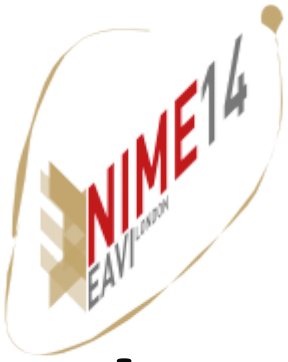


NIME 2014 (New Interfaces for Musical Expression)
Interactive Music Notation & Representation
Goldsmiths, University of London.

John Cage *Solo for Sliding Trombone*, a Computer Assisted Performance approach

Benny Sluchin, Mikhail Malt

June 30th, 2014

ensemble intercontemporain

ircam Centre Pompidou

PARIS SORBONNE UNIVERSITÉ

IRCMUS institut de recherche en musicologie

CONCERT FOR PIANO AND ORCHESTRA (1957–58) DE JOHN CAGE

- *Concert for Piano and Orchestra* (1957-58)
  - Decisive stage.
  - For the first time, the control over all the aspects of the music is given to the interpreter.
  - Each performance could thus be different from another, and
  - The duration may vary each time.

“Score” Organization

1. ***Piano :***
   – pages 1–63

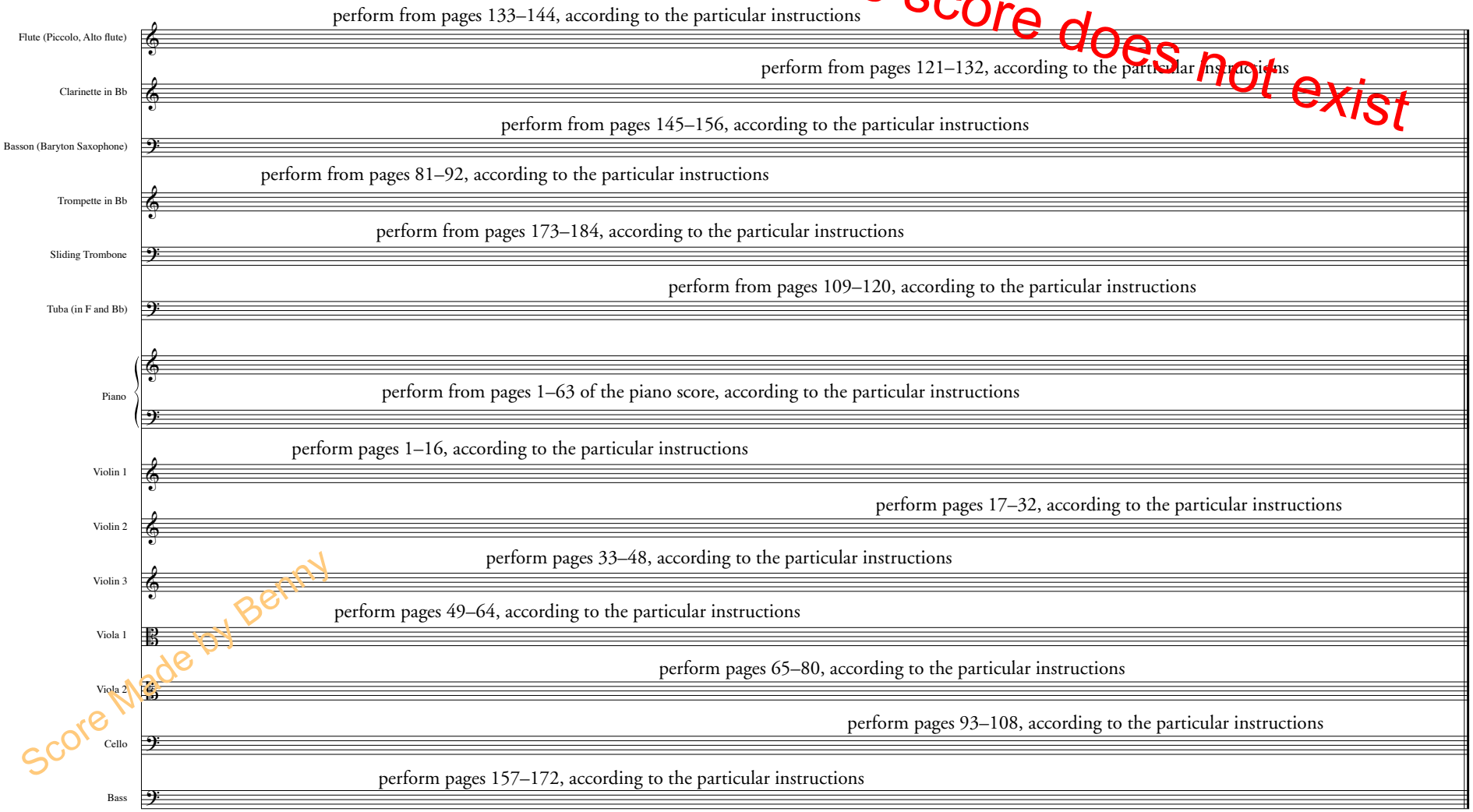
2. ***Instruments :***
   - ***Violin 1*** : pages 1–16
   - ***Violin 2*** : pages 17–32
   - ***Violin 3*** : pages 33–48
   - ***Viola 1*** : pages 49–64
   - ***Viola 2*** : pages 65–80
   - ***Trumpet in B flat*** : pages 81–92
   - ***Celle*** : 93–108
   - ***Tuba in F and B flat*** : pages 109–120
   - ***Clarinet in B flat*** : pages 121–132
   - ***Flute, Piccolo, Alto flute*** : pages 133–144
   - ***Bassoon***, ***Saxophone*** : pages 145–156
   - ***Double Bass*** : pages 157–162
   - ***Sliding Trombone*** : pages 173–184

3. ***Conductor***

Concert for Piano and Orchestra

John Cage
(1957–58)

