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Orient-Occident. From the film version to the concert version

Makis Solomos

In Ralph Paland, Christoph von Blumröder (éd.), *Iannis Xenakis : Das elektroakustische Werk*, Vienne, Verlag Der Apfel, Signale aus Köln 14, 2009, p. 118-134.

One of the first electroacoustic music histories, published in 1972, presented Xenakis' *Orient-Occident* (the concert version) as a masterpiece of electroacoustic music¹. Why did the author choose *Orient-Occident* among Xenakis' other early electroacoustic compositions? Probably because it is the least like Xenakis: compared to the granular works (*Concret PH*, *Analogique B*) and to the continuum ones (*Diamorphoses*, *Bohor*), *Orient-Occident* sounds very much like *musique concrète*. And this is perhaps due to the fact that, in the beginning, the piece was not intended for the concert hall, but was conceived as a "functional" project: film music.

1. The film version

1.1. The film

In the end of the 1950s and beginning of the 1960s, Xenakis had some commissions for incidental music projects. According to the Xenakis Archives (Bibliothèque Nationale de France), he worked for three advertising films, as well as for BP, he composed *Vasarely* and *Formes rouges* (two other film scores), etc. *Orient-Occident* is the only testimony of this activity that remains in his catalogue, an activity mainly related to his relationships with Schaeffer and the GRM.

The first version of *Orient-Occident* is music for the film realised by Enrico Fulchignoni, commissioned by the Unesco and performed in Cannes on May 1960. The film was about an exhibit in 1958-59 organised by Vadim Eliséeff, curator of the Parisian museum "Musée Cernuschi", which showed sculptures and other objects from Asia, Europe and Egypt and highlighted the relationships between East (*Orient*) and West (*Occident*). The subtitle of the film is *Images d'une exposition* ("Pictures at an exhibition", probably a reference to Mussorgsky). In the film, a spoken text describes these relationships, a text that, if we trust the closing credits of the film, was written by Pierre Henry. Fulchignoni wrote an important article on his collaboration with Xenakis², in which he writes:

"Le film était de réalisation difficile, puisqu'il s'agissait de passer d'un endroit à l'autre, d'une culture à l'autre, d'une époque à l'autre. L'une des sections du film, par exemple, comportait le passage d'une statuaire immobile, à perspective frontale, comme celle des Égyptiens, à la sculpture dynamique, en tension, de la Grèce, celle d'Alexandre en particulier, à travers plusieurs étapes. Il s'agissait là de donner en même temps l'impression de cette évolution et celle de la permanence magique et immuable du corps humain. Il y avait toutes sortes de cas de ce type. S'ils me posaient en tant que cinéaste, des problèmes ardues, ils en

¹ Cf. Herbert Ruscol, *The Liberation of Sound. An introduction to Electronic Music*, U.S.A. Prentice-Hall International, 1972, p. 235.

² Cf. Enrico Fulchignoni, "Sur *Orient-Occident*", in *Regards sur Iannis Xenakis*, Paris Stock, 1981, pp. 257-262.

posaient peut-être d'encore plus complexes au musicien, car, là où la transition visuelle pouvait trouver des solutions dans le montage, pour la musique, ces mêmes opérations de montage impliquaient des prolongements d'une zone dans d'autres, entreprise beaucoup plus complexe"³.

The film lasts 20'10" and there are 82 shots filming about 50 objects. It was in three reels. **Figure 1** presents a linear description of the film, with names and numbering of the objects as found in the Xenakis Archives.

