

---

### III- 2007-2008 : *StreicherKreis*

- les archets augmentés
- l'application suivi de geste
- les structures formelles de *StreicherKreis*
- le patch Max/MSP des transformations

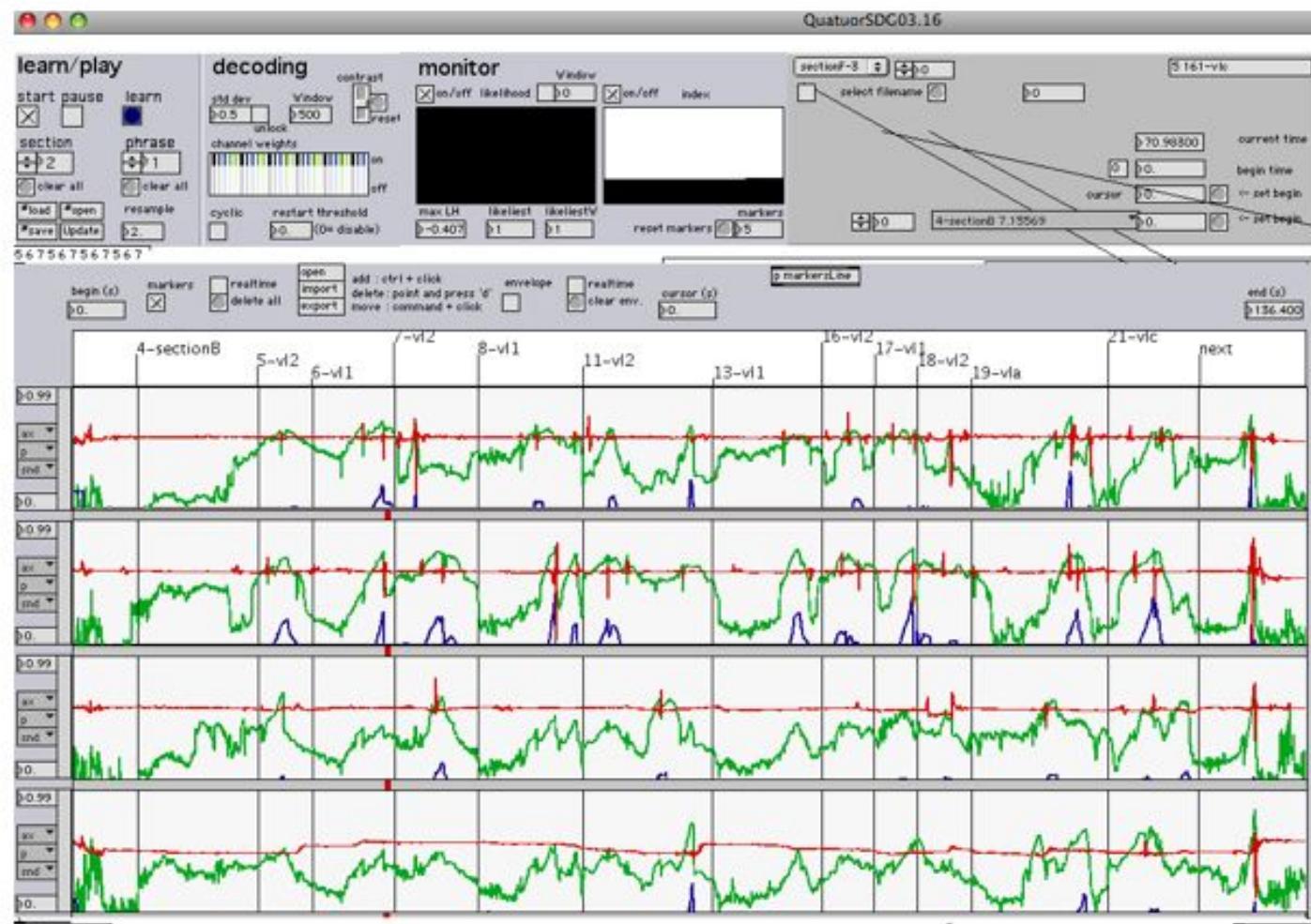
# archets augmentés

---



Mathias Demoucron

## **suivi de geste**

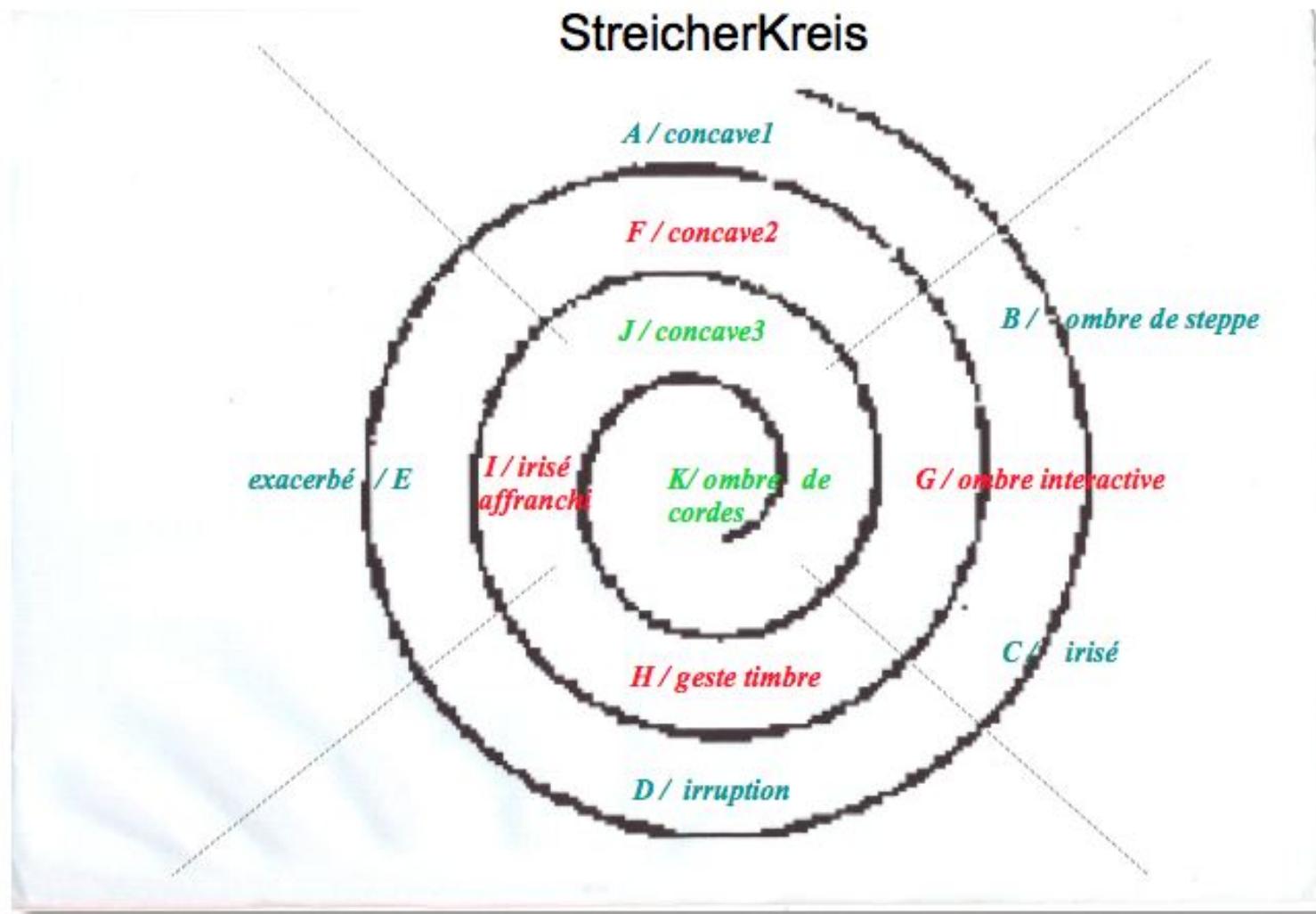


*StreicherKreis*

---

**Structures formelles**

forme spirale



en 3 cycles

A	B	C	D	E	F	G	H	I	J	K	
concaté	entre devoeux	unité	implac	exacéte	concaté2	entre interacte	génératrice	habituanch	concaté3	entre cœurs	
structure	apès haut à 80%	haute gestude en droiture	droiture contenue à rapée haut à synchr	droit en gestes composés par récence en accès	droitdroit holoparance -gratuit syn 30%	structure harmonie	accident opposé systématisé	droitdroit holoparance à forte 3	densité / ppp /		
structure harmonie	avec ligne entrelacées harmonies	EN SUITE D'ACCORDS relais de hauteurs, dynamiques, timbre et geste	avec ligne entrelacées harmonies	duo en droiture	engens à harmonies	avec ligne entrelacées4	duo en droiture	détaché- tremolo gettato- pizz-legno	disparition la ligne coupeable entrelacées en accès		
