *LH, *RH) and a '6'.

8

47

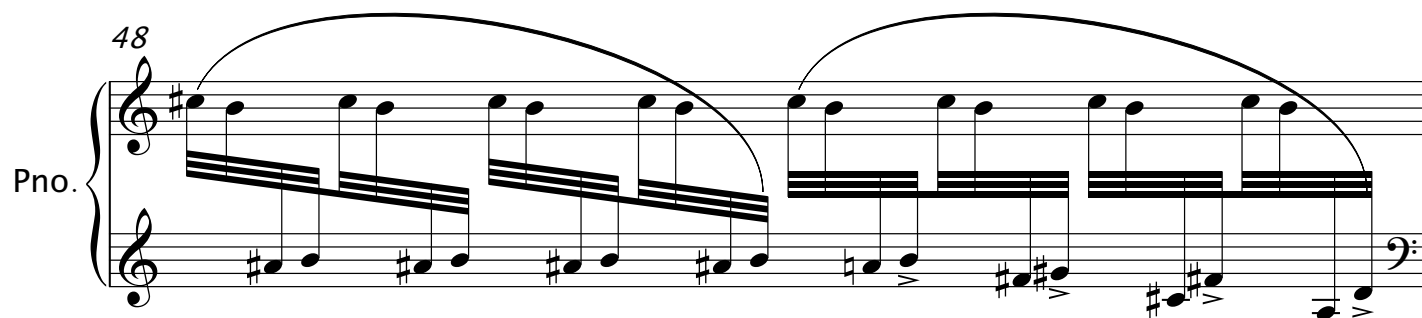
Pno.

ppp



48

Pno.



49

Pno.

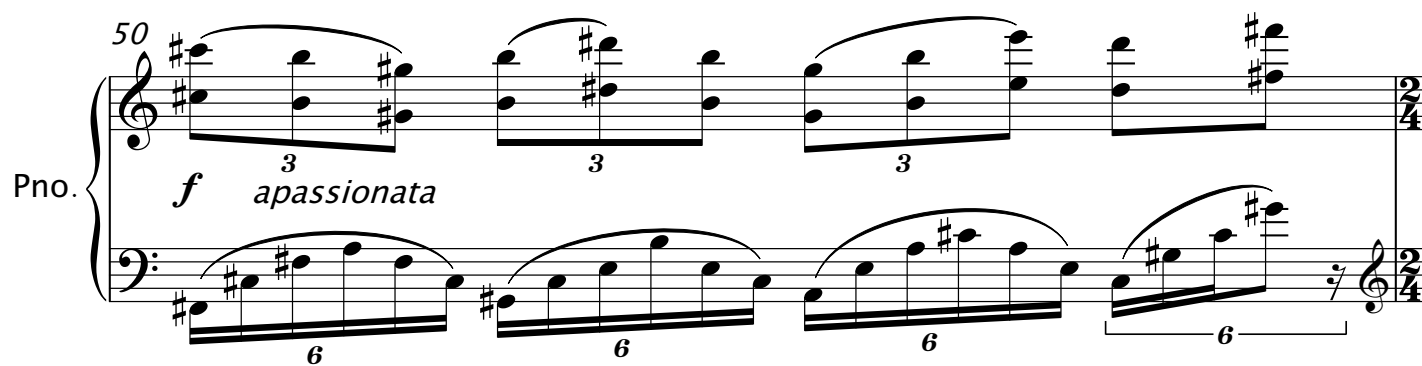
espressivo *poco a poco cresc.*



50

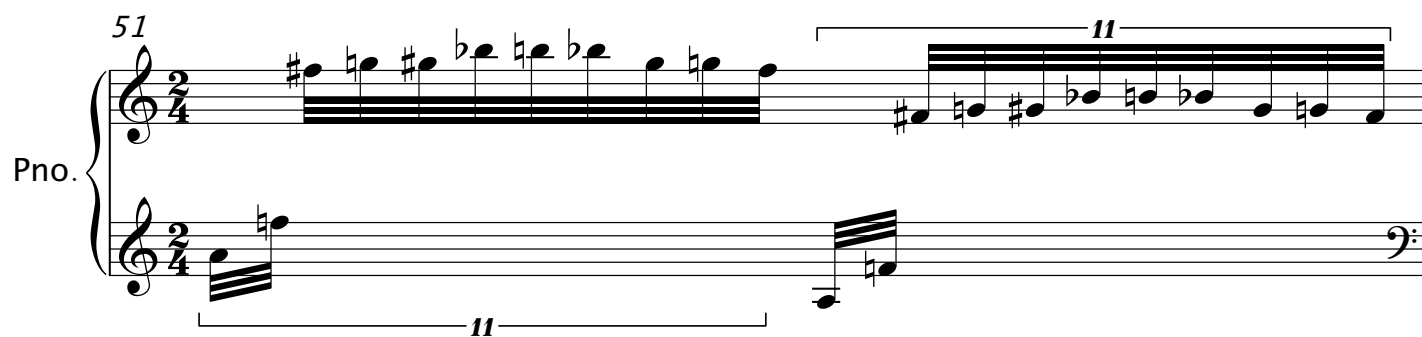
Pno.

f *apassionata*



51

Pno.



52 *cresc.* 11 11 9

Pno.

53 *ff* 7 7 7 7

Pno.

54 *cresc.* 7 7 7 7

Pno.

55 *fff* 7 7 7 7

Pno.

56 *fff* *gradually slow tremolo* *rit.* *pppp* *molto dim.* 15 16 15 16

Pno.

10

♩ = 72

58

Pno.

f *rapido*

mf

Ped.

*5

*1

60

Pno.

mp

pp

Phase III.

dolcissimo e espressivo

molto agitato ma delicato

62

Pno.

ppp sf *p*

p *mf* *ppp*

64

Pno.

sf dim.

p *mf* *ppp*

66

Pno.

mp

sub. p dolce e misterioso

68

Pno.

mf

forte non troppo

dim.

non arpeggio
(if possible!)

70

Pno.

sub. pp

mf

71

Pno.

f *p* *sim. irregolare*

f *p* *sim. molto dim.*

73

Pno.

p

f pp

sub.

*2+1

*3+4

3

3

3

3

12

75 *maestoso*

Pno.

ff *sub. ppp e dolce*

8va

77

Pno.

mf *cresc.* *f* *cresc.*

3

78

Pno.

ff

6

79

Pno.

f *mf*

6

80

Pno.

mp *p*

6

8va

senza Ped.