(1)	(2)	(3)	(4)
-	00'00	-	
0	00'03	(fondu enchaîné) générique début	
1	00'16	(fondu enchaîné) "Vénus tournante"	77
2	00'39	même statue, gros plan sur visage-main	
3	00'48	"femme au collier" : panoramique des pieds à la tête	78
4	01'11	(fondu enchaîné) "bas relief" avec musiciens, plan général	182
5	01'27	même statue, plan rapproché	
6	01'46	"premier bouddha", tournant	184
7	02'02	même statue, panoramique des pieds à la tête	
8	02'29	"bouddha jambes croisées", tournant	179
9	02'37	même statue, panoramique des pieds à la tête	
10	02'54	"personnages drapés", "groupe de deux statuettes", bouddhas, plan général	187
11	03'12	même statue, gros plan	
12	03'29	"statuette orientale tournante"	
13	03'41	même statue, panoramique de bas en haut	
14	04'00	"autre bouddha tournant" (Japon ?)	185
15	04'19	même statue, gros plan visage-bras	194
16	04'28	même statue, très gros plan visage-bras	
17	04'37	"bouddha coréen"	193
18	04'44	"génie plastique de l'Inde"	
19	05'00	"statuette orientale", "bras cassé", tournant	196
20	05'14	(fondu enchaîné) même statue, panoramique de bas en haut, tournant	
21	05'32	(fondu enchaîné) même statue, gros plan visage	
22	05'53	(fondu enchaîné) "bouddha aux bras", panoramique de bas en haut	197
23		"bouddha khmer"	199
24	06'26	"petit lion"	163
25	06'37	"lions", "plat"	126
26	06'50	"gorgone"	176
27	07'00	même statue, gros plan animaux du bas, tournant	
28	07'11	"deux bêtes"	129 A B
29	07'18	"masque"	168
30	07'28	même statue, gros plan	
31	07'37	"objet", "deux chevaux", panoramique de bas en haut	173
32	07'46	"éventail"	171
33	07'53	"garniture étrusque", faisant partie du char étrusque, gros plan	
34	08'02	même statue, plan général	
35	08'15	même statue, gros plan panoramique gauche droite et bas haut	
36	08'49	(fondu enchaîné) "archer sarde", tournant	158
37	08'55	(fondu enchaîné) même statue, gros plan sur tête, tournant	

³ *Ibid.*, pp. 256-257.

38	09'06	"la gitane"	
39	09'14	même statue, gros plan sur tête	
40	09'26	(fondu enchaîné) "étrusque tournant"	
41	09'52	même, gros plan sur tête	
42	10'01	même statue, gros plan profil	
43	10'16	"romain romaine"	
44	10'27	"romaine", gros plan buste, tournant	
45	10'39	(fondu enchaîné) "Aphrodite"	110
46	10'46	même statue, plan rapproché, tournant	
47	10'55	(fondu enchaîné) "trois grâces"	111
48	11'19	(fondu enchaîné) "dame touie", gros plan pieds, tournant, puis panoramique des pieds au visage	157
49	11'45	même statue, gros plan mains	
50	11'55	même statue, gros plan tête	
51	12'04	(fondu enchaîné) "statue de Rhodes", panoramique haut bas	
52	12'26	"deux drapés"	113
53	12'43	"corps féminin", tournant, panoramique bas-haut	114
54	12'59	"maternité"	81
55	13'14	"Isis égyptienne" (maternité)	80
56	13'21	"maternité" (autre), tournant, panoramique bas-haut	
57	13'36	"une fécondité"	
58	13'48	"deuxième fécondité"	
59	13'55	"troisième fécondité"	
60	14'02	"quatrième fécondité"	
61	14'11	même statue, gros plan tête	
62	14'19	même statue, gros plan bras avec bébé	
63	14'27	"symbole" (deux statuettes)	
64	14'40	même statue, gros plan sur l'une des deux statuettes	
65	14'47	(fondu enchaîné) "deux santons"	
66	14'57	"grosse dame"	
67	15'07	"?" (femme se tenant la poitrine)	
68	15'22	(écran noir, le plan démarre à 15'33) "homme"	100
69	15'45	même statue, gros plan, panoramique bras-tête	
70	16'04	(fondu enchaîné) "jambe en avant", tournant	103
71	16'16	"deux personnages"	
72	16'30	"garçon à la toque"	
73	16'42	(fondu enchaîné) "corps tournant"	
74	16'56	(fondu enchaîné) "déesse" [Diane ou Aphrodite avec pomme ?], tournant	
75	17'26	même statue, gros plan visage	
76	17'33	même statue, premier plan moyen, poitrine	
77	17'42	même statue, second plan moyen, poitrine	
78	17'55	même statue, gros plan pied	
79	18'04	même statue, gros plan main tenant un fruit [?]	
80	18'13	même statue, "déesse penchée"	
81	18'27	(fondu enchaîné) statue Cyclades, tournant	
82	18'52	même statue, gros plan, panoramique poitrine-tête	
	19'16	générique de la fin	
	20'02	écran noir	
	20'10	fin musique	

