

Shiori Usui

Into The Flesh

for tenor trombone, double bass

and the Xth Sense

(2012)

FULL SCORE

Instrumentation

Tenor Trombone

Double Bass

The Xth Sense

Duration: ca. 5'00"

What is the Xth Sense?

“...The Xth Sense (created by Marco Donnarumma) is a new and original, biophysical interactive system based on free, open source tools. The central principle underpinning the Xth Sense (XS) is not to “interface” the human body to an interactive system, but rather to approach the human body as an actual and complete instrument in itself. The XS completely transcends the paradigm of the user interface by creating sonic matter and control data directly from the performer’s body.

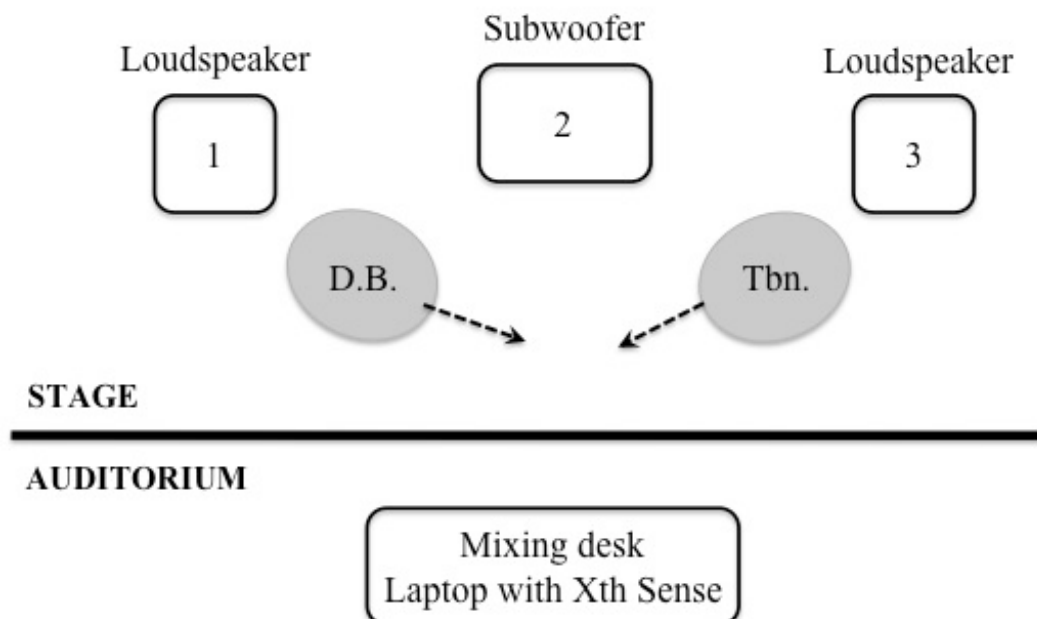
...During a performance muscle movements and blood flow produce subcutaneous mechanical oscillations, which are nothing but low frequency sound waves (also known as Mechanomyographic signals or MMG). The microphone sensors capture the sonic matter created by the performer’s limbs and send it to a computer. This develops an understanding of the performer’s kinetic behaviour by “listening” to the friction of her flesh. Specific gesture, force levels and patterns are identified in real time by the computer; then, according to this information, it manipulates algorithmically the sound of the flesh and diffuses it through a variety of multi- channel sound systems.”¹

¹ <http://www.inventorcomposer.net/> Accessed on 12/04/12.

Technical Requirements

- 2 Xth Sense wearable devices → available from the composer
- 1 Xth Sense Patch in Pure Data (PD extended 0.42.5)
→ available from the composer)
- 1 Laptop with Pure Data installed
- 1 Subwoofer
- 2 Loudspeakers
- 1 Pick up mic for Double Bass
- 1 Condenser microphones for Trombone
- 1 External soundcard
- 1 Mixer (4 in/3 out)
- 2 TRS jack to jack cables to connect biosensors to soundcard
- 2 XLR cables to connect the pick up and condenser mics to soundcard
- 6 power sockets minimum (1 for subwoofer, 2 for loudspeakers, 1 for laptop, 1 for soundcard and 1 for mixer)
- Other necessary cables

Stage Setup



About the work

The work consists of two small pieces. Each of them explores different aspect of the muscle movements and sound.