texture	sur-alys		alys & hauteur	medium bas-medium	alys-grave toula texture	unites gestuelles - écho-texture	alys & hautes	alys - alys-grave	sur-alys- -sur alys grave		
ambitus hauteurs()	nts resorb	ECLATEMENT de l'amplitude seulement dans le choc par le geste	lespaceaux s'tang par loge		unites gestuelles - écho-texture	nts resorb				a	
structures de dynamiques (*)	1 2 3		4	5	unites gestuelles - écho-texture	pp#			12 x 1 temps 2 x 1 temps 5 x 2 temps 2 x 2 temps 2 x 1 temps		
tempo	temp multiples, alys et superposés	=42		tempo accyndro	=42	tempo =42			=42 =90	=96 =42	
tempo	=46		=56	$\text{♩} = 84$							
geste	énonciations estaynantes accyndro	continuado accyndro	superposition continuo accyndro	synchr bb-synchr	processus gestuels AUTONOMES & CIRCULAIRES	énonciations estaynantes accyndro resorb	gestes composés	4 temps holoparance	processus gestuels AUTONOMES & CIRCULAIRES		
en référence aux 3 modes de jeu analytique		transposition					gestes muets				
Interprétation		en référence au mode									
		analyse/la différence									
transformations		TRANSFORMATION INDIVIDUELLE ET SUCCESSIVE				INTERACTIVITÉ des "hautes luthes"				TRANSFORMATION COLLECTIVE	