Figure 1. Linear description of the film. (1) Shots according to the Xenakis Archives, Bibliothèque Nationale de France, Dossier Œuvres 9/3; (2) Timing; (3) Images; in quotation marks: names found in Dossier Œuvres 9/3; (4) Numbering of the objects according to Dossier Œuvres 9/2 and 9/3. The three reels: 1) shots 0-23; 2) 24-67; 3)

68-end. According to archive documents, shot 22 was deleted, but it seems that in fact shot 23 was deleted.

1.2. The music of the film

For the music of the film Fulchignoni contacted Schaeffer, who had already contributed to his films⁴. Schaeffer gave the commission to Xenakis. As we can see in a letter from Schaeffer to Fulchignoni, Xenakis had very little time to compose the music, only one month:

“A l’attention de Monsieur Fulchignoni [adresse : Unesco]
Messieurs,
Faisant suite à la visite de mes collaborateurs Messieurs Pedrizet et Brissot, nous vous confirmons les conditions de notre accord concernant la sonorisation du film *Orient-Occident*.
Nous vous résumons ci-dessous les diverses opérations relatives à ce travail :
1 – réalisation d’une bande sonore en musique concrète.
2 – mixage et synchronisation de cette bande.
3 – traduction de la version française du commentaire en Anglais et en Espagnol.
4 – enregistrement par speakers agréés par vous, des versions Française, Anglaise et Espagnole de ce commentaire.
5 – mixage des bandes musique et parole dans les trois versions.
6 – travaux de laboratoire : tirage d’une copie de travail en réduction 16 m/m
– réenregistrement sur optique des trois bandes sonores définitives correspondantes à chaque version.
– tirage de trois copies standard 35 m/m relatives à chacune de ces versions.
[...]
Les délais de réalisation seront :
De quatre semaines pour le point 1
Puis de quatre nouvelles semaines pour les points 2.3.4.5.
Pour le point 6 les délais normaux des laboratoires.
[...]

This is confirmed by two GRM documents⁶, signed by Luc Ferrari, showing that Xenakis only worked in the GRM studio during December 1959 (including 2 January 1960). **Figure 2** shows the first document, which is the projected schedule (the second document introduces the necessary corrections of the dates), and which is interesting as it shows the “division of work” at the GRM at that time (“prise son”, “manipulation”, etc.). It is also important to notice that in this document Bernard Parmegiani is quoted as “assistant”. I asked him (June 2006) if he worked on *Orient-Occident*, but he couldn’t remember.

Nature des Moyens Techniques	Nombre de séances prévues	Nombre de Séances effectuées aux dates suivantes :
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⁴ Cf. *ibid.*, p. 257.

⁵ Letter from Pierre Schaeffer to Enrico Fulchignoni, 2 December 1959, Xenakis Archives, BNF, dossier Œuvres musicales 2/4-2.

⁶ Cf. Xenakis Archives, BNF, Dossier Œuvres musicales 9/1.