Into the Flesh I

It explores minute movement of muscle such as a movement of trembling fingers and arms. The extremely high pitches that created by the movements of the muscle are resonant at the beginning. However the sound gradually changes to the distortions together with some harsh inhaled vocal sound towards the end.

Into the Flesh II

It uses the sound of muscle as original as possible. Here, I have tried to create a hear-beat like effect with only the sound of muscle and percussive sound of Double Bass. The piece ends with the high resonant pitches.

Notation

Note-heads

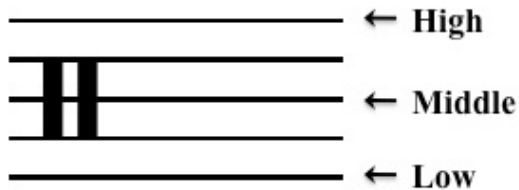


Approximate/indeterminate pitch.



The highest sound possible.

Clefs



The percussion clef used in combination with a five-line staff: It only indicates the approximate pitch contour of high, middle or low.

Others

- Accidentals are only valid for all the notes of that pitch for the remaining duration of the bar.



Rapid wide vibrato: contour indicates the scale of the intended effect.

f "

Dynamics indicated in quotation marks: these refer to the intensity of the performance manner rather than the resultant dynamics.

Into the Flesh

I

Shiori Usui

♩ = ca.55

BEFORE MUSIC STARTS

1. Stay still (i.e. No muscle sound).
2. Wait until the laptop player gives a cue (nod) for the start of the piece.

Scene 0

Xth Sense 4/4 **Scene 0**

R.H. Muscle mvt. 4/4

TENOR TROMBONE

Inst. 4/4

R.H. Muscle mvt. 4/4

DOUBLE BASS 4/4

Inst. 4/4

fingers: II III IV V

Slap

sfz

On fingerboard

Move fingers without creating any sound of D.B.

2

DB. (Muscle mvt.)

5/4 *f* 6/4

On fingerboard

4

DB. (Muscle mvt.)

6/4 *mp* *f* 4/4

This is only suggestion.
Player should use any combination of slide positions to get maximum effect.

II III *sim.*

5

TBN. (Muscle mvt.)

p *mp* *p*

In air

III II

DB. (Muscle mvt.)

"mf"

6

(Muscle mvt.)

mf *p*

TBN.

air sound through inst., voiceless
(audio example 1 from CD)

(Inst.)

"p" "f"

shu i shu i shu i shu i shu i shu i shu i shu i

On fingerboard

III II

DB. (Muscle mvt.)

"f"

7

(Muscle mvt.)

TBN.

(Inst.)

shu i shu i shu i shu i shu i shu i shu i shu i shu i shu i shu i shu i shu i shu i shu i

"p" "f"

On fingerboard

III II III II III II III III

DB. (Muscle mvt.)

"mf"

8

(Muscle mvt.)

TBN.

(Inst.)

shu

hi wi hi wi hi wi hi wi hi wi hi wi hi wi hi wi

"p" "f"

In air

II III II III II III II III

DB. (Muscle mvt.)

"f"

air sound through inst., voiceless (audio example 2 from CD)

9

(Muscle mvt.)

TBN.

(Inst.)

hi wi hi wi hi wi hi wi hi wi hi wi hi wi hi wi hi wi hi wi
 "ff" "p" "p"

On fingerboard

DB. (Muscle mvt.)

"mf"

II III II III II III II III II III II

5 3

(Muscle mvt.)

TBN.

(Inst.)

hi wi hi wi hi wi hi wi hi wi hi wi hi wi hi wi
 "ff" "f" < "fff" "p"

extremely high pitch suppressed

I sim.

IV III II III sim.

DB. (Muscle mvt.)