This score does not exist



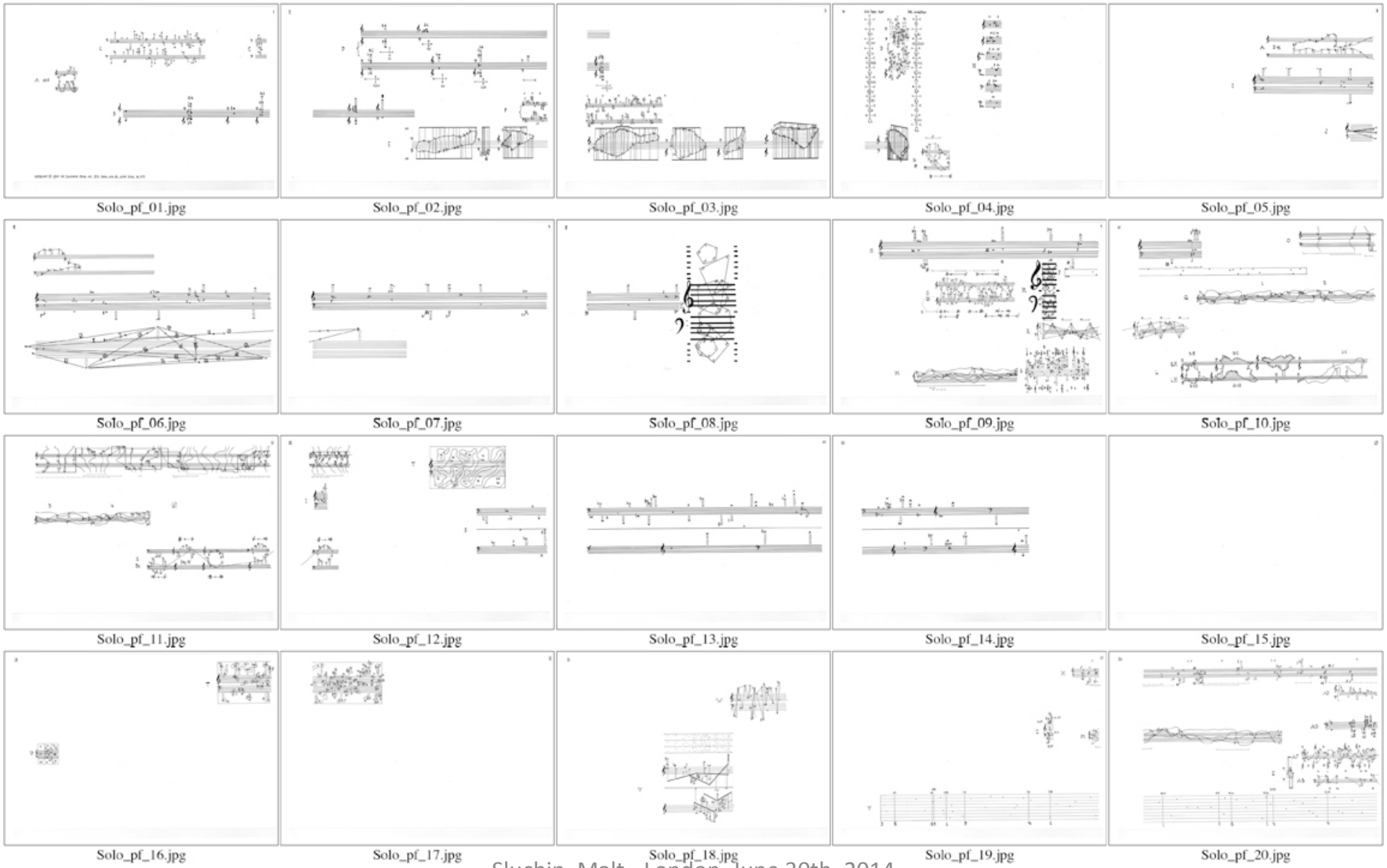
Score Made by Benny

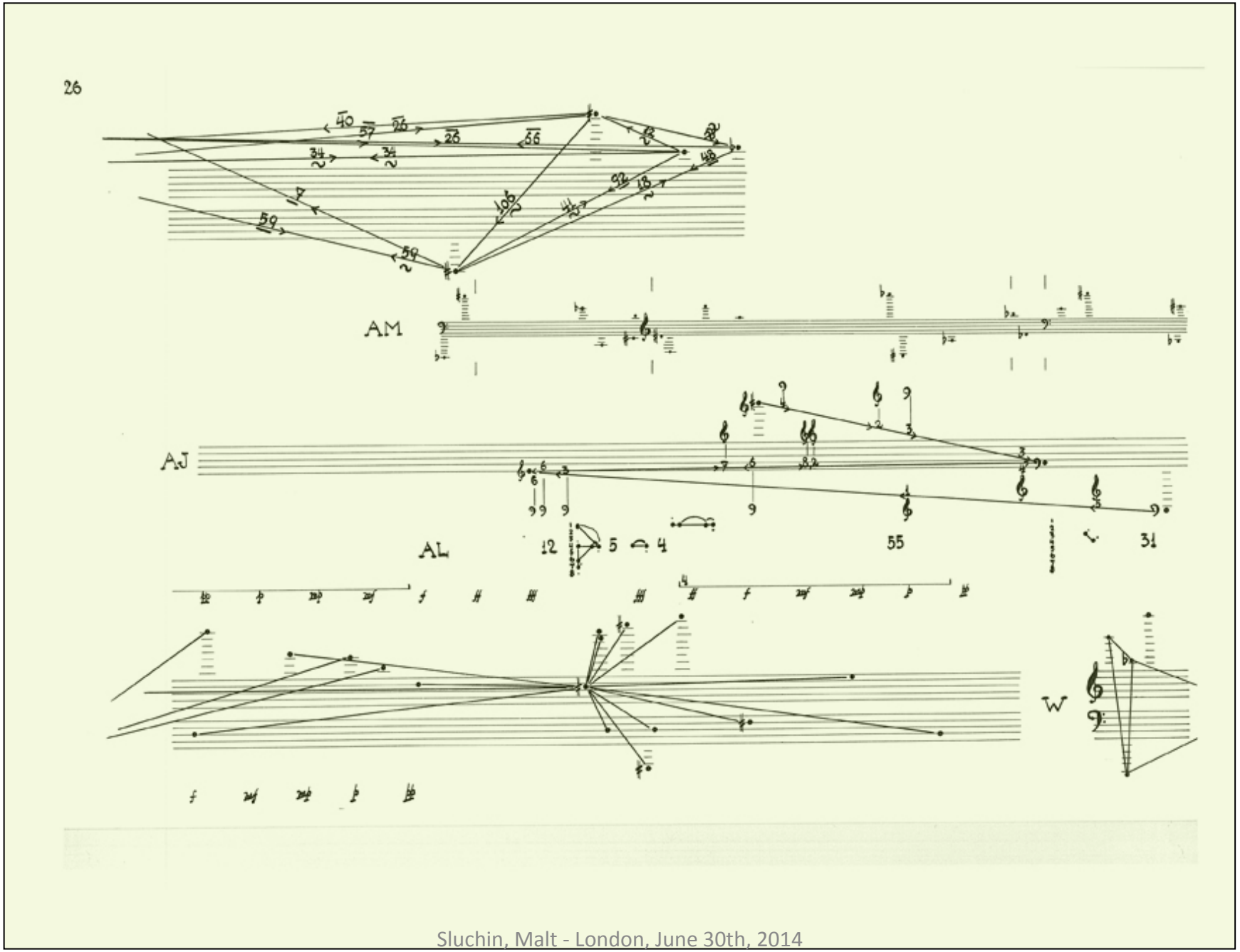
Sluchin, Malt - London, June 30th, 2014

Piano Pages

- Structure of the score is different from that of the instrumental parts.
- Elements are not only “punctual”
- There are different forms of composing, each having particular rules for interpretation.