1. Prise Son	4		12/12	19/12	26/12	2/1	
		3	1				
2. Manipulation	10	6	2				
3. Montage Synchrone	6	6	3				
4. Montage Simple	4	4					
5. Ecoute							
6. Copie							
7. Divers							

Figure 2. Projected schedule (10 December 1959) of Xenakis' work in the GRM studios. The Xenakis Archives, BNF, Dossier Œuvres musicales 9/1.

According to Fulchignoni, Xenakis composed the music in two months: “La composition musicale elle-même a été très rapide: si je ne me trompe, elle a duré deux mois environ”⁷. If we trust Xenakis' sketches, he also worked on the piece later:

-“terminé 1^{ère} bobine 6/2/59” (“finished first reel...” and, of course, it is 1960 and not 1959);

-“fini 23-2-60” (“finished...”): probably meaning the end of the second reel (see **figure 4**);

-“3^e bobine Fulgh. 24-2-60” and “terminé 2-3-60”: probably meaning the third reel⁸.

The question of the total time needed to compose *Orient-Occident* is not anecdotal. Even if we arrive at the conclusion that Xenakis composed the piece in three months and count the time spent in the studio, it is not a lot of time. It is probably the reason why *most of the sounds of Orient-Occident were not produced for that piece*.

Indeed, some of the sounds for *Orient-Occident* come from *Concret PH* and *Diamorphoses*. But most of them come from other GRM compositions (compositions by other composers). This is an exceptional situation for Xenakis. He very often transferred his materials from one piece to another (in his instrumental music as well as in his electroacoustic music), but *Orient-Occident* represents a unique situation, in which he uses material from other composers, probably because he did not have the time to produce his own.

But perhaps there is another explanation for this situation. Perhaps Schaeffer asked Xenakis to use sounds from the GRM sound library. As is well known, the production of this library was one of Schaeffer's aims with his *musique concrète* studies. Until the writing of the *Traité des objets musicaux*, Schaeffer worked more as a scientist than as a composer, and he also asked the other GRM composers to do so; that was the reason for the clash between him and Pierre Henry⁹. And it is certain that this library served for “functional” projects such as the *Orient-Occident's* film¹⁰.

⁷ Enrico Fulchignoni, *op. cit.*, p. 259.

⁸ Xenakis Archives, BNF, Dossier Œuvres musicales 9/4.

⁹ Cf. Michel Chion, *Pierre Henry*, Paris Fayard, 2003, chapter 2.

¹⁰ The GRM sound library is one of the mysteries in the history of *musique concrète*. There are no studies on it. According to Daniel Teruggi (email of September 2006), there were three libraries. The first was created by Pierre Henry at the request of Schaeffer; when Henry left the GRM he

In the Xenakis Archives there are documents showing that Xenakis worked with the GRM sound library, searching for sounds to put in *Orient-Occident*. **Figure 3** presents a document from 18 November 1959, in which the composer comments listening to some of these sounds. We read: “écoute de sons” (“listening to sounds”). There are also numbers (“5Fb15”, “5Fb153”..., “5Fe21”, etc.) that should correspond to the numbering of the sounds in the library. We also find specific indications regarding: origins of the sounds (“tube en carton”: “cardboard tube”), descriptions (“effet de gong bouddhique”: “effect of Buddhist gong”), and possible uses of the sounds for the film music (for “5fe21”, which is the “tube en carton”: “soupirs”: “sighs”: see below).

Many of the sounds in *Orient-Occident* can be found in compositions of other GRM composers of that period, either because they were the producers of these sounds (which they “donated” to the GRM sound library), or because they themselves took them from the library. For instance, at the beginning (0’00”-0’31”) of the fourth study (“Objets liés”) from Schaeffer’s *Études des objets* (1959, revised in 1971), we have three sounds that we find in *Orient-Occident*: according to the EMF/GRM release of the concert version¹¹ at 7’11”-7’41”, 1’16”-1’20”, and 4’03”-4’09”. Other examples are Henry’s *Spatiodynamique* (1954), which uses percussive sounds from Nicolas Schöffer’s sculptures, and his *Coexistence* (1958).