		9'15"						9'15"		5'30"	
durée	1'15	1'46	2'40	1'20	2'20	1'15	2'50	1'40	3'30	1'46	3'46

## rotation entre les 4 instruments du quatuor

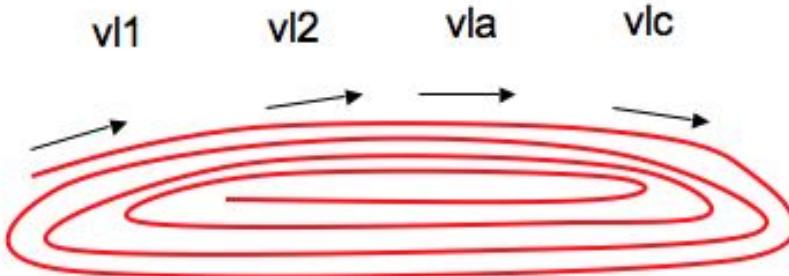


Tableau des rotations vi1 vi2 vla vlc

			vi1	vi2	vla	vlc
sectionA	sectionB		mes6 mes8 mes13 mes17	mes7 mes11 mes16 mes18		
	sectionC			mes27 mes35 mes43 mes54 mes58 mes73	mes28 mes36 mes47 mes55 mes59 mes73	mes29 mes40 mes49 mes57 mes67 mes72
	sectionD					
sectionE		duo1-vla+vlc duo2-vl2+vla duo3-vi1+vi2		mes143	mes134	mes123
sectionF	sectionG			mes173 mes191	mes176 mes165	mes165 mes180 et 183 mes169 mes185
sectionH	sectionI			mes221 mes246 mes262	mes224 mes250 mes264	mes229 mes252 mes266 mes235 mes258 mes270
sectionJ						
sectionK						

# le traitement électroacoustique

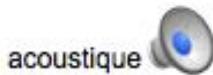
Objectifs :

- **l'Instrumentiste contrôle les transformations par son geste d'archet.**

C'est l'interprétation gestuelle du texte qui légitime la partition instrumentale et la partition électroacoustique, principe fondateur dans la manière même dont la pièce est conçue.