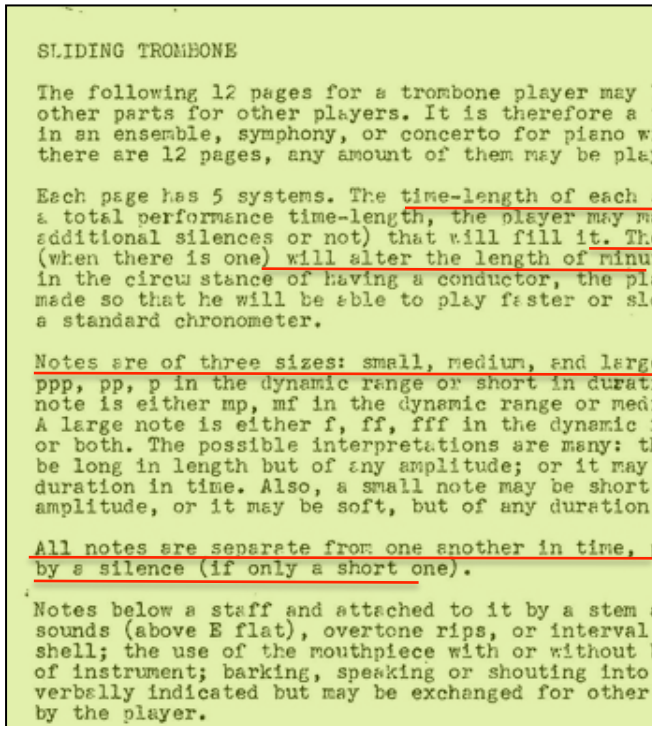
20 first piano pages




26
AM
AJ
AL
12
5
4
55
31
W

Instrument Parts

- Each instrumental part (each Solo) is composed:
  - one page of detailed instructions to performance



SLIDING TROMBONE

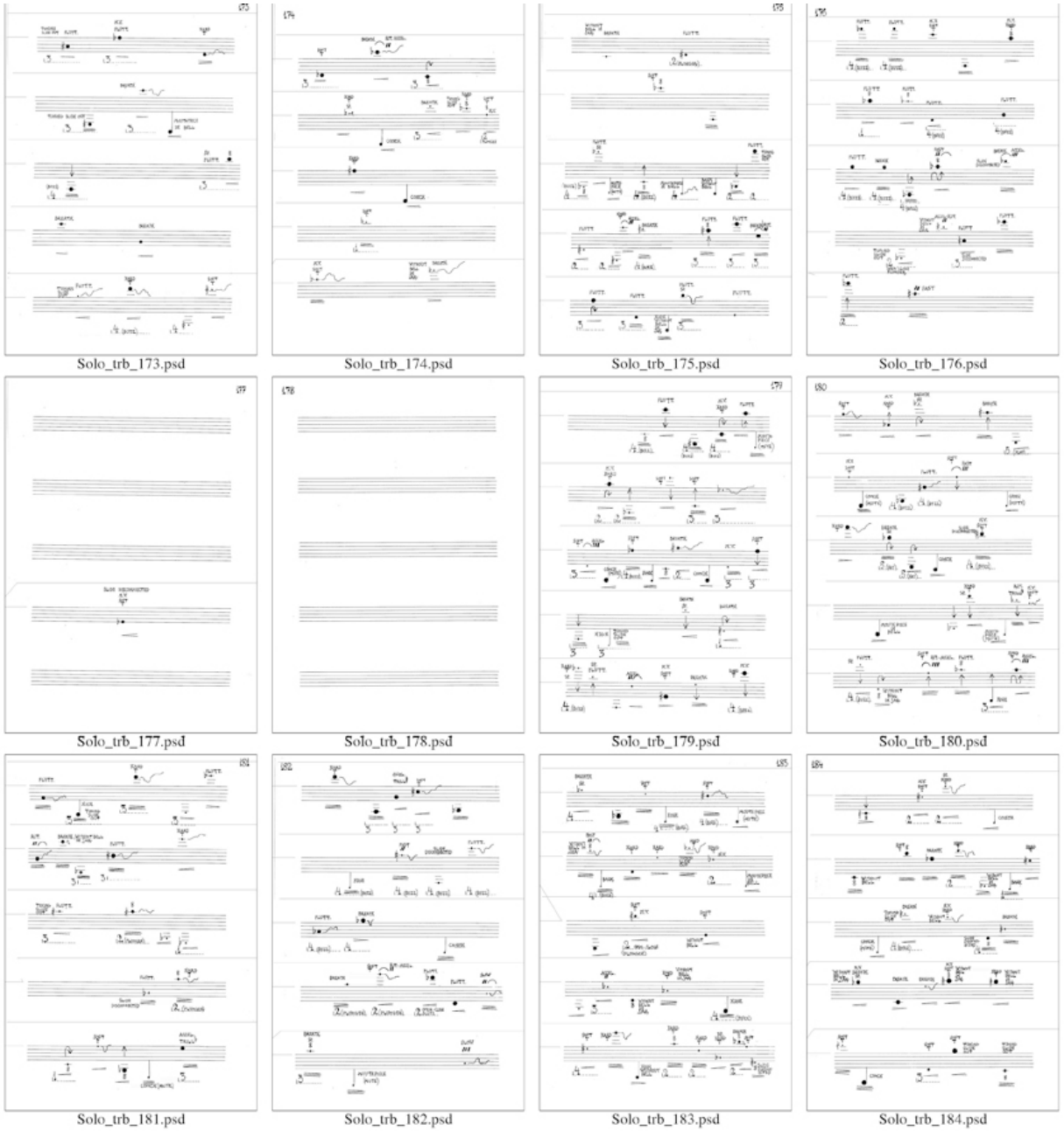
The following 12 pages for a trombone player may
other parts for other players. It is therefore a
in an ensemble, symphony, or concerto for piano w
there are 12 pages, any amount of them may be pla

Each page has 5 systems. The time-length of each
a total performance time-length, the player may m
additional silences or not) that will fill it. Th
(when there is one) will alter the length of minu
in the circumstance of having a conductor, the pl
made so that he will be able to play faster or sl
a standard chronometer.