Some of the sounds in *Orient-Occident* can also be found in the *Solfège de l’objet sonore*, published in 1967 to illustrate the *Traité des objets musicaux*. For instance, compare “Sixth point: instrumental timbre in the causality context”: “62. Initial parts of 61 (metal sheet [...])”¹² with the first sound of *Orient-Occident*.

It is due to this phenomenon that *Orient-Occident* sounds like a typical *musique concrète* production! It is why in *Orient-Occident*, unlike any other Xenakis composition of that period, we find many different sounds (more than 50). Finally, it is why we have here, for the first and last time in Xenakis’ music, an appearance of “sound objects” in the Schaefferien sense of the word.

Finally, it is for the same reason that in *Orient-Occident* Xenakis probably didn’t make use of formalisation and, more generally, of calculations¹³.

took these sounds with him. The second was the one that served for the *Solfège de l’objet sonore*. The third was produced in the 1970s.

¹¹ Xenakis, *Electronic Music*, EMF/INA-GRM, EMF CD 003, 1997. There are other versions of *Orient-Occident* that have to be studied. Some previous releases are: Philips, 835 485/6 AY, 1963; Erato, STU 70530, 1969; Nonesuch, H-71246, 1970. Some differences between the versions seem important (for instance, as noted by James Harley in “The Electroacoustic Music of Iannis Xenakis”, *Computer Music Journal* vol. 26 n°1, 2002, Cambridge (Massachusetts), MIT, p. 38; the EMF release stops 16 seconds before the Nonesuch release).

¹² *Solfège de l’objet sonore*. Pierre Schaeffer. *Trois microsillons d’exemples sonores de Guy Reibel assisté de Beatriz Ferreyra illustrant le Traité des objets musicaux et présentés par l’auteur*, Paris INA-GRM, 1967, new edition: 1998, p. 51 and CD 2: 62.

¹³ Despite what he says in *Formalized Music*, chapter II: “The first thesis is that stochastics is valuable not only in instrumental music, but also in electromagnetic music. We have demonstrated this with several works: *Diamorphoses* [...], *Concret PH* [...], and *Orient-Occident* [...]” (Iannis Xenakis, *Formalized Music*, Stuyvesant (New York) Pendragon Press, 1992, p. 43). But maybe he was referring to the sounds that *Orient-Occident* borrowed from *Concret PH*.

1.3. Music and image

Xenakis seems to have reflected on the relationship of music to image – not in an abstract way, but a very practical way – in the composition of the music while working out the concrete details of each sequence. Fulchignoni said that he showed the film to him only in its last montage and that he left him total liberty¹⁴. It is certain that the film opened Xenakis' imagination, and it is a pity that *Orient-Occident* is his only (recognised) film music! Belonging to the aesthetic of modernism, Xenakis rejects in his discourse the idea of “sonorising” images. Speaking about his musical compositions for ancient tragedy, he says they are not “accompagnement”, and he adds: “Je n’aime pas faire des musiques de films, qui sont des choses figuratives et réalistes, c’est-à-dire sonoriser, finalement, un film ou une pièce de théâtre”¹⁵. But when one reminds him that he composed *Orient-Occident*, he exclaims: “Mais c’était un film à partir d’objets anciens, archéologiques. Il y avait la Sardaigne, il y avait la Grèce, il y avait l’Égypte, il y avait l’Extrême-Orient, il y avait la Perse, c’était magnifique. C’était extraordinaire comme collection, d’ailleurs. Et c’est cela qui me motivait pour faire cette musique ; c’était un *commentaire sonore* de ces pièces-là”¹⁶. Indeed, the music of the film version is a “sound commentary”.