"f"

5/4

12

Scene 1

XS.

TBN.
(Inst.)

extremely high pitch
suppressed

f > *p* *mf* > *p* *fp* < *mf* *p* ————— *mp* > *p*

DB.
(Inst.)

pizz.

ff

5/4

(Muscle
mvt.)

TBN.

Inhale through inst., voiced
(audio example 3 from CD)

extremely
high pitch
suppressed higher pitch

(Inst.)

mf *f* ————— *p* *fp*

DB.
(Inst.)

ff

16

XS. **Scene 2**

This is only suggestion.
Player should use any combination of slide positions to get maximum effect.

III V sim.

wider tremolo/vibrato

(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

Inhale through inst., voiced

u a o

f *mp* *fff*

fff 6 6 6 6

gliss.

fp

6/4

wider tremolo/vibrato

(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

Inhale through inst., voiced

u a o

mf *p* *f*

fff 6 *fff*

gliss.

arco

fff

20

XS. **Scene 3**

(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

ff 6 6 *fff*

mp u

7 7

(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

ff 9 *fff* *ff* 9

sim. o

u a *f* a

3 7

$\frac{3}{4}$

>

(Muscle mvt.)

TBN. *fff*

(Inst.) *gliss.*

o u

molto sul pont. → sul tasto molto sul pont. → sul tasto

DB. (Inst.) *fff*

23

XS. $\frac{3}{4}$ **Scene 4**

(Muscle mvt.)

TBN.

(Inst.) Take plunger mute

DB. (Inst.) norm. *ff*

Imitate the processed sound of DB.
plunger

+ o + o ad lib.

TBN. (Inst.)

flz.
(Grr.)
f

DB. (Inst.)

fff

ff

molto sul pont. → sul tasto norm.

25

XS.

Scene 5

Imitate the processed sound of DB.
Inhale
lip glissando

TBN. (Inst.)

f

DB. (Inst.)

gliss.

molto sul pont.

IV I *sim.*

(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

f

sim.

plunger
+ o + o ad lib.

flz.
(Grr.)
f

gliss.

wider tremolo/vibrato

28

(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

f

fff

gliss.

29

(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

wider tremolo/vibrato

f *fff*

sim.

f

a o u a

30

(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

f *fff*

mp *f*

fp *f*

31

(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

f

a o e o

ff *f*

gliss.

9 9 9 9 9

3 3 3 3

7 7

32

(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

ffff

mp

a

3 3 3 3

33

(Muscle mvt.)

TBN. (Inst.)

DB. (Inst.)

fff *p*

wider tremolo/vibrato

Do NOT move

(Muscle mvt.)

TBN. (Inst.)

DB. (Inst.)

f *fff*

mp

col legno L.H. Slap arco col legno L.H. Slap col legno Do NOT move

DURATION**Minimum 4 crotchets (ca. ♩ = 55)****Maximum 8 crotchets (ca. ♩ = 55)**

- 1) Laptop: A nod (signal) to indicate DB & Tbn can move freely.
- 2) DB: Put away the bow.
- 3) Tbn: Give a nod to the laptop player when you are ready to start *Into the Flesh II*.
- 4) Laptop: A nod back to confirm the Xth Sense is also ready to start *Into the Flesh II*.

35

XS. (Muscle mvt.)

TBN. (Inst.)

(Muscle mvt.)

DB. (Inst.)

(Muscle mvt.)

4/4

4/4

4/4

4/4

4/4

II

♩ = ca.55

XS. Scene 6

This is only suggestion.
Player should use any combination of slide positions to get maximum effect.

IV I

(Muscle mvt.)

fff

TBN.

voice through inst.

brassy

(Inst.)

a

f

fff

37

sim.

(Muscle mvt.)

TBN.

sim.

voice through inst.

brassy

(Inst.)

fff

ga

f

fff

Slap

Slap pizz.

II

6

gliss.

ff

ff

38

(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

mp *mf* *p* *fff*

brassy

gliss. *gliss.*

III II

muscle sound of Tbn and DB creating heartbeat like texture

39

(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

sim.