Notes are of three sizes: small, medium, and larg
ppp, pp, p in the dynamic range or short in durat
note is either mp, mf in the dynamic range or med
A large note is either f, ff, fff in the dynamic
or both. The possible interpretations are many: t
be long in length but of any amplitude; or it may
duration in time. Also, a small note may be short
amplitude, or it may be soft, but of any duration

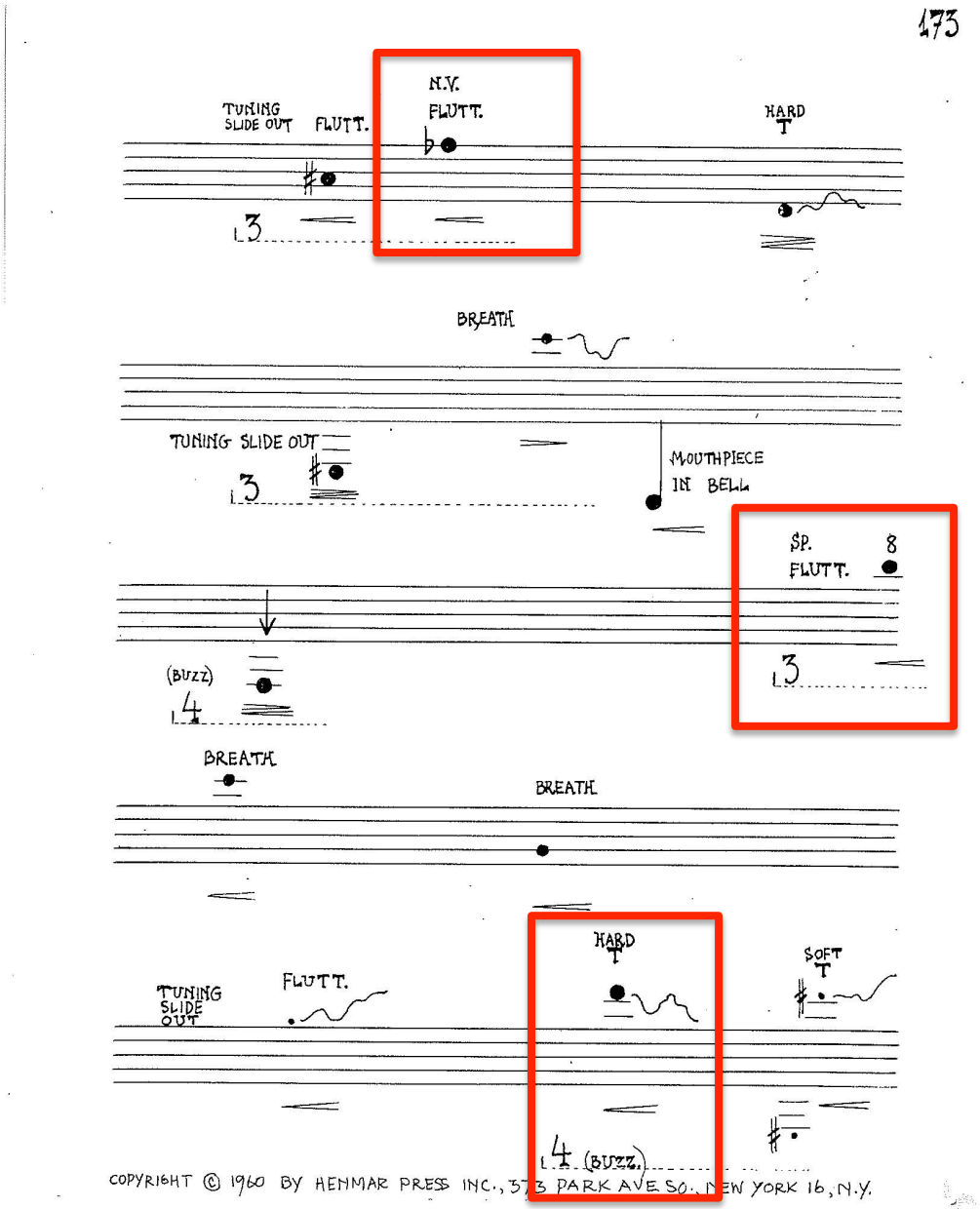
All notes are separate from one another in time,
by a silence (if only a short one).

Notes below a staff and attached to it by a stem
sounds (above E flat), overtone rips, or interval
shell; the use of the mouthpiece with or without
of instrument; barking, speaking or shouting into
verbally indicated but may be exchanged for other
by the player.