In Xenakis' sketches, there are several annotations about the music in relationship to image. For instance **figure 4**, which concerns the second reel, contains the numbering of shots, Xenakis' drawings of the sculptures, the time schedule, and thoughts about the music to use, such as: “guerre” (“war”: shot 35), “silence total quelques sons cloche 1 et les soupirs” (“total silence, some bell sounds and sighs”: for shots 47-50), “ressort Parmeg.” (“spring” and “Parmeg.” probably for Parmegiani: shot 63), “ici Φιλίπς - 12dB” (“here Philips”, for *Concret PH*: after shot 66), etc.

The most advanced sketches in the Xenakis Archives supply only a few ideas on the sounds to be used; perhaps other sketches were lost, or perhaps Xenakis also improvised in the studio. In some preliminary sketches we have the text which is spoken in the film and some of Xenakis' comments, for instance: “Bien avant d’avoir été le fournisseur, l’art grec a été en Occident le messenger de l’Orient” is the text for the sequence 13, and “césure du climat musical sur le lion” (“breaking of musical climate on the lion”) is Xenakis' comment. There are also some general thoughts as presented in **figure 5**. It seems here that Xenakis calculates the length of the sequences devoted to civilisations (“Grèce”, “extrême orient Japon Corée (+Khmer)”, etc.) or to specific topics (“animaux”, “guerre”, etc.: “animals”, “war”) and that he gives some indications on the sounds.

Grèce 1'30''+40''+60''+60''+1'30''+60''	= 6'40'' ≈ 7'	Maderna+cloche suisse
Inde 2'20''+2'	= 4'20''	[mot illisible] + voix grave
extr. orient Japon Corée (+Kmer)	= 60''	Japon
animaux	= 1'30''	
animaux+guerre	= 60'' 4'	Ferrari+Indes [mot

¹⁴ Cf. Enrico Fulchignoni, *op. cit.*, p. 259.

¹⁵ Xenakis in François Delalande, « *Il faut être constamment un immigré* ». *Entretiens avec Xenakis*, Paris Buchet-Chastel/INA-GRM, 1997, p. 133; emphasis is mine.

¹⁶ *Idem*.

animaux	= 1'30''	illisible]
animaux+guerre		
guerre		
Beauté Touie Egypte	= 1'	Mâche soupirs
Maternité	= 1'30'' → 2'	Inde grasse
Mouvement+Bab+Egypte+Grèce gliss.	1'30''	gliss. Pith+Metast (1)

Figure 5. Music and image. Xenakis Archives, BNF, extract from Dossier Œuvres musicales 9/4.

If we try to establish some general principles concerning the relationship music-image in *Orient-Occident*, we might propose the following typology:

1. Use of ethnic music. I have not yet mentioned that in the *Orient-Occident*'s film score there is music from East Asia, especially in the first reel; it "illustrates" the Buddhas.

2. Abstract relationships. For instance, the beginning of the film.

3. Moments where music imitates the image. (In spite of what Xenakis says about the idea of "sonorising" images, he never refused the notion of imitation, even in his musical compositions for tragedies¹⁷). For instance at 1'13" (film version), we see a sculpture with musicians, one of whom is playing tambourine; the music has percussive sounds.

4. Sound ambiance. This is probably the most important category. The correspondence between music and image is made through a general mood. As illustration, two extracts:

"La partie du film et de la musique la plus émouvante selon moi est celle qui évoque la texture de bruits comme préhistoriques, de sons qui entouraient nos très lointains ancêtres. Cette matière sonore pourrait paraître naturelle, mais d'une nature mystérieuse, dont on ignorerait la source – lorsque des données historiques font défaut, on est dans une atmosphère très propice à l'envoûtement. À un moment, on entend comme un galop d'aurochs : c'est précisément la séquence de la chasse préhistorique, et du commencement de la figuration. Au contraire, lorsque la musique, vers la fin surtout, procède par sortes de coulées, il s'agit de civilisations déjà révélées en elles-mêmes, et dans lesquelles apparaît une certaine complaisance, pour ne pas dire un certain narcissisme. D'où cet aspect fluide du son pour celle d'Alexandrie, civilisation de la volupté"¹⁸.