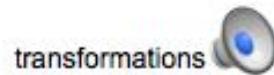
- **son acoustique et son électro sont consubstanciels.** Le traitement électroacoustique **constitue une extrapolation intégrée à l'écriture.** Il ne cherche pas dans cette pièce à créer des lignes instrumentales virtuelles séparées qui viendraient se juxtaposer au quatuor.
- **l'alliage entre son acoustique et son électro n'est en aucun cas démonstratif** (pour le public) du complexe dispositif sous-jacent. Il est conçu pour l'instrumentiste afin qu'il puisse s'approprier le dispositif des haut-parleurs comme il s'est approprié son instrument, qu'il joue la partition électro comme il joue la partition instrumentale.

## Le début de la pièce



acoustique

les conditions de possibilité -->



transformations  
par le geste d'archet

## Les 3 cycles de transformation

TRANSFORMATION INDIVIDUELLE ET SUCCESSIVE

INTERACTIVITÉ de l'un sur les 3 autres

TRANSFORMATION COLLECTIVE

# début cycle1 / rotation / frequency-shifter

6-v11      7-v12      8-v11

17-v11      18-v12      19-v11

11-v12

21-v1c

13-v11      16-v12

24-sectionC      25      26-v1c

ligne = pression --> freq FS / accX ---> gain positif FS

C 008: sectionC, ligne J' --> freq FS et GT--> gain FS  
reconnaissance/interprétation dans les 8 staves

# cycle1 / structure harmonique fondée sur 5 accords de 8 sons

section A à D compris (8mn) / structure de 5 accords de 8 sons avec relais de hauteurs, timbre, dynamiques et gestes

StreicherKreis  
Florence BASCHET

**A- concavé**

accords 1 ->2 mes.6 2 mes.9 3 mes.17 4 mes.25 5 mes.33

**B- ombre de steppe**

accords 11 ->15 mes.9 mes.14 mes.19 mes.30 mes.34 mes.40 mes.47 mes.55

**C- irisé**

accords 21 ->25 mes.30 mes.34 mes.40 mes.47 mes.55

accords 27 ->29 mes.57 mes.67

**D- irruption**

accords 31 ->35 mes.82 mes.87 transposé transposé transposé

éclaté 2+ 5 éclaté 4+ 5 7+ éclaté 4+ 7+ 7+

○ ligne

□ aplat

- - - relais

## relais de hauteurs, dynamiques, timbre et geste

4

This musical score excerpt shows a sequence of measures from page 4. It features four staves, each with a different instrument: voice (vcl), violin (vl1), viola (vla), and cello (vc). The score includes various dynamics (p, f, ff) and performance instructions like 'Glossando' and 'flautando'. Red markings are used to highlight specific elements: red circles around notes on the first two staves, red squares around sustained notes on the first staff, and red dashed lines connecting notes between the first and third staves to indicate height and dynamic relays. Measure numbers 17-vl1, 18-vl2, and 19-vla are visible at the bottom.

17-vl1      18-vl2      19-vla

20

This continuation of the musical score from page 20 shows a sequence of measures. The instruments remain the same: voice, violin, viola, and cello. The score includes dynamics like p, f, ff, and performance instructions such as 'riten.' (riten.) and 'diminuendo'. Red markings continue to highlight relays: red circles around notes on the first and fourth staves, red squares around sustained notes on the first staff, and red dashed lines connecting notes between the first and third staves. Measure numbers 20-vcl, 21-vlc, and 22-vcl are visible at the bottom.

20-vcl      21-vlc      22-vcl

© 1996 sectionC, ligne :  $P \rightarrow freq\ FS$  et  $Gl \rightarrow gain + FS$   
reconnaissance/interprétation dans les 8 trames

début cycle2 / rotation et structure identiques / aplats densifiés / modèle de résonance

24

25

169-vic

176-v12

173-vII

180-vI

ligne = pression --> spectral corner / accZ ---> freq add



## le matériau sur les 3 cycles

début du 1er cycle,  
sectionB, mes.10  
ligne + aplats

Musical score showing four staves of music. The key signature is common time (C). The first staff has a tempo of 60 BPM. The second staff has a tempo of 42 BPM. The third staff has a tempo of 42 BPM, with a note instruction "ord -> poss". The fourth staff has a tempo of 42 BPM. The score consists of eighth-note patterns with various dynamics (e.g., *p*, *f*, *pp*) and articulations like *acc* (accents) and *sf* (sforzando). Measure numbers 11 and 12 are indicated at the bottom.