12 pages of the Trombone at a glance

Trombone


173
TUNING SLIDE OUT
FLUTT.
N.V.
FLUTT.
HARD T
BREATH
TUNING SLIDE OUT
MOUTHPIECE IN BELL
SP.
FLUTT.
(BUZZ)
BREATH
BREATH
TUNING SLIDE OUT
FLUTT.
HARD T
SOFT T
(BUZZ.)
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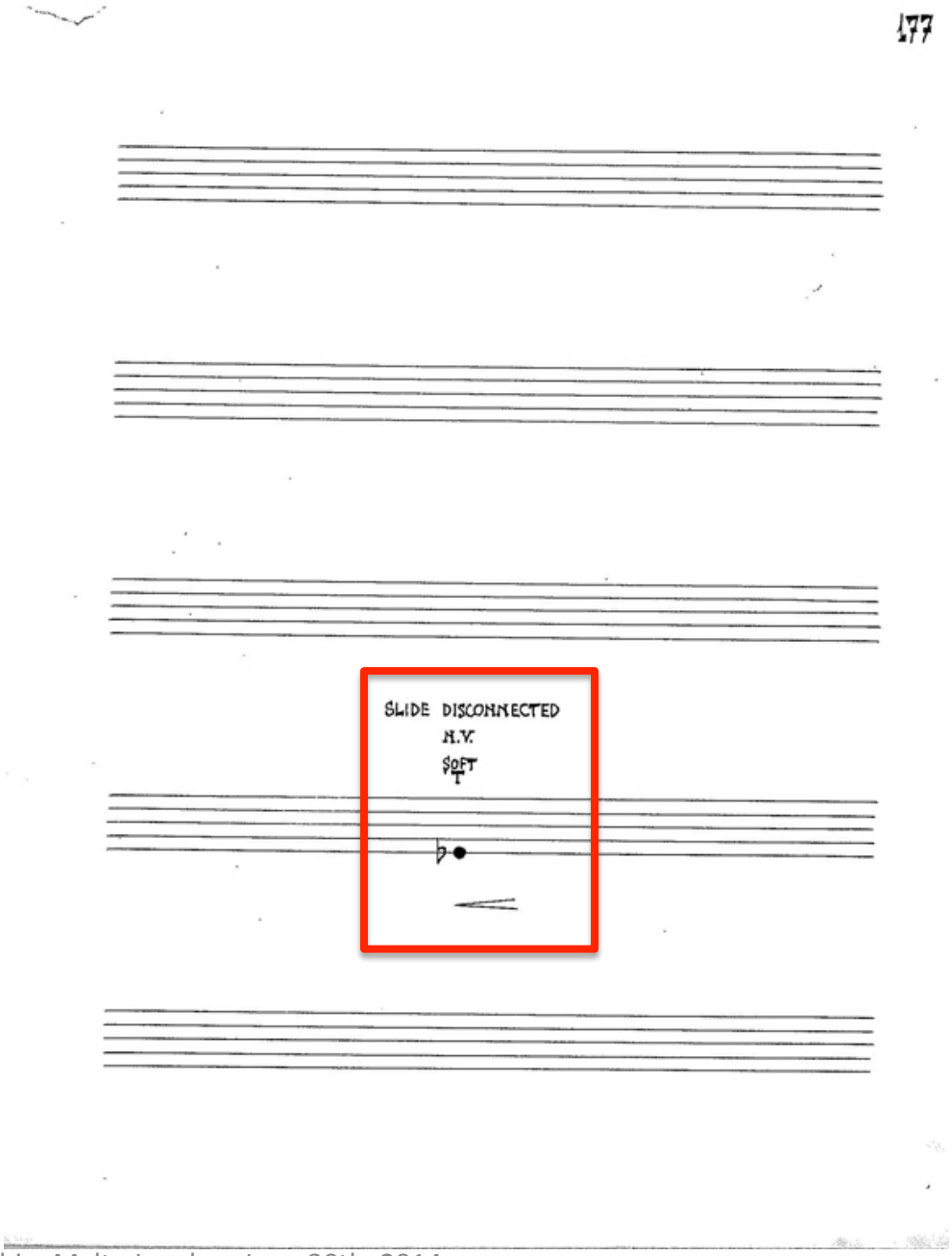
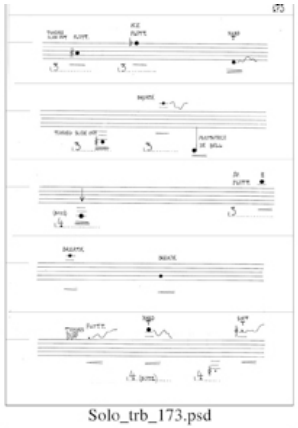
Trombone

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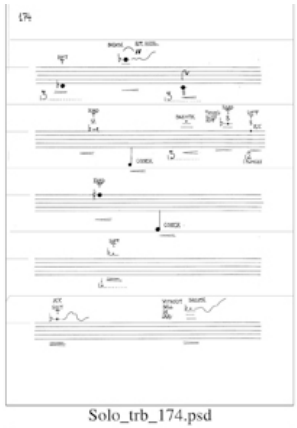
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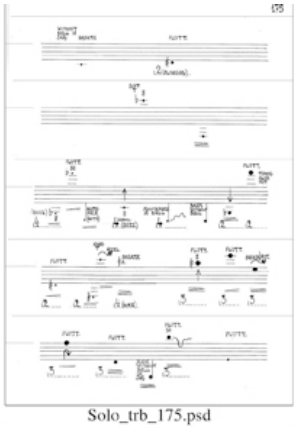
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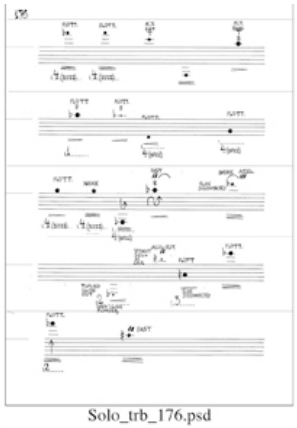
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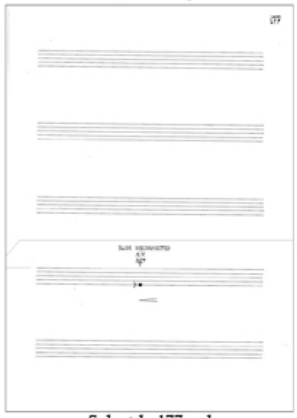
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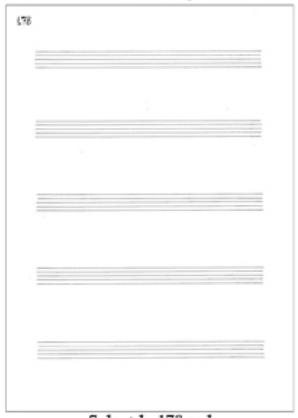
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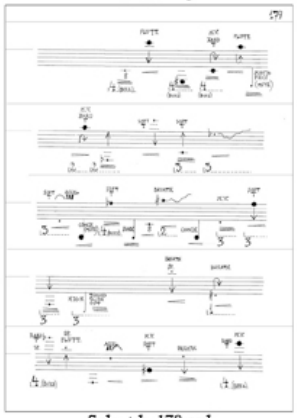
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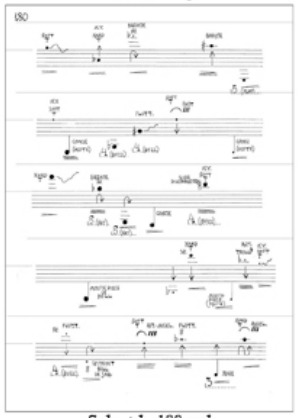
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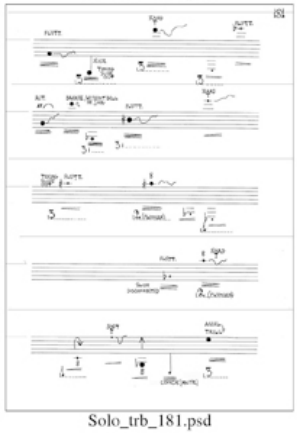
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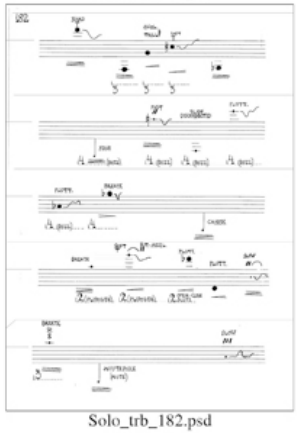
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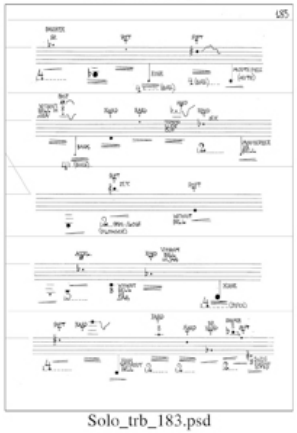
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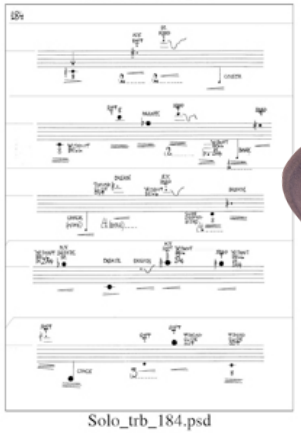
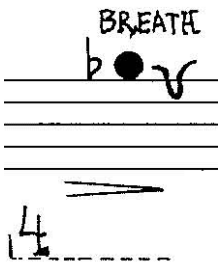
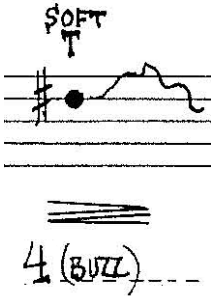
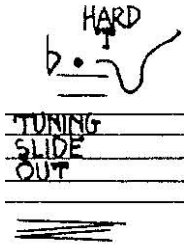