5. Figuration (in the sense used for Baroque music, for instance). Of course, here we would need Xenakis' words on his intentions, and these words don't exist. Only a detailed study of the comments in the sketches could show all the instances of figuration. One example is given by Xenakis in an interview, and perhaps it is the most fascinating example of figuration in *Orient-Occident*. In the film, "il y avait une statuette égyptienne en bois qui était d'une beauté fantastique, et que j'ai traduite dans *Orient-Occident* par des soupirs ; c'était une boîte en carton qui faisait des souffles et cela ressemblait à des soupirs, à des gémissements. Des gémissements devant la Beauté, d'admiration"¹⁹. **Figure 6** shows this

¹⁷ See also *Polla ta dhina*, his music for the verses 332-367 of Sophocles' *Antigone*.

¹⁸ Enrico Fulchignoni, *op. cit.*, pp. 259-260.

¹⁹ Xenakis in François Delalande, *op. cit.*, p. 133.

Egyptian goddess as shown in the film at 11'38". The cardboard tube which produces these erotic "sighs" is probably the "tube en carton" mentioned in **figure 3**.

2. The concert version

2.1. The making of the concert version

Thus, the first version of *Orient-Occident* – the film version – is not pure "absolute" music, but "functional" music. It was not supposed to be performed in concert or in other musical situations. That is why Xenakis decided to make a concert version, which is (for the moment) the "*Orient-Occident*" that is referred to in music history books. In doing so, he made a practical decision; he simply deleted some passages. As he wrote for a concert in Bonn, "Es handelt sich um eine Suite aus der Begleitmusik zu dem Film *Orient-Occident*, den Enrico Fulchignoni für die UNESCO drehte und der die Wechselbeziehungen zwischen den Kulturen Europas, Asiens und Afrikas seit der Frühantike behandelt. Im Einklang mit den elektro-akustischen Produktionsmitteln in den Studios der Groupe de Recherches Musicales de l'O.R.T.F., wo das Werk produziert wurde, ließ sich der Komponist bei der Auswahl und Organisation der Klänge und Klangstrukturen vom Thema des Films selbst leiten"²⁰. Indeed, as in the film there are three reels with two sound breaks; in the concert version we have three parts (this is the "Suite"). **Figure 7** shows the relationship between the film version and the concert one.

Film version	Concert version (CD EMF)
reel 1:	
00'00-3'28: no changes	00'00-3'28
3'29-end (ethnic music): cut	
reel 2:	
6'26-8'48 (lion' roar and other bestiary's sounds with a lot of silence): cut	
8'49-15'21: condensed	3'29-7'45
reel 3:	
15'22-16'01: cut	
16'02-17'24: condensed	7'46-8'04
17'25-20'10: no changes (apart the cutting of the Greek cymbal's sounds)	8'05-10'50

Figure 7. From the film version to the concert version.

2.2. "Sound objects" and sound associations

Thus, the concert version continues to sound as *musique concrète*, and, as stated above, *Orient-Occident* seems to use "sound objects" in the Schaefferien sense of the word: the sounds from the GRM sound library were elaborated by their composers and by Schaeffer respecting the "orthodoxy" of the *Traité des objets musicaux*. For Schaeffer, a sound object has at least two features²¹. First, its origin must be overshadowed, and the

²⁰ Iannis Xenakis, programme note for a concert, Xenakis Archives, BNF, Dossier Ecrits 9/3. The concert was performed in Bonn at tram stoop (U-Bahn-Haltepunkt) of the main railway station (am Hauptbahnhof) on 21 September (the year is missing).