début du 2ème cycle,  
sectionG, mes.171  
ligne + aplats montés en  
densification

Musical score showing four staves of music. The key signature is common time (C). The tempo is 42 BPM. The score consists of eighth-note patterns with dynamics like *p*, *f*, *pp*, and *mf*. Measure number 173-vii is indicated at the bottom.

début du 3ème cycle,  
sectionK, mes.314  
ligne distribuée en aplats

Musical score showing three staves of music. The key signature is common time (C). The tempo is 42 BPM. The score consists of eighth-note patterns with dynamics like *pp*, *mf*, and *ppp*. Measure numbers 314 and 315 are indicated at the top. A small blue speaker icon is located in the bottom right corner.

### le geste

1-geste presque inexistant

2- énoncés de micro-gestes (constitutifs des modes de jeu)

**flautendo / écrasé / détaché /  
stridente / col legno tratto /  
tremolo / gettato / pizz**

The image shows four staves of musical notation for a string quartet, arranged horizontally. Each staff consists of five lines and a dashed middle line. The notation includes various note heads, stems, and rests. The first staff is labeled "28-12-12-12" at the bottom. The second staff is labeled "38-12-12" at the bottom. The third staff is labeled "41-12-12" at the bottom. The fourth staff is labeled "43-12-12-12" at the bottom. The notation is dense and includes many slurs and grace notes.

### 3- articulation de modes de jeu composés

A musical score page showing two staves of music for orchestra and piano. The top staff is for the orchestra, featuring multiple parts with various dynamics and articulations. The bottom staff is for the piano, with a single melodic line. Measure 79 starts with a forte dynamic in the orchestra and a sustained note in the piano. Measure 80 continues with complex rhythmic patterns and dynamics, including a piano dynamic of 'p' (pianissimo) and a forte dynamic in the orchestra.



#### 4- geste musical collectif, geste-timbre

A musical score page showing two measures of music. The top staff is for the strings (Violin I, Violin II, Viola, Cello), the second staff is for the piano, and the bottom staff is for the bassoon. Measure 1 starts with a forte dynamic. Measure 2 begins with a piano dynamic. The piano part includes a dynamic marking 'fissando'.



## geste-muet interactif sur le trio cycle2

212

*col legato tratto*

*pp* *col legato tratto*

*p* *col legato tratto*

*pp* *col legato tratto*

*pp* *col legato tratto*

*pizz* *col legato tratto*

212a

vlc *G1* → reverb in *s/tutti*  
vlc *accY* → granular transp *s/tutto*

212b

vlc *G1* → reverb in *s/trio*  
vlc *G1* → FS freq in *s/trio*  
vlc *accX* → FS gain négatif *s/trio*  
vlc *accX* → granular transp *s/trio*

*con sonde*

*p* *p* *ff* *pp*

*p* *ff* *p* *ff pp*

*p* *ff* *pp*

*p* *ff* *pp*

*p* *ff* *pp*

*p* *ff* *pp*

*avec de = en + d'énergie*

*pp*

213

*Glimando*

*Glimando*

*ord.*

*Glimando*

*Glimando*

*ord.*

*avec de = en + d'énergie*

*pp*

214



## mapping direct

off  
v1\_gyro1  
v1\_gyro2  
v1\_accZ  
v1\_accY  
v1\_accX  
v1\_pressure  
v2\_gyro1  
v2\_gyro2  
v2\_accZ  
v2\_accY  
v2\_accX  
v2\_pressure  
al\_gyro1  
al\_gyro2  
al\_accZ  
al\_accY  
al\_accX  
al\_pressure  
vc\_gyro1  
vc\_gyro2  
vc\_accZ  
vc\_accY  
vc\_accX  
vc\_pressure

This patch consists of 11 Max/MSP objects arranged in three columns:

- Column 1:**
  - Top: A list of sensor and control names.
  - Middle: A `revin` object with a tree graph. Input 1 is "off" or "brut" from the list. Input 2 is a scale from 0 to 500%. Output is "lineaire". Value 156.0 is mapped to 0.52. Value 0 is mapped to center.
  - Middle: A `freqShiftfq` object with a tree graph. Input 1 is "off" or "brut" from the list. Input 2 is a scale from 501% to 1400%. Output is "lineaire". Value 1400.0 is mapped to 899.0. Value 0 is mapped to center.
  - Middle: A `freqShiftgainNégatif` object with a tree graph. Input 1 is "off" or "brut" from the list. Input 2 is a scale from 852% to 10.0. Output is "lineaire". Value 10.0 is mapped to 0.0. Value 0 is mapped to center.
  - Bottom: A `granularTranspAles` object with a tree graph. Input 1 is "off" or "brut" from the list. Input 2 is a scale from 884% to 500.0. Output is "lineaire". Value 500.0 is mapped to 10.0. Value 0 is mapped to center.
- Column 2:**
  - Top: An `harmoPreset` object with a tree graph. Input 1 is "off" or "brut" from the list. Input 2 is a scale from 0% to 600%. Output is "lineaire". Value 0 is mapped to 0. Value 1.32 is mapped to 0. Value -1.32 is mapped to -0.59. Value 0 is mapped to center.
  - Middle: An `harmoPreset` object with a tree graph. Input 1 is "off" or "brut" from the list. Input 2 is a scale from 600% to 4.0. Output is "lineaire". Value 4.0 is mapped to 0. Value 0 is mapped to center.
  - Bottom: An `spectralMappingMix` object with a tree graph. Input 1 is "off" or "brut" from the list. Input 2 is a scale from 490% to 1.32. Output is "lineaire". Value 1.32 is mapped to 0. Value 0 is mapped to center.
- Column 3:**
  - Top: An `Az1` object with a tree graph. Input 1 is "off" or "brut" from the list. Input 2 is a scale from 490% to 180.0. Output is "lineaire". Value 180.0 is mapped to -180.0. Value 0 is mapped to center.
  - Middle: An `Az2` object with a tree graph. Input 1 is "off" or "brut" from the list. Input 2 is a scale from 490% to 180.0. Output is "lineaire". Value 180.0 is mapped to -180.0. Value 0 is mapped to center.
  - Bottom: An `Az3` object with a tree graph. Input 1 is "off" or "brut" from the list. Input 2 is a scale from 490% to 45.0. Output is "lineaire". Value 45.0 is mapped to -45.0. Value 0 is mapped to center.