Solo_trb_184.psd

12 pages of the Trombone at a glance







A new way of displaying the music

● ● ●

Concert for Piano and Orchestra (1957–58)

INTERPRETATION CONTEXT (CONCEPTS)

Sluchin, Malt - London, June 30th, 2014

The four concepts (± 1950-60)

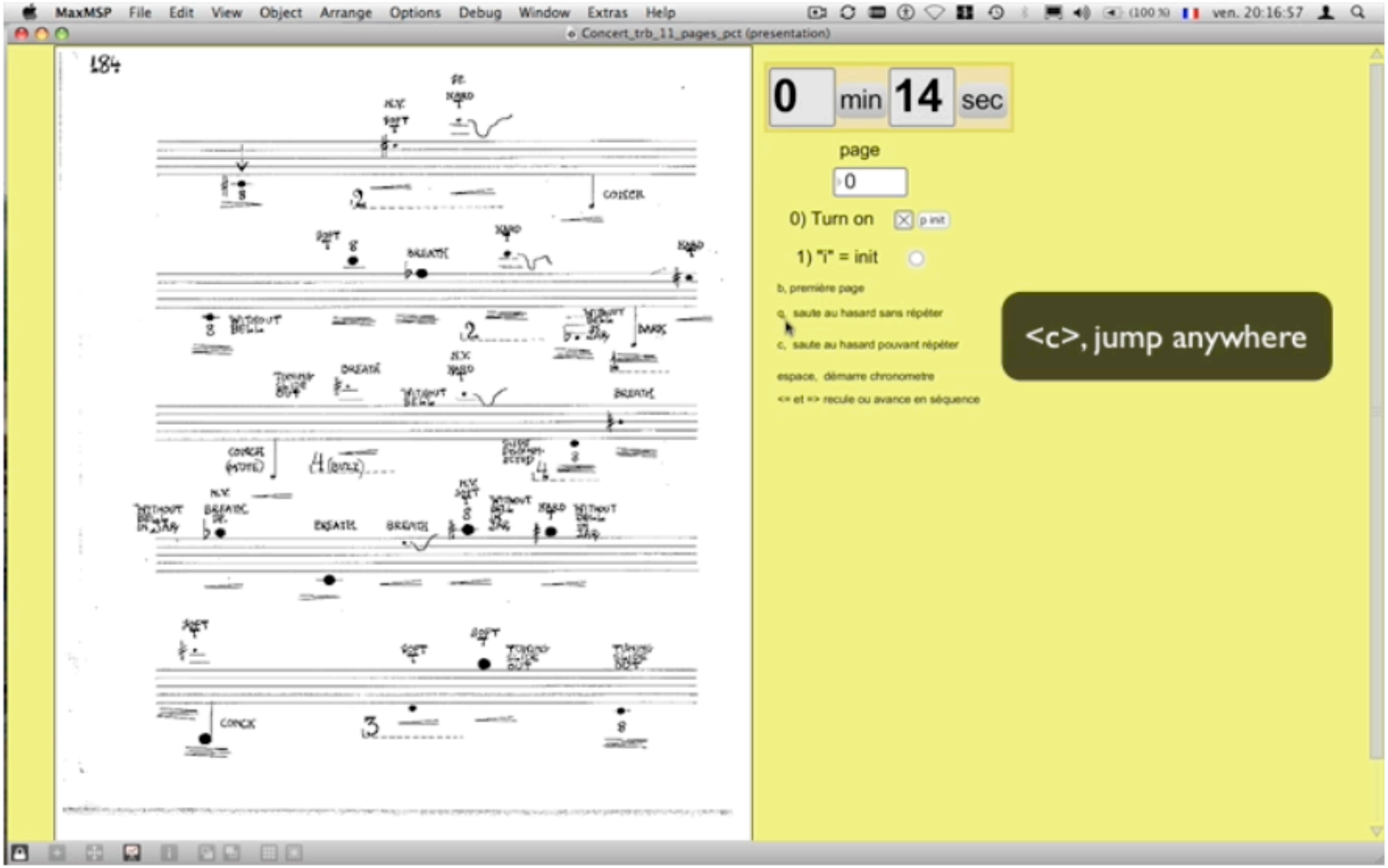
- “Silence”
  - …
- “indeterminacy”
  - “indeterminacy” ≠ “chance”
- “chance” (random).
- “unintentional” (non intentional)