Damp (LH) Damp (LH) II III

gliss. *gliss.*

40

(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

Damp (LH)

6

gliss.

ff

Hit the body of instrument with knuckle
Look for relatively high pitches in order to contrast with low muscle sound

41

TBN. (Inst.)

DB. (Inst.)

42

TBN. (Inst.)

DB. (Inst.)

Damp (LH)

ff

ff

Hit the body of instrument with knuckle

43

TBN. (Inst.)

DB. (Inst.)

Damp (LH)

Hit the body of instrument with knuckle

f *ff*

44

TBN. (Inst.)

DB. (Inst.)

45

TBN. (Inst.)

DB. (Inst.)

46

TBN. (Inst.)

DB. (Inst.)

47

TBN. (Inst.)

DB. (Inst.)

48

TBN. (Inst.)

DB. (Inst.)

Damp (LH) Hit the body of instrument with knuckle

f *ff*

49

TBN. (Inst.)

DB. (Inst.)

Damp (LH) *sim.* Hit the body of instrument with knuckle

f *ff*

TBN. (Inst.)

DB. (Inst.)

4/4

51

XS. **Scene 7**

TBN. (Inst.) $\text{H } \frac{4}{4}$ $\frac{6}{4}$

DB. (Inst.) $\text{H } \frac{4}{4}$ $\frac{6}{4}$

$\frac{6}{4}$

TBN. (Inst.) $\frac{6}{4}$ $\frac{6}{4}$

DB. (Inst.) $\text{H } \frac{6}{4}$ $\frac{6}{4}$

53

XS. **Scene 8**

TBN. (Muscle mvt.) $\frac{6}{4}$ $\frac{4}{4}$

(Muscle mvt.) $\text{H } \frac{6}{4}$ $\frac{4}{4}$

DB. (Inst.) $\frac{6}{4}$ $\frac{4}{4}$

II III sim.

"p" < "f" > "p" *"f"*

54

TBN. (Muscle mvt.)

DB. (Muscle mvt.)

"p"

55

TBN. (Muscle mvt.)

DB. (Muscle mvt.)

"f"

"p"

II III IV V

II III sim.

56

(Muscle mvt.)

TBN.

(Inst.)

extremely high pitch suppressed

p f p

II III IV V II

II III sim.

DB. (Muscle mvt.)

DB. (Inst.)

pizz.

ff

57

TBN. (Inst.) *mf* *gliss.* *p* *mf* *gliss.* *p* *p*

(Muscle mvt.) *ff*

DB. (Inst.) pizz. *ff*

II
III
IV
V
II

58

(Muscle mvt.) "p" < "f" > "p"

TBN. (Inst.) *f* > *p* < *f* > *p* *f* > *p* *f* > *p*

59

TBN. (Inst.) *p* *mf* > *p* *f* > *p* *f* > *p* *f* *p*

Movements for taking the bow.
The movement and its resultant sound
should be kept as minimum as possible.

Move right arm towards the bow	Grab the bow	Bring the bow near the strings
<i>p</i>		

DB. (Muscle mvt.) *p*



(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

air sound through inst., voiceless
ad lib.
(audio example 4 from CD)

tu ku tu ku tu ku tu ku tu ku tu ku tu ku tu ku tu ku tu ku tu ku
"p" < "ff" > "p" < "ff" > "p" < "ff" > "p"



61

XS. **Scene 9**

(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

small slide movement
III

col legno
Dampen the strings with LH
norm. → molto
sul pont. *sim.*

tu ku tu ku tu ku tu ku tu ku tu ku tu ku tu ku tu ku tu ku tu ku
"ff" > "p" "ff" > "p" "ff" > "p"

p < *mf* > *p* < *mf*

p < *mf*

62

(Muscle mvt.)

TBN.

(Inst.)

DB. (Inst.)

tu ku tu ku tu ku tu ku

"ff" > "p"

63

TBN. (Muscle mvt.)

DB. (Inst.)