# geste interactif



208-vla

vib G1 -> reverber in s' batt  
vib accY -> granular trimp s / trio

moderate dynamic until legato or end

vib G1 -> reverber in s' batt  
vib accY -> granular trimp s / trio

209-vcl

dynamic

vib G1 -> reverber in s' batt  
vib accY -> granular trimp s / trio

210a-vcl

vib G1 -> reverber in s' batt  
vib accY -> granular trimp s / trio

210b-vcl

211a

211b

vib G1 -> reverber in s' batt  
vib accY -> granular trimp s / trio



cycle3 - sectionJ

transformation collective pour créer une autre image sonore du quatuor

45

45

46

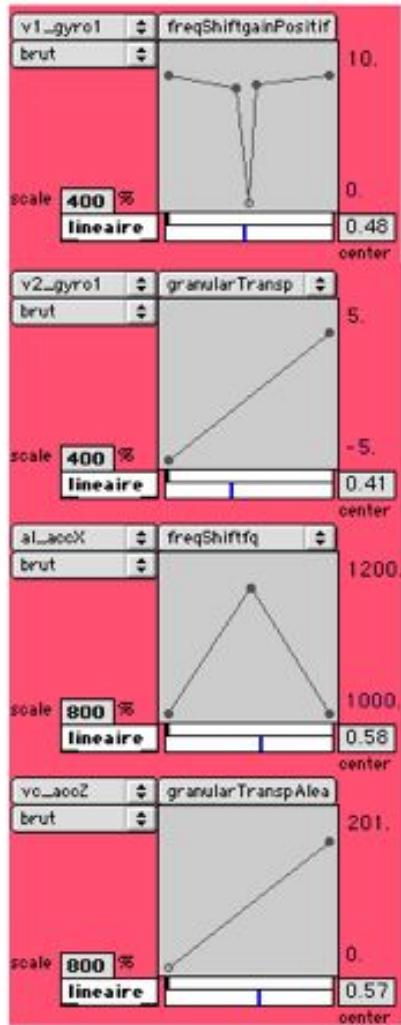
47

48

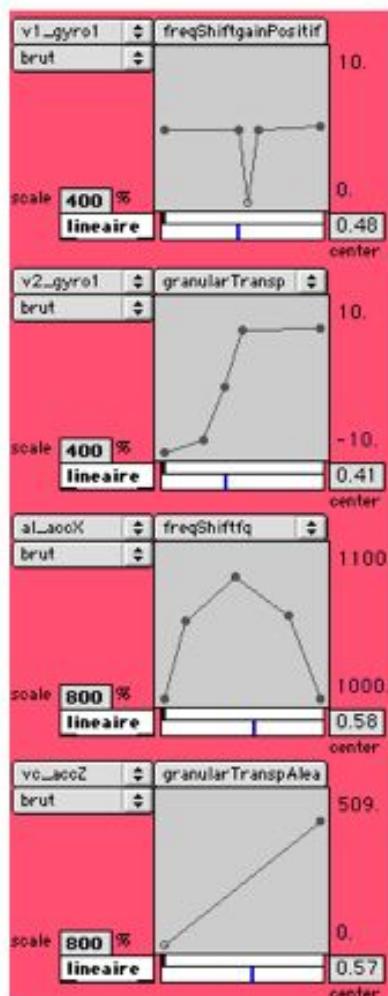
transformation de acc sur l'oscillation du col legato  
acc > acc  
acc > riten

G1 & P1 sans pointe  
G1 & Grandeur temps r/lat-méme  
de acc & P1 freq r/lat-méme  
de acc & grandeur temps alors r/lat-méme

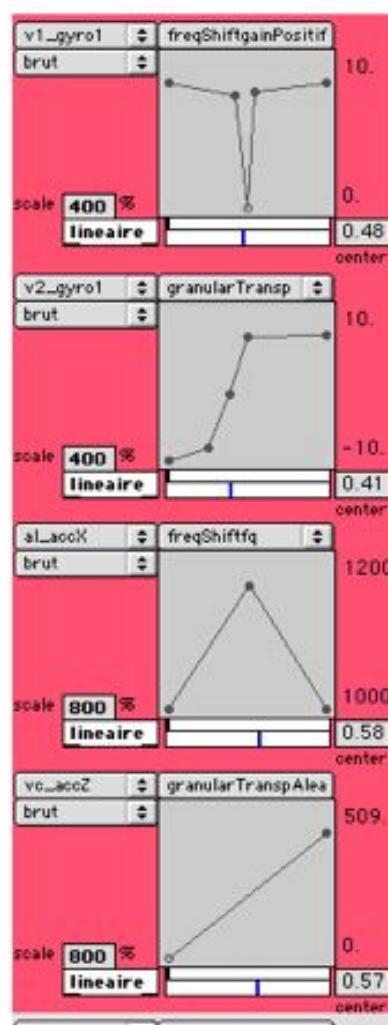
279



282



283





## Patch de transformation

**Max/Msp Patch (Top Left):**

Quatuor092 patch titled "9 240-tutti". It includes a matrix section, a follower sync, and various effect modules like p\_dither, p\_dither, p\_captors, p\_mixer, p\_noise, p\_matrix, p\_matrix-partie, p\_reverb, p\_spots, p\_similation, p\_miroir, p\_harmo, p\_granular, p\_filters, p\_freqShift, p\_data, and p\_spatial.

Controls include a "store > in 5146" button, a "p1000" slider, and a "p\_rampTime" slider. A note at the bottom says: "ATTENTION SECTION C ET G, BAISSEZ MIXER EFFECTS DE 5-7 DB".

**Max/Msp Patch (Bottom Left):**

BCF2000-Prog 1 patch titled "[mixer]". It shows a grid of faders for various effects: simulation, spat, general, repeat, harmo, grain, filtered, delay, disto, reverb, and reverb2. A small table below lists values for each effect.

	simulation	spat	general	repeat	harmo	grain	filtered	delay	disto	reverb	reverb2
HPI 1	-127										
HPI 2											
HPI 3											
HPI 4											
HPI 5											
HPI 6											
HPI 7											
HPI 8											

**Max/Msp Patch (Top Right):**

Mapping patch titled "[capteurs]". It contains several sub-patches for mapping sensor data (p\_captors) to various parameters. Examples include "freqShiftPanPosition", "granularTransp", "harmonPreset", "spectralFlapping", and "timeaire". Each sub-patch includes controls for "off", "brut", "scale", and "center".