The problematic…

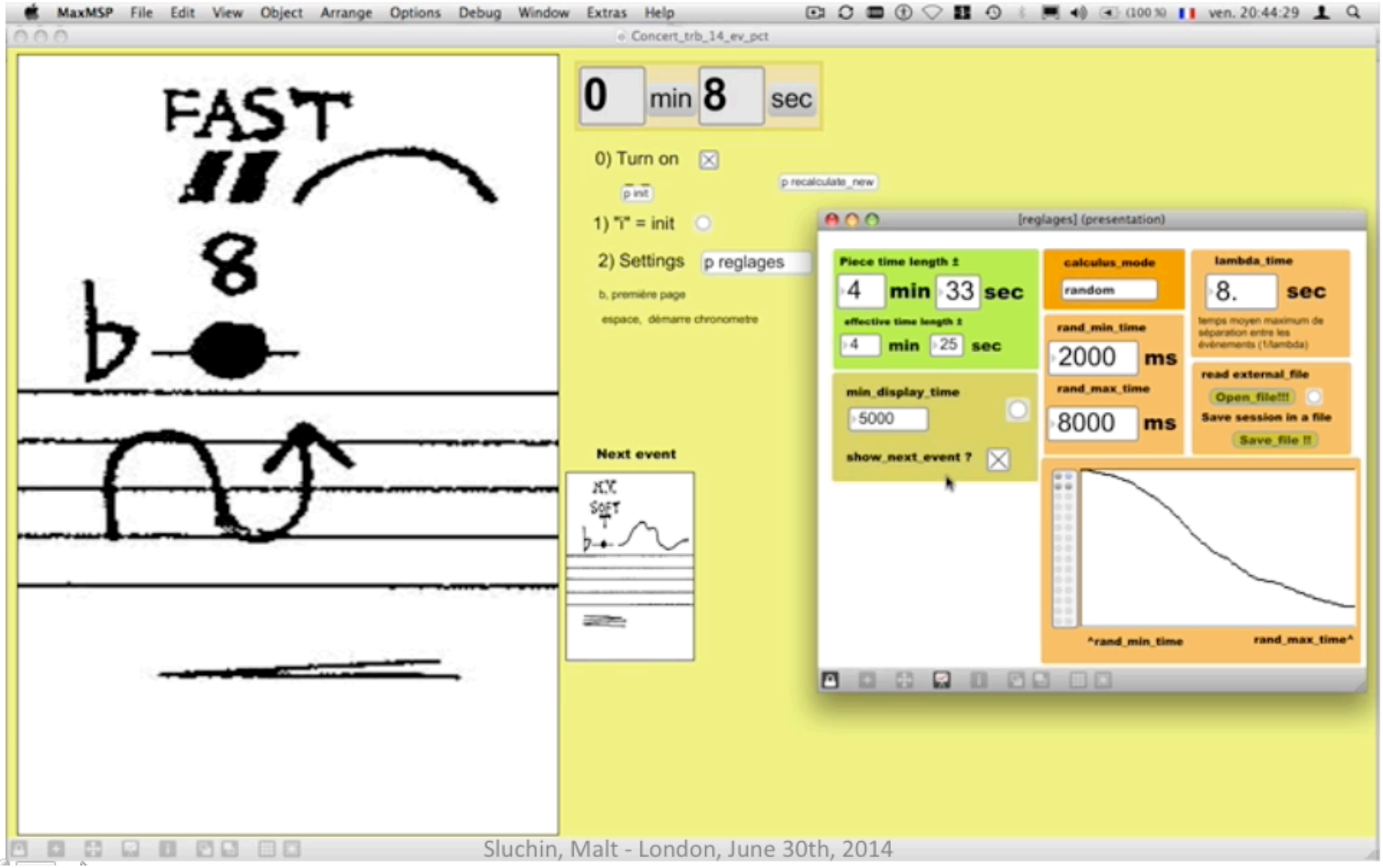
- How to navigate rapidly between two events, that are displayed on different places, on disjoint pages ?
- How can one makes an “non-intentional choice” ?
- How could one better integrate these concepts by an interface, or notation within a computer sphere?