²¹ Cf. Pierre Schaeffer, *Traité des objets musicaux*, Paris Seuil, 1966, *passim*.

object should become “abstract”. Second, its morphology should not be “eccentric” (for instance, a sound object should not be too long). Thus, for Schaeffer the sound object is the new linguistic unity replacing the note (the unity of instrumental music). This vision presupposes a division, as in traditional (tonal) music, between two levels: the level of material and the level of form; more generally, it presupposes the idea that music is a language.

For Xenakis, “music is not a language, it is not a message. [...] The impact that music produces often exceeds our rational methods of investigation. Movements are created inside you, you can be conscious of them or not, you can control them or not, they are in you”²². This is why Xenakis’ sounds are very often “eccentric”, and he doesn’t care whether the listener recognises their origin or not. More generally, in Xenakis’ electroacoustic music, especially of the first period with pieces like *Diamorphoses*, *Concret PH* and *Bohor*, the form of the piece results from the material, and there is no division into two levels.

Of course, this is not the case with *Orient-Occident*, as we can clearly distinguish its different sounds. **Figure 8** presents a manual, graphical transcription of the piece, in which the sounds are classified with the help of numbers and letters. This is a listening analysis which gives 52 sounds, a very high number for a Xenakis composition²³. But the way in which the sounds are associated in order to create form tends to create a continuity that is based on Xenakis’ ideas and not on the idea of making second level articulations, as is the case with the Schaefferian concept of sound objects.

It is not easy to formalise and to speak with definitive precision about sound associations and thus about the idea of articulation in *Orient-Occident*. With the help of my graphical transcription we might imagine the following categories that include possible relationships between the sounds – not in linear articulation, but in non-temporal relationship:

- direct acoustic affinities: all the sounds that have the same number (*1a-1b*, *2a* to *2g*, etc.);
- indirect acoustic affinities: the pairs *2b-16*, *2d-20*, *4c-12a*, *7-12a*, *7-19*, *8-10*, *9-14*, *17-22*;
- the possibility of deriving one sound from another: this is only the case for sounds *17* and *18* which produce sound *21*;
- association with the same well-known instrumental sound: sounds *3*, *4a*, *5*, *6*, *7*, *9*, *17*, *19*, *22* and *23* are very near to percussion sounds;
- formal association: sounds *3*, *4a*, *5*, *6*, *7*, *8* and *9* enter simultaneously and contrast with what precedes; sounds *11* and *13* succeed one another and have the same function; sounds *14* and *15* are always heard together. This is the “linguistic” category, very near to Schaeffer’s use of the concept of the sound object. So, we could say that for Xenakis “linguistic” associations are only a specific case among other sound associations.

²² Xenakis in Raymond Lyon, “Propos impromptu”, *Courrier Musical de France* n°48, 1974, p.133.

²³ This figure is more fully commented in Peter Hoffmann, Makis Solomos, “The Electroacoustic Music of Iannis Xenakis”, in *Symposium of Musical Informatics*, Corfou, Ionio University, 1998, p. 86-94.

-associations full of imagery: of course, here the affinities are very numerous: I mention only the “sea” atmosphere that is established progressively toward the end of the composition with sounds 17, 21, 22, 23, 24 and 25.

To conclude, we could say that the last category is the most important one. So, as we have seen, the original version (the film version) of *Orient-Occident* explains why the concert version sounds so much like *musique concrète*. Now we see that this original version also explains why the concept of sound associations in *Orient-Occident* diverges from Schaeffer’s linguistic concept: the images, which remain “behind” the music even in the concert version, are a major factor in the formal coherence of the piece.

Figure 3. Xenakis’ comments while listening to the GRM sound library. Xenakis Archives, BNF, *Carnet 19*, p. 103.

Figure 4. Xenakis’ sketches for *Orient-Occident*. Xenakis Archives, BNF, Dossier Œuvres musicales 9/4, p. 26.

Figure 6. “Statuette égyptienne”. Image from the film at 11’38”.

Figure 8. Graphic transcription of *Orient-Occident*.