COMPUTER INTERFACES

Instrumental interface 1

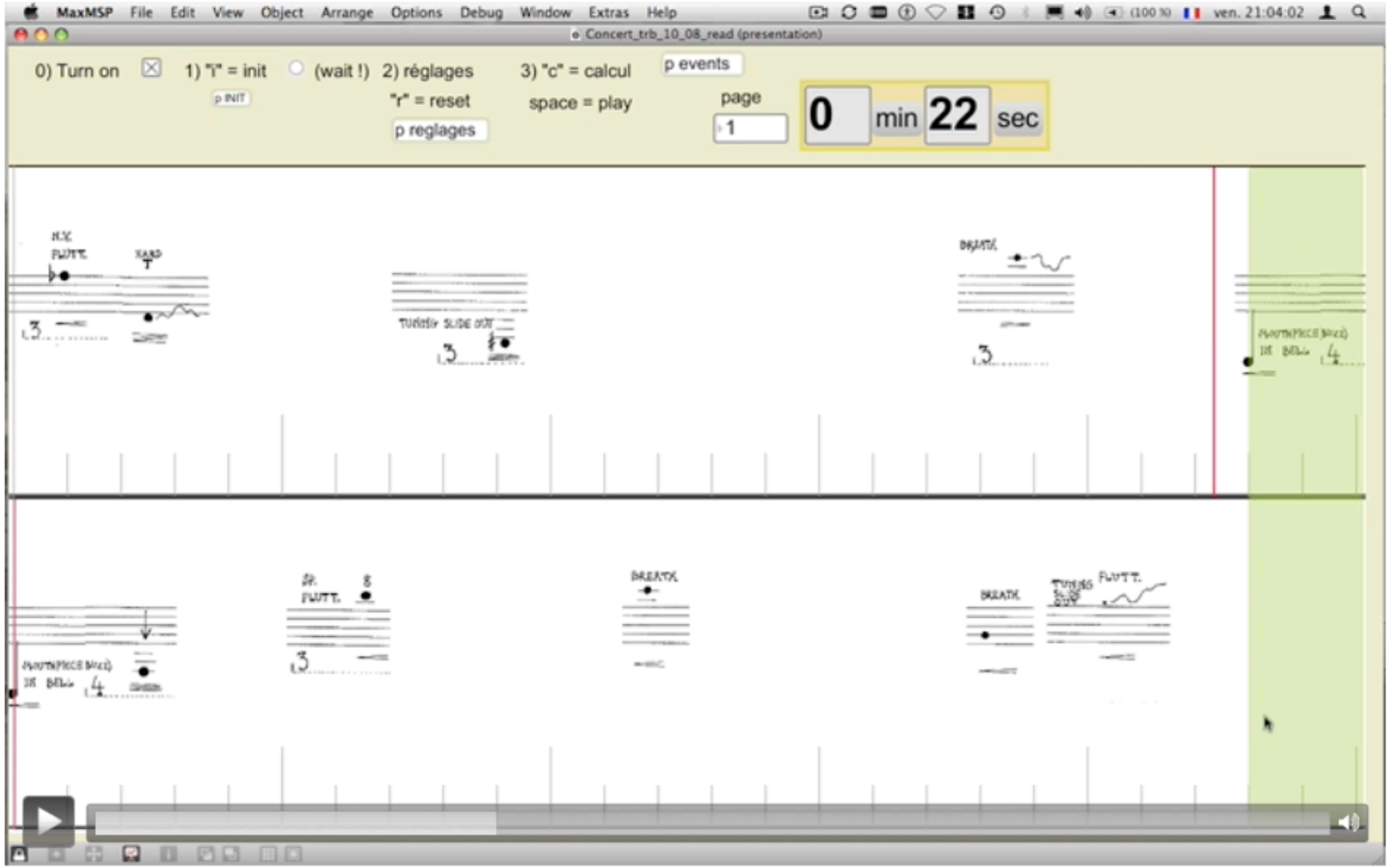


Instrumental interface 2

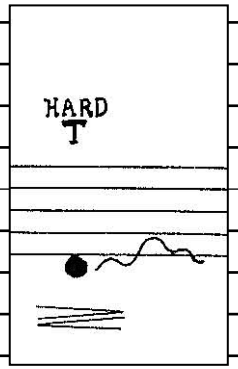


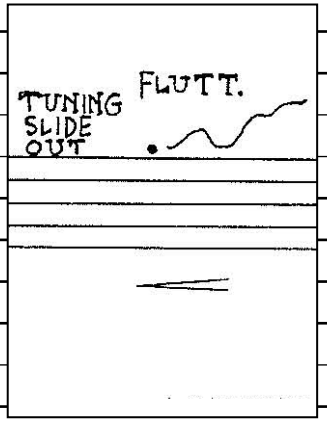
Sluchin, Malt - London, June 30th, 2014

Instrumental interface 3



Identity	number of the system followed by the order of the event on that line (i.e. 4_2: second event in the fourth system)
placement	distance from the beginning of system in milimeters (0 à 168 mm.)
genre	normal (0) ou autre (1 à 9)
	played normally (0), tunning slide out (1), mouthpiece in bell (2), spit valve open SP (3), without bell (4),
	without bell in jar (5), with slide disconnected (6), conch (7), mouthpiece (mute) (8), conch (mute) (9), other (10)
classement	pitch in MIDI (23 to 75), or its nature when unpitched (0), bark (1), high (2)
size	small (1), medium (2) or large (3)
	small=piano or short or both, medium=medium in dynamics, in duration or both, large=forte or long or both
profil dynamique	nothing (0), cresc (1), diminuendo (2), both (3)
articulation	nothing (0), breath (1), soft T. (2), hard T. (3)
vibrato	avec (0) ou sans (1)
	all notes are played with vibrato (slide, or lip or slide and lip) unless accompanied by the indication N.V.
formant	coloration of the sound when sustained
	nothing (0), flutt (1), double tongue // (2), preceeds by sustained note (3), fllowed by sustained note (4)
	triple tongue /// (5), preceeds by sustained note (6), followed by sustained note (7), trill (8)
formant speed	nothing (0), rit (1), accel. (2), rit. accel. (3), accel. rit. (4), fast (5), slow (6)
mute	without or with one from five indicated. #1 and #3 are freely chosen
	open (0), straight (1), plunger (2), cup (3), buzz (4), hat (5), plunger open close (6)
arrows, curves	smaller microtonal slides
	no arrow (0), curve down (1), curve up (2), arrow down (3), arrow up(4),
	arrow up and down (5) arrow down and up (6), arrow up down and up (7)





“Descriptors vectors”

<Name> p0 p1 p2 p3 p4 p5 p6 p7 p8 p9 p10

Identity	placement	genre	classement	size	profil dynamique	articulation	vibrato	formant	formant speed	mute	arrows, curves
1_1	42	1	49	3	1	0	0	1	0	3	0
1_2	70	0	56	3	1	0	1	1	0	3	0
1_3	142	0	41	3	3	3	0	0	0	0	1
2_1	46	1	32	3	3	0	0	0	0	3	0
2_2	91	0	64	2	2	1	0	0	0	3	0
2_3	114	2	0	3	1	0	0	0	0	0	0
3_1	30	0	33	3	3	0	0	0	0	4	3
3_2	168	3	74	3	1	0	0	0	0	3	0
4_1	23	0	64	2	1	1	0	0	0	0	0
4_2	90	0	47	2	1	1	0	0	0	0	0
5_1	37	1	59	1	1	0	0	1	0	0	0
5_2	110	0	65	3	1	3	0	0	0	4	2
5_3	146	0	32	1	0	0	0	0	0	4	0
5_4	151	0	66	1	1	2	0	0	0	0	1

fully “non intentionality” to fully intentionality

Perfomances

- Triton (Les Lilas, France), 27/05/2009
  - Fabian Fiorini (piano), Guillaume Orti (sax), Benny Sluchin (trombone), Eric-Maria Couturier (violoncello), Mikhail Malt (computer).
- Hateiva (Jaffa, Israël), 29/10/2009
  - Amit Dolberg (piano), Yonatan Hadas (clarinet), Benny Sluchin (trombone), Eric-Maria Couturier(violoncello)
- CD recording (Paris, France), 28/08/2012
  - Sylvain Rappaport (piano), Benny Sluchin (trombone)
- Médiathèque Musicale (Paris, France), 27/09/2012
  - Nicolas Crosse (Double bass), Benny Sluchin (trombone)
- CD recording (Paris, France), 28/05/2013
  - Sylvain Rappaport (piano), Nicolas Crosse (Double bass), Benny Sluchin (trombone), Jean Max Dusser (clarinet)